How can we close the educational gap for advanced practice registered nurses (APRNs) who are new to oncology? Because most APRN education is broad, there’s a lot that remains to be taught. Come hear some of the most unique solutions to closing the educational gap, and prepare yourself to think outside the box. You’ll learn about an online APRN oncology curriculum, a rare program. You’ll also explore The Ohio State University Comprehensive Cancer Center—Arthur G. James Cancer Hospital’s new advanced practice oncology fellowship, which is integrated with the ONS post-master’s curriculum. Both are cutting-edge ways to create more formal education and practice experiences, and you’ll dig deep, exploring their program rationale, logistics, and lessons learned. You’ll come away with new tools for implementing a needs assessment in your practice, instilling evidence-based practice, and changing the way you educate APRNs.

**Objectives:**
At the end of this session, participants will be able to:
1. Evaluate two different methods of educating oncology APRNs to determine an appropriate plan of action to create APRN oncology at their practice.
2. Decide on the appropriate timing of when to initiate oncology-specific education and utilize established resources to make their education successful.

**Content Outline:**

I. Rationale for creation of APRN-specific oncology education
   A. Decreasing physician supply, increasing oncology population
   B. Recommendations from IOM report “The Future of Nursing”
   C. Review educational needs of oncology APRNs.
   D. Current oncology APRN education opportunities

II. Curriculum development
   A. Oncology focus
      1. Integration of ONS post-masters oncology course
      2. Supplemental didactic content
         a. Case discussions
         b. Problem-based approach
         c. Simulation
   B. Role focus
      1. APRN skills
         a. Understanding state/practice setting requirements
      2. Collaborating within multidisciplinary care team

III. Infusing evidence-based practice
   A. Embedded librarian’s role in the fellowship
   B. EBP course work
   C. EBP project
   D. Potential outcomes–measuring EBP beliefs and implementation

IV. Logistics of programs
   A. Timeline for development
   B. Who needs to be involved
   C. What kind of funding or staffing does it take?
   D. Utilization of available resources
      1. ONS post-masters course
      2. Colleges/universities with oncology curriculums
   E. Fellowship program benefits/costs
      1. Profile of applicants/participants

V. Lessons learned and future directions
Bibliography:
Background

• The American Society of Clinical Oncology (ASCO) estimates a 48% increase in the demand for oncology services by 2020
  – As it stands now, there will only be an increase in oncologists of 14%
    • Resulting in a projected shortage of 2,550 to 4,080 oncologists
  – Advanced Practice Registered Nurses (APRNs) are part of the solution

(Erikson, et al., 2007 & Erikson et al., 2009)

Background

• What percentage of NPs practicing in oncology received oncology-specific content in their NP training programs?
• What percentage of Advanced Oncology Certified Nurse Practitioners (AOCNPs®) since received graduate education focused in oncology?

(McCorkle, et al., 2011; Navidion, et al., 2010)

Post-Education Training

• The Institute of Medicine’s (2011) Future of Nursing report recommends transition to practice programs
• Oncology-specific internships date back to 1985 when the first one was developed in collaboration with the National Cancer Institute (NCI) Intramural Research Program.
• Now many of the 41 NCI Cancer Centers have oncology internships ranging from six weeks to one year.

(Childress & Gorder, 2012; Parchen, et al., 2008)

Residency Outcomes

• For new registered nurses, residencies or internships lead to higher retention rates.
• Oncology specific internships have led to improved retention rates, increased RN competency, confidence, socialization, and satisfaction.

(Childress & Gorder, 2012; Goode, et al., 2013).

NP Oncology Knowledge

• Most oncology-focused learning occurs on the job
• A national needs assessment of current oncology NPs reported they overall felt poorly prepared to provide specific oncology care.
  – Topics they felt most unprepared included: procedures, chemotherapy and biotherapies, billing/reimbursement, and recognizing/managing oncologic emergencies.
  – Many described being “not at all prepared for” end of life care, recognition/management of drug toxicities, diagnosis and staging to help formulate a treatment plan, and radiographic ordering and interpretation.

(Rosenzweig, et al., 2012).

NP Oncology Knowledge

• How long does it take a NP new to oncology to feel fully competent in his/her practice?
• What does this gap in knowledge and skills lead to for these NPs?

(Rosenzweig, et al., 2012).
**Advanced Practice Oncology Fellowship Program**

- Based on experience at our institution, what is known in the literature about new oncology NP preparedness, and recommendations from the IOM’s *Future of Nursing* report, we received approval to initiate a year-long fellowship starting fall 2013.

**Fellowship**

- **Our goal**: to have a robust advanced practice provider (APP) workforce that is specialty certified and has a rich foundation in EBP with an ability to integrate it into every day practice.

**Fellowship**

- Ten fellows accepted in inaugural class
- All new graduate NPs
- Average years RN experience = 3.2 (range 0-12)
  - Other experience (engineering, research, IT, public relations)
- No oncology experience and limited role experience

**Fellows’ Needs**

- Prior to starting the program, the fellows completed a needs assessment that was modified from The Bridging the Gap Workgroup’s publication.
- Fellows most comfortable with:
  - Performing a physical exam
  - Documenting in EHR
- Fellows least comfortable with:
  - Performing procedures
  - Providing survivorship care

(Rosenzweig, et al., 2012)

**Fellowship Clinical Rotations**

- **September – December:**
  - Fellows rotate through various disease-based groups and experience both inpatient/outpatient, medical/surgical settings, as appropriate to the clinical area.
- **January – August:**
  - Fellows will have 2-3 longer rotations that will be based on the fellow’s interest, compatibility with the clinical area and anticipated need to add an additional NP to the team.

**Fellowship Education**

- **Didactic Education:**
  - Bi-monthly, two hours
  - Presentations from various professionals within The James re: oncology/clinical knowledge
- **Lunch sessions:**
  - Opposite weeks, two hours
  - Focus on APP role and other multidisciplinary roles
- **ONS Post-Master’s Foundation in Cancer Care for the Advanced Practice Provider**
  - Online course, 12 weeks
Fellowship & Technology

- Paperless schedules via Outlook
- Created orientation books via iTunes University per specialty area and grant access to fellows to view
  - Post lecture materials instead of printing slides
- Utilizing Apps like Notability which allow you to download slides and make comments on them.
- Communicating with each other
  - Using a closed Facebook group (with set ground rules) and Edmodo for the fellows to communicate.

Advantages of Fellowship Program

- Dedicated time for education away from the clinical environment
  - Time is above a traditional onboarding process
- Opportunity to try out several specialties prior to committing to one
- Assigned mentor
- 12 month onboarding compared to traditional 2-3 month new hire.

Measuring Outcomes

- Ohio State University IRB approval to study fellowship cohort during the program and one year after
- Outcomes include perceived autonomy, job satisfaction, belief in and implementation of evidence based practice, and cost-effectiveness of the program.

Embedded Librarian in APP Oncology Fellowship

- Health Sciences Library conducted a request for proposals grant awarding embedded librarian
- Fellowship awarded embedded librarian for up to 20 hours per week for 12 months
- Librarian had years of experience teaching nurses, nursing students and medical students evidence based practice

What is an embedded librarian?

- Disparity in working definitions
- Compare to embedded journalists
- Cultural integration into a clinical or academic unit to provide customer-driven, specialized, and complex information services
- Distinctions in terminology: informationists versus clinical librarians versus embedded librarians

Initial Vision for Embedded Librarian within APP Fellowship

- Guide APPs in developing and conducting EBP projects
- Refresh curriculum in collaboration with nursing education
- Provide real time evidence in the context of clinical interdisciplinary team
- Connect with patients and families regarding searching high quality info resources
Actual Embedded Librarian Role within the APP Fellowship

- Provided expert literature support during planning processes
- EBP workshop with fellows
- Support for EBP projects: preliminary investigation on questions, mentoring in addition to CNS mentors, guidance and motivation throughout project
- Mentoring critical thinking by application of EBP process

Impact and Challenges

- Statistics
- Clinical rounds
- EBP realities
- Patient education
- Working within a system’s established culture

Resources for Developing an Embedded Librarian Program

- If you have a library, contact them first to begin discussions.
- If you do not have a library, consider recruiting through the Medical Library Association: mlanet.org.
- Consider consulting with established programs for guidance.

Practice Issues in Oncology Nurse Practitioner Practice

Margaret Quinn Rosenzweig PhD, FNP-BC,AOCNP
University of Pittsburgh School of Nursing

Practice Issues in Oncology Nurse Practitioner Practice

R25 - CA148050-03

Original Curriculum
University of Pittsburgh

- Multiple sources of input
- Nurse practitioner educational criteria – ONS and ACS
- Oncology advanced practice nursing
  - 48 credits – 600 clinical hours
  - 9 credit/30 week curriculum – 400 clinical hours oncology
  - Traditional didactic lectures
  - Clinical with MD/NP/PA preceptors
  - Little opportunity for faculty feedback
  - Good Outcomes – Students felt prepared, employers rated highly prepared
  - No longer possible

Adapted for Clinical Education

- Development of specific curriculum for NPs new to cancer care in community settings, outpatient hospital clinics and inpatient cancer care settings
- 6 week “Cancer Care for the Nurse Practitioner”
  - Didactic only
- Developed and implemented based on the established curriculum
- Limitations – Clinical commitments – attendance sporadic
- This education can not be in work time settings
Oncology Nursing Society

- Recognition of the need for entry level competencies in oncology nurse practitioner practice
- Formulated an national expert consensus panel
  - Created the development of entry level competencies
  - Conducted a national validation process from practicing oncology nurse practitioners and educators
- Competencies were created with the consultation of the National Organization of Nurse Practitioner Faculties (NONPF) and the American Nurses Credentialing Center (ANCC)
- Helped to delineate content on which the educational program is based

Top Learning Needs

- What would you rate as a top learning need for new oncology nurse practitioners?

Primary Sources of Information

- Who or what is the most common source new oncology NPs utilize to learn?

Need is Established

- Education must be done at the post graduate level
- Physicians are providing that education
- Novel educational delivery system

Application Opportunities

- Application of knowledge in problem solving
- Communication Skills
- Feedback for Learners

Interactive Education

- Problem based learning
- Simulation
Curriculum

• New patient visit
• Presenting a new patient
• Treatment across the continuum of care
• Hospice and palliative Care
• Self care and professional growth

Curriculum – New patient visit

• Performing a Comprehensive Review of Medical Record
• Performing a Comprehensive Review of Pathology and Laboratory Results
• Performing a Comprehensive Review of NCCN Guidelines (or other nationally acceptable guidelines such as ASCO)
• Creating a comprehensive initial History and Physical for a newly diagnosed oncology patient
• Using appropriate communication techniques with patients in order to reduce anxiety and encourage communication

Presenting a New Patient

• Select and incorporate the appropriate information in the History of the Present Illness
• Select and incorporate the appropriate amount of detail in a patient presentation
• Appropriately prepare and deliver a patient presentation
• Handle challenging situations that arise during patient presentations
• Document the appropriate amount of information from the patient visit

Treatment Visits Across the Cancer Continuum

• Recognize the distinct visits that occur across the cancer continuum
• Communicate with an anxious patient
• Recognize the resources for and the process of managing symptoms appropriately.
• Provide and encourage support during cancer survivorship.
• Recognize the potential for oncologic emergencies.
• Share difficult or bad news

Hospice and Palliative Care

• Incorporate palliative care into a treatment visit
• Manage common symptoms related to Palliative and Hospice Care
• Recognize effective methods for integrating goals of care including the introduction of Hospice
• Identify important components of Hospice Care

Self Care Professional Development

• Know how to remain physically and emotionally healthy in a challenging environment
• Plan for your professional development
Curriculum Dissemination
• National – R25 Grant Mechanism
• Recruitment - 100 new nurse practitioners and their physician/nurse practitioner mentors.

Evaluation
• Mentor assessment
• Self described knowledge and confidence
• 1 year follow up for professional development

Future Directions
• National imperative for minimal educational requirements.
• Institutional commitment to training

Conclusion
• There is an established need to offer oncology education post graduation
• Multiple ways exist to obtain this additional education including on the job, through university affiliations, and fellowship programs
• Incorporating an embedded librarian services is another novel way to enhance clinical education and practice
Preceptor Evaluation

Please rate with following scale for a nurse practitioner new to oncology

1 – No Skill
2 – Minimal skill
3 – Average Skill
4 – Above average
5 – Highly skilled

New Patient Visit

1. The nurse practitioner is able to discern the necessary components of the initial history in a patient with cancer.
   1  2  3  4  5

2. The nurse practitioner is able to utilize national guidelines to determine the necessary components of the patient history according to tumor type
   1  2  3  4  5

3. The nurse practitioner is able to find the necessary components of the patient history in the available medical records.
   1  2  3  4  5

4. The nurse practitioner is able to obtain a comprehensive history from a new patient.
   1  2  3  4  5

5. The nurse practitioner is able to deal with challenges that occur during new patient visits.
   1  2  3  4  5

Patient Presentation

1. The nurse practitioner is able to relate a comprehensive history and physical for a new patient.
   1  2  3  4  5

2. The nurse practitioner is able to focus the History of the Present Illness on the details of the malignancy.
   1  2  3  4  5
3. The nurse practitioner is able to integrate appropriate pieces of information from other components of the history into the History of the Present Illness.

1  2  3  4  5

4. The nurse practitioner is able to present a new patient in an efficient but comprehensive manner.

1  2  3  4  5

5. The nurse practitioner is able to remain focused and efficient in her presentation despite questions and interruptions.

1  2  3  4  5

**Patient Visits**

1. The nurse practitioner is able to obtain the appropriate information for the patient visit according to the patient’s place on the cancer care continuum.

1  2  3  4  5

2. The nurse practitioner is able to assess and grade chemotherapy related toxicity.

1  2  3  4  5

3. The nurse practitioner is able to appropriately manage chemotherapy related side effects.

1  2  3  4  5

4. The nurse practitioner is able to counsel regarding survivorship issues.

1  2  3  4  5

5. The nurse practitioner recognizes potential oncologic emergencies and intervenes appropriately.

1  2  3  4  5

**Palliative Care**

1. The nurse practitioner appropriately integrates palliative care into metastatic cancer care visits.

1  2  3  4  5

2. The nurse practitioner assesses and manages symptoms specific to patient’s receiving active treatment with metastatic disease.

1  2  3  4  5
3. The nurse practitioner practices empathic communication, listening and responding to patient emotion.
   
   1  2  3  4  5

4. The nurse practitioner is able to suggest hospice consults appropriately.
   
   1  2  3  4  5

5. The nurse practitioner assists patient and families with clarification of treatment goals.
   
   1  2  3  4  5

**Self Care and Professional Development**

1. The nurse practitioner is able to articulate a professional development plan for 1 and 5 years
   
   1  2  3  4  5

2. The nurse practitioner is aware of opportunities for continuing education in oncology appropriate to her learning needs.
   
   1  2  3  4  5
### Examples of Embedded Librarian Work

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<td>Patients with cancers requiring bone marrow examination for diagnosis, staging, and monitoring treatment effectiveness</td>
<td>Bilateral bone marrow aspiration and/or biopsy</td>
<td>Unilateral bone marrow aspiration and/or biopsy</td>
<td>False negatives Change in treatment</td>
<td>During the course of staging and treatment monitoring</td>
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<td>Bone marrow examination Bone marrow biopsy Bone marrow aspiration (Bone marrow AND diagnosis OR pathology) AND bilateral</td>
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<td>Sensitivity and specificity Diagnosis</td>
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Searched in PubMed, CINAHL, Scopus

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(((bone marrow examination) OR (bone marrow AND (Diagnosis OR pathology)))) AND (lymphoma OR leukemia OR carcinoma OR sarcoma OR preleukemia OR multiple myeloma OR myelodysplasia) (((bone marrow examination) OR (bone marrow AND (Diagnosis OR pathology)))) AND (lymphoma OR leukemia OR carcinoma OR sarcoma OR preleukemia OR multiple myeloma OR myelodysplasia) AND (bilateral OR unilateral)
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### Citation


Prospective study of 49 cases of NHL. Bilateral BM biopsy obtained from posterior superior iliatic spine. Included ages 2-86. Indian Study Results: 55.1% showed BM involvement by lymphoma (27 out of 49 cases). Of these 27 cases with BM involvement, 4 (14.1%) had unilateral involvement while the other 23 had bilateral. Results give a lot of histological specifics related to the examination of BM itself. Might need to consult a pathologist for better understanding of their results.

**Brusamolino, E., Bacigalupo, A., Barosi, G., Biti, G., Gobbi,** Guidelines produced by the Italian Society of Practice guideline; systematic review + expert panel
| P., Levis, A., ... Tura, S. (2009). Classical Hodgkin's lymphoma in adults: guidelines of the Italian Society of Hematology, the Italian Society of Experimental Hematology, and the Italian Group for Bone Marrow Transplantation on initial work-up, management, and follow-up. *Haematologica, 94*(4), 550-65. doi: 10.3344/haematol.2008.002451 | Experimental Hematology and the Italian Group for Bone Marrow Transplantation. Included a comprehensive and systematic literature review plus consensus. Focused on classical HL; lymphocyte predominate histology is excluded. In patients with B symptoms and/or advanced stage disease (Stage III/IV) and/or blood count abnormalities, mono-lateral bone marrow biopsy should be performed. Grade D recommendation (support by poor quality evidence or evidence extrapolated from level 2+ studies, sustained mainly by experts' opinion. Used Scottish Intercollegiate Guidelines Network grading system | Level VII on Melnyk/Fineout-Overholt pyramid (for this particular recommendation) |