The ongoing balancing act of staffing and retention is one of the most challenging issues in healthcare today. In specialty areas such as oncology, staffing presents an even more difficult challenge. Finding qualified individuals with the right experience to fill open positions can be a taxing, time-consuming task. As a result, cancer programs may find themselves dealing with lengthy vacancies, which can cause strains on a growing clinic and lead to an unhappy environment for nurses and patients. When Loma Linda University Cancer Center encountered this understaffing dilemma, chemotherapy-skilled, oncology-experienced (CS-OE) registered nurses (RNs) in our cancer center began facing increased workloads, which put them at risk for potential burnout, increased the possibility of errors, and resulted in longer wait times for patients.

As applicants for open RN positions at the cancer center were screened, many emphasized their goal to work in an outpatient oncology setting but also expressed disappointment in not being able to find an organization willing to provide services to our growing patient population.
with obtaining an education in oncology nursing. After encountering this sentiment a number of times and being unable to hire CS-OE RNs, we began to consider how we could “grow our own” CS-OE RNs.

We first looked at our job vacancies. Through our analysis, we found that the number of days an RN job posting remained vacant increased by 16 percent between 2011 and 2013 (see Figure 1, below). A variety of reasons accounted for the turnover during this period—retirement, pregnancy, relocation—with no identifiable trend. The increase in vacancy length raised concerns from the program leadership team about being able to provide services to our growing patient population. Additionally, providers complained about the impact in terms of limiting appointments and the capacity to start patient treatment within a designated time frame—problems created by a shortage of CS-OE RNs.

Our second step was to look at the types of services in demand. Each treatment appointment is scheduled according to an acuity scale ranging from 1 to 6 (see Figure 2, page 37). Level 1 appointments require 30 minutes or less to complete; for example, an injection or central line blood draw. At the other end of the scale, level 6 appointments include procedures taking up to six hours, such as a blood transfusion or a multi-agent chemotherapy regimen with pre- and posthydration. Over a one-year period, we noted that 40 percent of all appointments on any given day were of a level 1 acuity. Additional analysis of the appointment types revealed that 15 percent of level 1 patients had central intravenous (IV) access lines, which require an RN license to manage them.

Our first attempt to fill open positions was to hire licensed vocational nurses (LVNs). Job descriptions were developed and the scope of practice was reviewed because LVNs had not previously been used in the clinic. In the short time that these LVN positions were posted, two qualified LVNs were hired. However, these positions only filled a partial need, because LVNs with an IV certification are limited to peripheral supportive IV treatments. We were still facing provider and patient complaints about the need to provide additional capacity for chemotherapy/biotherapy appointments, which brought us back to our original goal to grow our own CS-OE RNs. Leadership decided that the best way to meet this goal was through the development of a nurse mentoring program.

**Mentoring Program Objectives**

With the need to expand capacity for an increased number of chemotherapy/biotherapy appointments, we reviewed our goal. If our overarching goal was to grow our own CS-OE RNs, what were our other objectives? Below are the four objectives we established with the intention of guiding our mentoring program:

**Promoting the Specialty of Oncology.** Often the revelation that one is an oncology nurse is met with the response: “Wow, that must be hard!” It can be difficult to understand why someone would want to work with cancer patients. If the general nursing population sees oncology nursing as “hard,” it may contribute to the challenges in filling a staff position. As mentioned earlier, in speaking with RN applicants, we heard nurses express the desire to work in the oncology specialty if given the opportunity and proper training. Providing this opportunity would mean the challenge of training non-oncology-experienced RNs.
Capitalize on the Capacity of Experienced RNs to Provide Basic Supportive Care. Level 1 appointments were partially provided by LVN staff; however, additional appointment capacity was needed for patients with central IV access lines. To jumpstart the training process for non-oncology-experienced RNs, we selected RNs with the experience and skills to manage central IV lines. This type of nursing care does not require an RN to be CS-OE.

Create a Pathway for Experienced Non-oncology RNs to Attain Oncology Nursing Society (ONS) Chemotherapy/Biotherapy Provider Cards. In speaking with RN applicants who had attained the ONS CPC card, they described the difficulty of attaining the card without hands-on experience. By assigning cancer patients needing supportive treatment (blood transfusions and hydrations) to non-oncology-experienced RNs, we created a pathway to provide experience for these new-to-oncology nurses while freeing up CS-OE RNs to administer the chemotherapy/biotherapy.

Retain Chemotherapy RNs. Over the next 20 years, it is estimated that the United States will have 400,000 fewer RNs than will be needed. If Loma Linda University Cancer Center is unable to retain chemotherapy RNs, the consequences for patients and the cancer center may include an increase in cost and a decrease in quality of care. In addition to providing a pathway to gain and develop the skill of administering chemotherapy and biotherapy, our mentoring program offers the opportunity for promotion to a Clinical Nurse C (indicating an advancement in knowledge from competent to proficient). We see our oncology nurse mentoring program as a proactive response to competition for scarce resources.

Meeting the Objectives
We worked with our recruitment department to identify RNs with a minimum of one year of clinical experience. By recruiting from an applicant pool that already had developed basic nursing skills—for example, assessments, interventions, problem solving—we could focus the training on oncology and not have to start from scratch, as with a newly graduated RN. Once potential applicants are selected, they are scheduled for an interview using the behavioral interviewing approach.

Behavioral interviewing is a selection process utilized at Loma Linda University Health to help us hire staff who live our core values of compassion, integrity, teamwork, excellence, and whole-ness. The approach is based on the belief that past performance is the best predictor of future behavior. In a behavioral interview, we select a set of key attributes (skills) and values needed for the position and ask questions to determine whether the applicant has the selected key attributes and values. The applicant then describes stories that bring to life the skill sets required for the position. Questions are directed at how the applicant responded (behaved) in a specific situation, instead of asking how he or she would behave. The interviewers include the hiring manager, a human resource (HR) representative, and a peer. Each person meets with the applicant to ask the selected questions independently. The three interviewers take 30 minutes each to elicit behavioral situations the applicant has experienced. For example, the hiring manager may ask a question such as, “Tell me about your most difficult day at work.” Applicants’ descriptions of their selected situations would reveal what they would classify as “difficult,” their ability to problem solve, how they utilized their resources, and what experience they gained from the situation.

Figure 2. Appointment Types (Level 1 to Level 6)
The HR representative may ask: “Tell me about a scheduling conflict you had.” Applicants responses would reveal how they manage time and work as a team member. The peer interviewer may ask: “Tell me about a time when you were on a team that did not work well together.” Again, this would give insight into what RN applicants have experienced in an ill-fitting team and how they handled the situation. This extensive interview process lasts about one and one-half hours.

Our experience with having a peer involved in the interview process has been positive. Throughout the interview, the peer is judging whether or not he or she would want the applicant as a coworker. Often RN applicants are more at ease with the peer interviewer and may reveal information they would not provide to the hiring manager or the HR representative. The recommendation to hire or not to hire is a consensus decision by the interviewing team.

**The Mentoring Program**

**Phase One.** After the RN is selected for the mentoring program, the first phase is a two-month general orientation to the hospital and the oncology department. Classroom lectures include general hospital policies and routines, general nursing policies, and electronic health record classes. Self-study modules include courses such as fire safety and corporate compliance, a cancer fundamentals course, and departmental introduction. Once the basic courses are completed, the RN enters a preceptored practicum. The RN is introduced to the daily routines and responsibilities, and skills are validated on the department orientation checklist (see Figure 3, page 39).

**Phase Two.** Upon successful department orientation completion, the new RN employee begins phase two of the training. This includes taking on daily patient assignments to manage supportive care treatment appointments such as blood transfusions, hydration, and central line blood draws. During this phase, the RN is exposed to a variety of patients with varying cancer diagnoses and the need for supportive care treatments. Additionally, the RN becomes familiar with the cancer treatment protocols and begins to link side effects and complications to the medications the patient received. Although the mentee RN is assigned to a daily group of patients, his or her mentor is readily available as a resource for questions that may come up during the RN’s shift. Throughout this phase, the new RN meets regularly with the mentor, RN manager, and clinical educator to review and understand the rationale for supportive care treatments. This phase may last from four to 10 months, based on the RN’s progress as assessed and evaluated by the RN manager and the clinical educator.

**Phase Three.** The third phase is the joint decision to attain the Oncology Nursing Society Chemotherapy/Biotherapy Provider Card (ONS CPC). Because of the regular review meetings occurring during phase two, the third phase is a relatively short. The new-to-oncology RN has now been a Loma Linda University Cancer Center employee for approximately one year. The RN enrolls in the ONS Chemotherapy/Biotherapy course and, upon completion, attains the ONS CPC.

**Phase Four.** Once the ONS CPC is attained, the RN begins phase four. Designed to add more daily experience and build confidence, this phase lasts four months. In this phase, the RN is placed again on a focused assignment to gain independence administering chemotherapy/biotherapy competently. Early in the development of this program, we learned that setting a defined time frame prevented an RN who may be hesitant to take on this high-risk skill from steadily progressing through the learning process. The RN works directly with the mentor for consistent support, demonstrating knowledge and skills so that the mentor can document competency. This would include the safe handling of the chemo drug, managing complications that go along with a patient receiving the drug, and scheduling treatment according to the prescribed cycle. This is documented on a second orientation checklist for administering chemotherapy/biotherapy (see Figure 4, page 40).

**Phase Five.** This final phase is optional but highly encouraged. Phase five is the promotion to Clinical Nurse C status, indicating an advancement in knowledge from competent to proficient. While working to attain Clinical Nurse C status, the nurse develops refined expertise and becomes highly proficient in his or her specialty. The nurse not only integrates the oncology standards learned in the ONS Chemotherapy/Biotherapy course into daily practice but serves as a role model and preceptor to his or her colleagues. As the nurse strives to attain the “C” status, he or she continues to learn, grow, and develop professionally. This growth ensures the highest quality of care for patients and their families.

The organizational requirement for Clinical Nurse C status requires a portfolio including a verbal commitment to proceed with the application, peer reviews, coworker reviews, and proof of required points. For example, required points may include advanced degrees, continuing education units, quality improvement courses and/or participation, awards, publications, committee memberships, and advanced skills. The length of this phase varies depending on how long it takes an applicant to acquire the necessary points.

**Mentor Selection**

The mentors for our program are selected through a defined process. The mentor is a more experienced oncology RN who is not only a competent, self-motivated staff member but can also provide supervised orientation and training. First, a mentor may express interest as a professional or departmental goal set during his or her annual performance appraisal. A mentor may also be encouraged to enter the mentoring selection process based on observations by the RN manager or clinical educator. Oncology nurses selected to serve as mentors attend a formal training session offered by the hospital’s Staff Development Department. This one-day workshop is created for the healthcare provider who assists in the orientation and assimilation of staff and students to the work environment. The content provides participants with a general understanding of the preceptor’s role and the preceptor process. This interactive workshop includes elements of the preceptor as a role model, educator, facilitator, and evaluator.
these applicants were new employees to Loma Linda University Medical Center; the other nine were internal transfers from inpatient hospital departments.

Attainment of the ONS CPC is representative of the quality of the training provided to RNs as part of the mentoring program. All 10 of the RNs who opted to pursue the ONS CPC have attained their goal. The average amount of time to attain the CPC was seven months from the date of hire (see Figure 5, page 41).

After successful completion of the workshop, the guidelines for our mentoring program are reviewed with the mentor. This includes daily communication with the RN manager for a focused assignment based on the needs identified in the orientation checklists.

**Mentoring Program Results**

Since the program began in 2014, we have accepted a total of 18 applicants for the oncology nursing mentoring program. Nine of these applicants were new employees to Loma Linda University Medical Center; the other nine were internal transfers from inpatient hospital departments.

Attainment of the ONS CPC is representative of the quality of the training provided to RNs as part of the mentoring program. All 10 of the RNs who opted to pursue the ONS CPC have attained their goal. The average amount of time to attain the CPC was seven months from the date of hire (see Figure 5, page 41).
One of the greatest successes from our mentoring project is the number of nurses we have been able to retain. Ninety percent of the RNs (nine of 10) who attained the ONS CPC have remained as employees within Loma Linda Cancer Center. Although not all RNs who have been in, or are currently going through, the mentoring program attempted to attain the ONS CPC, there is a centerwide retention rate of 72 percent (13 of 18). Of the nurses who have not attained the ONS CPC, four have left the organization, three are on track to attempt the ONS CPC, and one transferred to a nurse navigator position within Loma Linda University Cancer Center prior to attempting the ONS CPC (see Figure 6, page 41).

One unexpected outcome we identified is the relationship between the development of critical thinking through our mentoring program and the critical thinking RNs felt they developed while working in intensive care. There are seven RNs who worked in an intensive care unit setting prior to accepting a position at Loma Linda University Cancer Center. Among these nurses, the most common reason for wanting to work in oncology was the need for greater patient interaction. One might assume that the need for patient interaction would mean working in an acute care inpatient department. However, upon graduating from the mentoring program, nurses with an intensive care unit background have expressed professional satisfaction as an oncology nurse at the same level as a critical care RN. This was attributed to involvement in administering and monitoring patients undergoing cancer treatment.

Not only has there been greater retention within the oncology nursing department, but there has also been a positive effect on mentors. In interviews, RN mentors have expressed an increase in professional satisfaction and an enjoyment of the opportunity to expand their role through the mentoring program.

A high RN turnover rate is an expensive problem. Encouraging career development, growth, and specialization is a strategy to retain nurses. Professional satisfaction can be gained through mentoring, for both the mentee and the mentor. Given the opportunity, nurses are eager to specialize in oncology.

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**Figure 4. Excerpt from the Orientation Checklist for Administering Chemotherapy/Biotherapy**

<table>
<thead>
<tr>
<th>Method of Instruction Key:</th>
<th>Method of Evaluation Key:</th>
<th>Method of Instruction (Use Instruction Key)</th>
<th>Evaluation Method (Use Evaluation Key)</th>
<th>Date</th>
<th>Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>P = Policy/Protocol/Practice</td>
<td>O = Observation (clinical setting)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E = Education Session</td>
<td>RD = Return Demonstration</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>WC = Written Competency</td>
<td>T = Written Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C = Clinical Practice</td>
<td>V = Verbal Review/Discussion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D = Demonstration</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**CHEMOTHERAPY/BIOHERAPY ADMINISTRATION**

Observed demonstrating administration of chemotherapy/biotherapy following all double-checks and correct techniques including:

- Compares original order to delivered drug (checks with pharmacist or RN)
- Verifies patient identification with two identifiers
- Confirms informed consent on chart before administering first treatment
- Confirms/obtains nursing consent to treat
- Verifies adequacy of venous access and appropriate IV site selection
- Verifies pump settings
- Verifies line IV line connected to patient
- Confirm patient has had treatment education
- Demonstrate nursing double checks/signing before chemotherapy administration
- Demonstrate calculation of weight for possible dose adjustment
- Demonstrate correct usage of protective gear
- Use of standing orders for hypersensitivity reaction
Lexine Thall, MN, RN-BC, AOCN, is director of Patient Care and Kristina Chase, BSN, RN, OCN, is manager of Patient Care at Loma Linda University Cancer Center, Loma Linda University Medical Center, Loma Linda, Calif.

References

Our Program At-a-Glance
Loma Linda University Health is a nonprofit religious corporation and is the umbrella organization for Loma Linda University Cancer Center, located in Loma Linda, California. Our mission is to continue the teaching and healing ministry of Jesus Christ “To Make Man Whole” through healing the whole person—body, mind, and spirit. LLUCC provides patient-focused, world-class care, provided by highly respected specialists in a convenient and accessible environment. Our commitment to caring for the whole patient ensures the entire cancer treatment process is individualized and focused on treating each patient’s physical, emotional, and spiritual needs.