ONc-PoWER

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An innovative web-based education resource for oncology nurse practitioners

There is growing evidence that the nation is facing a shortage of cancer care providers needed to provide high-quality cancer care. As the population ages, the treatment options for cancer expand and cancer survival increases, yet the current oncology workforce is without proportionate replacement for expected attrition.[1,2,3] While nurse practitioners (NPs) working within the specialty field of oncology are expected to assume the cancer care provider role, some may come with limited cancer experience and knowledge. The web-based education resource discussed in this article can help ensure that these providers have a basic level of knowledge to support safe, quality cancer care.

The Nurse Practitioner Role in Cancer Care

NPs have established evidence of cost effectiveness, patient satisfaction, and quality care outcomes in multiple care settings,[4-10] prompting the rapid growth of these professionals in cancer care.[5,11-14] NPs in the field of general medicine and primary care have strong skills in patient education, communication, and adherence to evidence-based practice guidelines.[15] Additionally NPs in oncology have demonstrated patient outcomes that include: [16-19]

- Increased access to care and patient education
- Improved patient satisfaction
- Cost effectiveness
- Improved patient compliance
- Fewer hospital admissions
- Decreased lengths of stay, readmission rates, emergency care visits, and healthcare costs.

The American Society of Clinical Oncology (ASCO) Fall 2008 Workforce Statement urged the development of a workforce to ensure continuous delivery of high-quality cancer care.[20] Re-strategizing oncology care delivery by increasing the numbers and expanding the roles of non-physician practitioners, such as NPs, is considered to be critically important to meet the current and potential cancer care needs of the U.S. population.[20]

While the shortage of oncology providers is seen as an opportunity for NPs to play a major role in the care of cancer patients and their families, this opportunity to utilize nurse practitioners to the full extent of their capacity is not being realized. A survey of practicing oncologists conducted in 2006 found that more than half (54 percent) of the nation's oncologists work with an NP or physician assistant, but few NPs see themselves as functioning in a truly "advanced practice" nursing role. The true scope of NP practice includes: [21,22]

- Performing comprehensive health histories and physicals
- Ordering appropriate testing
- Making differential diagnoses
- Performing procedures
- Ordering medications, including chemotherapy
- Promoting health and wellness despite the stage of illness.

This full scope of practice is not realized due to a variety of factors:

- Poor education and preparation in oncology limiting the ability of the nurse practitioner to immediately assume patient care responsibilities
- Poor physician understanding of the role potential
- NPs new to oncology assuming a more comfortable and familiar "staff nurse" role rather than advanced practice nurse role in the face of new challenges and role uncertainty
- Reluctance or unwillingness of the supervising physician to teach "Cancer 101" in the middle of other clinical responsibilities.

Standardized cancer care education for oncology nurse practitioners—that creatively includes the supervising physician as a preceptor—would help eliminate these barriers. This education would include an understanding of the full scope of the oncology nurse practitioner role; the basic preparation to assume that role with safety and quality; and a template to help achieve that potential.

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The Need for an Oncology-Specific Curriculum

Traditionally, NPs are educationally prepared under broad umbrellas of patient populations, not disease-specific entities.[12] Because cancer care reaches across all patient populations, the existing NP educational preparation—family, adult, acute care, women's health—is not entirely adequate for the care of the cancer patient and family. NPs who come from any of these patient population educational programs and enter oncology require additional education to be able to provide safe and appropriate care of the cancer patient and family across the cancer care trajectory.[23-27] Currently NPs without previous cancer care experience or knowledge are entering oncology positions requiring a high degree of autonomy and decision making without any additional training or education, leaving cancer programs at risk of poor patient outcomes, risk management vulnerabilities, and high clinician attrition.[28] Improving and standardizing the cancer care education available to NPs entering oncology—and their clinical preceptors—is an important and essential step in eliminating or mitigating these risks.

Factors & Information Shaping the Oncology NP Curriculum

As the nurse practitioner role in oncology care has grown, additional sources inform the need, content, and delivery mode for the "Adult Cancer Care for NPs" educational program. These sources include the Oncology Nursing Society's (ONS) entry-level competencies and a "Bridging the Gap" survey of working NPs in oncology. In 2007 a national expert consensus panel, convened through ONS, created the development of entry-level competencies

for NPs entering oncology practice and conducted a national validation process from practicing oncology NPs and educators.[28] These competencies were created using established national nurse practitioner standards and through consultation with the National Organization of Nurse Practitioner Faculties (NONPF) and the American Nurses Credentialing Center (ANCC). The templates for Family, Adult, Women's Health and, and Acute Care NPs were used to develop the oncology NP entry-level competencies. Learn more at: ons.org/sites/default/files/npcompetencies.pdf and http://c.ymcdn.com/sites/www.nonpf.org/resource/resmgr/competencies/populationfocusnpcomps2013.pdf.

A working group of experienced nurse practitioners established through ONS developed a cross-sectional, descriptive 30-item electronic survey to assess learning needs at entry into and through the first year of practice for oncology NPs. In the first year of practice 90 percent of oncology NPs rated themselves as "prepared" or "very prepared" in standard nurse practitioner competencies, such as obtaining patient history, performing physical exam, and documenting findings. However, oncology NPs rated themselves as "not at all" or only "somewhat prepared" in important clinical issues of chemotherapy and biotherapy competency (77.9 percent, n=81); recognizing and managing oncologic emergencies (70.2 percent, n=77); and recognition and management of drug toxicities (60.6 percent, n=63). The primary source of oncology education for oncology NPs new to practice was almost exclusively the collaborating and/or supervising physician (80.8 percent, n=84).[29]

"Adult Cancer Care" Introductory Learning

The delivery method and timing of the educational intervention chosen for the essential introductory content was formulated based on Knowles' Adult Learning Theory[30] and Bloom's classic Taxonomy of Learning.[31] Knowles' Adult Learning Theory states that adults learn best when content can be made immediately relevant. According to Bloom's Taxonomy of Learning, content should be increasingly sophisticated, progressing from basic delivery of information to higher level educational competencies, such as synthesis and application. The NP curriculum advances from basic, essential introductory cancer care information to more clinical application in each module, with suggestions for application with the identified mentor as content is made relevant to the learner's needs. These clinical application suggestions could be made to the mentor to facilitate application of the content as it is presented. For the NP new to cancer care, the foundational content with mentored application to cancer care is necessary for safe application to clinical problem solving.

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additional option may entail some basic orientation with other nursing staff, which is not appropriate for the complexity of the nurse practitioner role or there may be a random mix of web-based and on-site courses—with or without formal mentoring—and with limited insight in regards to curriculum quality and learning needs of the new NP.

To begin to better define the role and standardize knowledge and skill preparation into oncology practice, ONS published specific competencies for the entry-level oncology nurse practitioner. These 2007 competencies build on core competencies for all nurse practitioners, to meet the "unique needs of patients with a past, current, or potential diagnosis of cancer."[28] The Oncology Nurse Practitioner Competencies assume that nurse practitioners have completed graduate course work and clinical experiences to "provide advanced nursing care to meet the specialized physiologic and psychological needs of patients throughout the continuum of care, including cancer prevention and detection, cancer diagnosis and treatment, rehabilitation, survivorship, and end-of-life care."[28]

ONc-PoWER

In 2013 and in accordance with the ONS Competencies for entry to practice, a team of researchers from the University of Pittsburgh School of Nursing developed an online web-based educational tool titled "Oncology Nurse Practitioner Web Education Resource (ONc-PoWER)." Funded by the National Cancer Institute (NCI), the ONc-PoWER course consists of five modules (Table 1, right) to be completed at the learner's own pace.

Enrollment and completion of the course will qualify nurse practitioners for 30 continuing education (CE) contact hours and their mentors will receive a $1,000 honorarium. The course is offered at no charge for nurse practitioners who began their career in cancer care within the last year.

The five interactive modules use life-like characters in clinical story settings. For example, "Gina" is a recent NP graduate who is excited and nervous in her new cancer care position. Within the module Gina is assigned a mentor who provides support, direction, and encouragement. The course then "solves" Gina's challenges as a new nurse practitioner in cancer care. One challenge: how to assess a new cancer patient. Gina shares her anxiety with her mentor, who tells Gina that everyone feels nervous. The mentor then identifies resources to help Gina assess and treat her new patient; the learner taking the online course learns to use these resources alongside of Gina.

The ONc-PoWER course (nursing.pitt.edu/continuing-education/onc-power) is being disseminated and evaluated as an educational product for adoption and use by cancer programs employing nurse practitioners. The course is embedded into a university course web structure as a continuing education module. Each module is organized into Content, Challenges, and Resolution.

Table 1. The Five Modules in the ONc-PoWER Web-Based Adult Cancer Care Course

MODULE 1 (The New Patient)
Skills and knowledge related to a new patient visiting the clinic:
- Locate and review information in a patient's record.
- Assess tumor characteristics.
- Complete a history and physical.
- Communication techniques.

MODULE 2 (Patient Presentation)
Presenting a patient to the multidisciplinary team:
- Select the appropriate amount of the patient's information to include.
- Prepare for the presentation.
- Manage challenging situations that may occur during the presentation.

MODULE 3 (Care Continuum)
Managing patients at different points on the cancer care continuum:
- Recognize the distinct visits in cancer care.
- Communication with the anxious patient.
- Symptom management.
- Support for patients during survivorship.
- Recognize oncologic emergencies.
- Share difficult or bad news with the patient.

MODULE 4 (Palliative and Hospice Care)
Incorporating palliative care into cancer care:
- Incorporate palliative care into a treatment visit.
- Manage common symptoms related to palliative care and hospice care.
- Identify the important components of hospice care.

MODULE 5 (Self-Care and Professional Development)
Taking care of yourself:
- Ways to remain physically and emotionally healthy in a demanding profession.
- Plan for your professional development (setting goals, choosing conferences and seminars, further education, professional organizations, and more).

Table 2. The 7 Principles for Good Practice in Undergraduate Education in ONc-PoWER

PRINCIPLE 1. Good practice encourages student-faculty contact.

The ONc-PoWER course was designed to encourage contact between NPs and their mentors.

Through Gina (the new NP) and her mentor (Sandra), the course models an effective NP/mentor relationship. The course encourages:

- NPs to identify a mentor and/or request a mentorship.
- NPs to learn the content independently, while the mentor assists the NP in applying the content. Mentors are required to evaluate the NP's ability to apply the content of each module to practice. For example, when the NP completes Module 1, the mentor is asked to evaluate the NP's ability to perform a history and physical by agreeing to the following statement: "The nurse practitioner was observed and critiqued while performing a History and Physical (H&P) for a patient with cancer." Student and faculty contact is primarily through email and telephone, as needed.

PRINCIPLE 2. Good practice encourages cooperation among students.

The ONc-PoWER course is taken independently by NPs new to oncology, but it was designed to encourage NPs to work within a multidisciplinary team. Specifically, Module 2:

- Introduces multidisciplinary team members, including fellows, RNs, and visiting professors.
- Presents challenges NPs may face when presenting a patient to the multidisciplinary team.
- Asks NPs to choose the best response to some challenging comments or questions from the team during a patient presentation.
- Discusses the importance of team-based support during the module on wellness and growth.

PRINCIPLE 3. Good practice encourages active learning.

- Curriculum content is provided to NP learners through interactive activities.

PRINCIPLE 4. Good practice gives prompt feedback.

- Interactive learning activities prompt instant feedback with opportunity for revision of answer.

PRINCIPLE 5. Good practice emphasizes time on task.

- The ONc-PoWER course uses the blackboard system, which allows instructors to monitor participation and interaction of NPs and mentors throughout the course. Course faculty has the ability to see how often and how long NPs and mentors work on the program.
- The course is available to NPs and mentors for 6 months.
- NPs who do not move through the course, or do not begin the course after registering, receive reminder emails.
- NP learners can work at their own pace.
- NP learners can review material as much as needed.
- NP learners can immediately apply the curriculum in their work setting.

PRINCIPLE 6. Good practice communicates high expectations.

- The expectation is that new NPs will want to learn this content and invest time in order to become more proficient with specialty content.

PRINCIPLE 7. Good practice respects diverse talents and ways of learning.

The ONc-PoWER course provides a variety of learning activities for NP engagement:

- Multiple types of interactive exercises:
  - ◇ In Module 4, the NP observes a conversation between the physician, patient, and family and is asked to assess how the conversation going.
  - ◇ In Module 4, interactive sections require NP learners to "click and drag" statements or thoughts under correct categories.
  - ◇ In Module 5, NPs engage in an interactive game. Specifically, NPs are shown a Zen Garden and asked to drag a floating rock to the appropriate effective and/or ineffective action NPs would take to protect and care for themselves.

Course includes multiple sources for content. Information is presented in text on screen, linked to text-based sources, and reiterated in course feedback during interactive exercises.

The "Content" section features the lesson of the module with the introduction of outside resources. The "Challenges" section features interactive situations in which the NP is asked to use the content or resources just presented for patient situations with immediate feedback. Each module ends with a "Resolution."

Creating quality online educational materials requires more than knowledge translation. All online teaching aids must connect with the learner, complement their learning style, and incorporate adult learning principles. Furthermore, any instructional strategy must be supported by sound educational principles that guide the teaching and learning process. Researchers from the University of Pittsburgh School of Nursing used the Seven Principles for Good Practice in Undergraduate Education as a framework to create the ONc-PoWER course: [32]

1. Good practice encourages student-faculty contact
2. Good practice encourages cooperation among students
3. Good practice encourages active learning
4. Good practice gives prompt feedback
5. Good practice emphasizes time on task
6. Good practice communicates high expectations
7. Good practice respects diverse talents and ways of learning.

While all seven principles were implemented in the development and delivery of the ONc-PoWER curriculum, the two or three areas that the curriculum used the most were active learning, prompt feedback, and student/faculty interaction (see Table 2, left).

NPs interested in taking ONc-PoWER should consider these additional benefits:

- While NP learners must use the embedded resources within the course, these resources can also be used in the real-world setting. For example, in the New Patient module, NP learners use an embedded pathology report and outside resources to review the different sections in the pathology report and answer questions about the information in the pathology report, essentially mimicking tasks required of NPs in the practice setting.
- The ONc-PoWER curriculum provides oncology education in a measured approach. While course pace may vary, the expectation is that that NP learners will complete the course within four to six months from time of enrollment. Accordingly, course access expires six months from enrollment.
- Online learning modules allow NP learners to review course content as often as needed to fully understand the information and concepts presented. Students work at their own pace, but within the specific time frame mentioned above.

The ONc-PoWER course begins with the assumption that NPs new to oncology are motivated to learn additional content in order to provide quality, safe cancer care to their patients. Further, this course was developed with the intention that nurse practi-

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tioners will want to implement this education into routine cancer care. Finally, the course helps prepare NPs for their future. Specifically, Module 5 speaks to the professional development that is necessary for the new nurse practitioner. The module covers continuing education and professional certification, and encourages healthy lifestyle choices to prevent emotional burnout in a high-stress and high-caring work environment.

Evaluation of the curriculum by nurse practitioners new to oncology and their onsite mentors is currently ongoing. For more information about ONc-PoWER and its course curriculum go to: nursing.pitt.edu/continuing-education/onc-power. ◻ᴼᴵ

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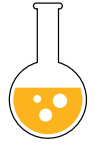
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