The 2004 Schering Lecture

Are Advanced Practice Nurses (APNs) here to stay? The APN in the oncology setting

By Krista Lachance

I feel extremely honoured to have been asked to present at the 2004 CANO conference on a topic that is near and dear to my heart, "Are advanced practice nurses (APNs) here to stay? The APN in the oncology setting." Oncology nursing is one of my passions. I am convinced that in life, if you want something, you have to believe in it with passion, and it is my consuming passion for nursing and advanced nursing practice that has brought me here today to speak to you, my colleagues. I challenge each of us to find our passion in nursing. It does not have to be in advanced nursing practice, but I believe we have a responsibility to support one another in our often complex pursuits.

When I first began examining the literature on my topic, I actually thought this presentation should be titled: "According to the literature, did we do anything right? And, if we did so many things "wrong" why is it working?" Today's presentation focuses on the following objectives:

- Gain further understanding of the who, what, where, how, when and why of APNs
- Explore the Cross Cancer Institute's experience with introducing this role along with its evolution
- Provide feedback from staff and patients on their experiences working with an APN
- Discuss future directions involving the integration of APNs into oncology care.

All nurses do not work with APNs and, for this reason, I thought I'd start with who I am. Unfortunately, advanced practice nurses have too many titles including: CNS, NP, Advanced Nurse Practitioner, Expanded Role Nurse, Nurse Associate, Physician Assistant, and Physician Extender. Along with the official titles are the unofficial ones which include pioneer and trail blazer. Now, I recognize that most of these are merely job titles as opposed to elaborating on the actual role, however, the list of titles serves to illustrate two points: 1) there is probably a fair amount of role confusion with regard to APNs, and 2) with at least eight possible titles, the literature is scattered and can be difficult to locate (Brown & Draye, 2003; Canadian Nurses Association, 1997; McDermott-Blackburn, 1998; Murphy-Ende, 2002).

What is an advanced practice nurse (APN)? It is an umbrella term describing nursing practice at the edges of the expanding boundaries in nursing. Advance practice remains grounded in knowledge that is the foundation of nursing theories and values, as well as incorporating other theoretical foundations and research such as medicine, psychology, and sociology. APNs maximize the use of in-depth nursing skills and knowledge (Canadian Nurses Association, 2002).

Each province is responsible for the regulation of APNs and, as a result, practice rules vary across Canada. In Alberta, the scope of practice includes diagnosis and treatment, along with permission to order and perform lab, diagnostic tests, and interpret the results of tests. APNs are permitted to prescribe drugs listed under Schedule 1 with the exception of narcotic analgesics. Nurses who work as APNs must be registered with the Alberta Association of Registered Nurses on an extended practice roster. Registration on the roster allows nurses to have an expanded scope of practice involving the elements I have described. Entry requirements for the extended practice roster require a nurse to hold a BScN, have at least three years of practice and complete an approved Nurse Practitioner (NP) education program. In Alberta, two education programs are offered, one at the University of Alberta, another at the University of Calgary; both qualify as approved NP education programs.

One might ask why it would be important to include APNs on the oncology team. The answer is quite simple; patients benefit from them. Research continues to demonstrate that APNs improve the public's access to high quality care at a cost saving to our health care system (Feldman, Ventura, & Crosby, 1987; Kinnersley et al., 2000; McGrath, 1990; Mundinger, 1994; Mundinger et al., 2000). With an APN as part of the staffing mix, we can provide faster access to specialized cancer care. Not all patients need to be seen by a medical or radiation oncologist on every visit. APNs can work in an environment that is partially structured; rules and protocols are common elements. Our work is protocol-driven and evidence-based which, in turn, provides patients with standardized care. This style of care enables an APN to see some oncology patients independently. Research shows that with APNs on staff, there is a sense of enhanced continuity of care, thereby increasing patient and family satisfaction with their health care experience (Cunningham, 2004; Knaus, Felten, Burton, Fobes, & Davis 1997; Spross & Heaney, 2000).

It is important to highlight that APNs are not intended to replace any health care professional but, instead, serve to address gaps that exist in our health care system. We are here to augment existing

Since 2003, Krista Lachance, RN, BScN, CON(C), MN, has worked as an Advanced Practice Nurse at the Cross Cancer Institute in Edmonton, Alberta, where she specializes in caring for patients with gastrointestinal and breast tumours. She holds a Bachelors of Science in Nursing and a Masters Degree in Nursing from the University of Alberta. Krista welcomes comments from colleagues and can be reached at kristala@cancerboard.ab.ca. services and add enhanced nursing knowledge to the multidisciplinary team. An analysis published in the New England Journal of Medicine concluded that while medical doctors (MDs) and APNs may treat specific illnesses identically, they evaluate the illness differently. APNs place more emphasis on prevention, education and health promotion (Mundinger, 1994). Shah, Bruttomesso, Sullivan and Lattanzio (1997) demonstrated in their research that APNs are readily available to staff nurses, thereby allowing physicians to concentrate on complex care issues. Their research found that APNs demonstrate excellent clinical skills and knowledge and that allows them to function independently, combining both medicine and nursing in a holistic paradigm. One might ask if APNs provide nursing or medical care. I believe we need to remind ourselves that the day-to-day work of caring, curing and helping constantly overlaps with medicine. Functions are shared. It is not the transferring of those functions from one member of the health care team to another that defines the profession. Instead, it is the application of advanced knowledge that makes nursing practice advanced (Canadian Nurses Association, 2002; Canadian Nurses Association, 1997; Magdic & Rosenzweig, 1997). Research demonstrates the benefit of having APNs on staff, but the question of need remains. The Canadian Cancer Society estimates on average 2,798 individuals will be diagnosed every week in 2004. This past year at the Cross Cancer Institute, we saw 6,500 patients in our gastrointestinal clinics and 6,700 patients in our breast clinics. Do all patients need to be seen by an oncologist? I believe the evidence indicates that not all patients need advice from a medical or radiation oncologists on every visit. Let's explore the process that led to implementing the APN role at our institution.

The Cross Cancer experience

In 1998, nursing leaders at the Cross Cancer Institute first put forward a proposal to incorporate the APN role in the clinical setting. The proposal was rejected by the Alberta Cancer Board and the momentum evaporated. The original proposal was rejected for many reasons including timing, lack of support for the position, and lack of legislative reform. However, early in 2001, nursing leaders made a second attempt. They began by first asking Ms. Esther Green (former president of CANO) for advice. Ms Green had been instrumental in setting up a similar program at Princess Margaret Hospital during the 1993-1995 years.

Nursing advocates knew that research demonstrated APNs could provide a cost-effective means of delivering high quality patient care. At the same time, the Alberta Cancer Board was being asked by the government to find creative ways to demonstrate fiscal restraint yet continue to meet ever-growing demands for specialized cancer care. It was as if the stars were aligned. The Alberta Government was simultaneously completing legislative changes to the Health Act that would allow APNs to function in a less restricted fashion. Naturally, the Canadian Association of Nurses in Oncology, along with the Canadian Nurses Association and the Alberta Association of Registered Nurses were supportive of changes that would allow APNs to function in more diverse settings than previously had been permitted.

At the local level, nursing leaders formed a task force to examine what changes would be needed for our institution to incorporate this new role. The vision of "meeting the challenges of escalating patient needs by augmenting the oncology health care team with Advanced Practice Nurse" was agreed upon by the task force. This vision served both as a guide towards the ultimate goal, and also to help various stakeholders conceptually understand the need for APNs. The task force was responsible for conceptualizing how this new role would fit into the existing organizational structure. Practice models can serve to guide how APNs fit into an organization. In the literature, three models are prominently discussed (Bush & Watters, 2001; Cummings, Fraser, & Tarlier, 2003; Hamric, 1996; Magdic & Rosenzweig, 1997; Richmond & Keane, 1996). They include:

1. Physician Practice Model

- 2. Nursing Practice Model
- 3. Collaborative Practice Model

In the Physician Practice Model, an APN joins an existing group of physicians working in an established practice. The APN reports to a physician. This can be potentially isolating from nursing. In addition to the potential for isolation, physicians can perceive their role as supervisory as opposed to a partnership with an APN. Naturally, this may lead to potential tension as medicine and nursing need to negotiate their perceptions of the role and who would "hold the power" to decide what the role should include. APNs working in a physician practice model may be viewed as physician extenders as opposed to nurses with advanced skill and unique knowledge. Nonetheless, many APNs do work successfully using this practice model.

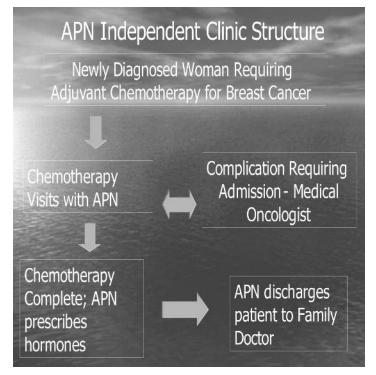
A Nursing Practice Model is designed with an APN reporting to a nursing director. This type of practice model is traditionally seen with the CNS role. There is the potential for decreased collaboration between the medical team and nursing if medicine views the APN as being responsible solely to nursing. Supporters of the nursing practice model feel that nursing maintains the control over the APN position. Naturally, as APNs continue to advance their scope of practice and skills, ties to nursing are essential for the profession to retain its unique contribution. Without strong ties to nursing, APNs run the risk of being viewed as non-nurses.

The third practice model is commonly described in the literature as the Collaborative Practice Model. In this model, APNs and physicians equally share authority for providing care within their respective scope of practice. The concept of interdependence is emphasized as the APN reports to both medical and nursing directors. Normally, patient outcomes related to medical management are the responsibility of a physician director, whereas professional practice, program development and system improvements are elements reported to a nursing director. This model allows APNs to maintain identity with and involvement in nursing, while establishing parity with physician team members. Coordination of care and integration of services within complex institutional settings is best facilitated using this structure (Cummings et al., 2003; King, Parrinello, & Baggs, 1996; Mick & Ackerman, 2000).

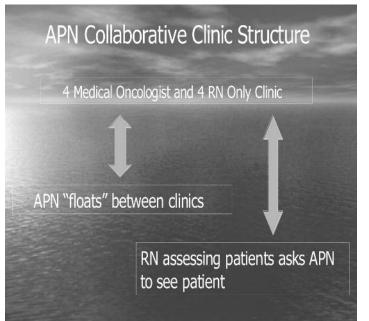
In November 2003, the Cross Cancer Institute hired the first APN. Nursing and medicine decided jointly that the areas of work assigned to the APN would be those areas with the greatest clinic workload. Although these areas were tumour specific (breast and gastrointestinal), each had different pressure points and clinic designs. It was immediately determined that the APN would need to have her own clinics caring for breast patients but, in the gastrointestinal areas, she would work collaboratively in physician clinics. Since the position was new, we decided a three-month orientation period would be needed in which the APN would rotate through the various breast and gastrointestinal clinics to familiarize herself with the various oncologists and their treatment philosophy. This was also to allow the physician team members to become familiar with the skill level of a novice APN and understand what type of guidance and mentoring would initially be required. This orientation also enabled the APN to become familiar with advanced procedures she would be required to perform as part of her practice.

After the orientation was complete, we began to assign clinic work to the APN. Unfortunately, without the experience of other organizations with similar structure and clinical needs, we were forced to estimate what an appropriate clinical workload would be. In conjunction with medicine, nursing leaders and the APN, we decided on a clinical assignment involving five half-day clinics a week. Three of these clinics would involve women who required adjuvant chemotherapy for breast cancer and the remaining two clinics would be gastrointestinal clinics. The goal was to have the workload composed of 75% clinical time and 25% research/education. In addition, it was agreed that the APN would see patients with urgent concerns when requested by the medical oncologists. Procedures including paracentesis, thoracentesis, and central line removals would also be the responsibility of the APN.

Patients in the two tumour groups (breast and GI) had different care needs. Each required a different style of practice from the APN. The breast group examined their needs and concluded that they would have an APN see all women requiring adjuvant chemotherapy. This population was chosen partly because our institution has evidencebased treatment protocols in use for all stages of breast cancer. Once chemotherapy is completed, we routinely discharge women who have completed their adjuvant chemotherapy back to their family physicians. Given that routine follow-up care is minimal and care during chemotherapy is guided by treatment protocols, we determined these women would represent a group of patients who could safely and effectively receive their care from an APN. Medical and nursing leaders had already determined that it would be appropriate for APNs to see patients on ongoing treatment, but the initial consultation on any newly diagnosed patient or decision about which chemotherapy agents to recommend would be the responsibility of the medical oncologists. A medical oncologist would be assigned to each patient's case as a contact person for the APN. However, once the initial consultation was completed, patients requiring adjuvant chemotherapy would have their care managed in clinic by the APN. These clinics, run by an APN, were designed to be autonomous with the medical oncologist available for consultation when asked. It is both beneficial and practically essential for a novice APN managing such a clinic to have treatment protocols in place. A visual diagram of the APN clinic structure is presented below:



Unlike the breast clinics, which were independently managed by the APN, the gastrointestinal clinics were structured as a collaborative practice. The workload with respect to individuals with gastrointestinal (GI) cancers had increased dramatically with the addition of new treatments for the metastatic population. For this reason, the GI tumour group knew the support of an APN would be valuable. However, our GI group had already established nurse-run clinics for patients receiving adjuvant chemotherapy. One of the lessons we have learned about having "nurse-only" run clinics is that support for those clinics is essential. Just because a patient is booked to see the nurse, does not ensure they will only need to see the nurse. Accordingly, we decided that an APN likely could handle many of the questions and patient concerns that would arise from the nurse-only clinics. Therefore, a collaborative approach was suggested for the GI clinics. Twice a week, GI clinics are held. On those days, the APN would determine which patients were appropriate for her to see. A large portion of the APN practice involved reviewing the result of CT scans and evaluating the effect of treatments for patients undergoing chemotherapy for metastatic colon cancer. Since it was not considered within the scope of APN practice to present new treatment options, patients who had favourable CT scan results were often seen by the APN. For those patients in treatment who had stable or improved scans, the APN was often the care provider they saw. However, those patients with CT scans demonstrating disease progression saw the medical oncologist. I, personally, wondered if patients would figure out the APN was the "good news girl". A schemata of the work load structure is presented below.



What does the typical day of an APN look like? Usually at least half the day is spent in clinic seeing patients. Procedures are often scheduled for the times when the APN is not in clinic. During nonclinic hours, a physician can ask the APN to see patients with urgent concerns who need assessment, or the APN can be following up on other patient problems. The remaining time is spent completing paperwork, reading research, conducting literature searches to answer practice questions or working on presentations and publications. However, what we have discovered is that despite the relatively smooth day-to-day operations, implementing a new position still poses challenges that require diligent work to resolve.

Issues for our institution

They say that time changes things, but you actually have to change them yourself – Andy Warhol

Things do not change, we change - Henry David Thoreau

During the process of implementing the APN position, we discovered there are many issues to be explored and resolved. One of the most common themes that initially appeared was "who does what". When an APN is added to the team, the well-established

routines can be disrupted. Suddenly, there is a new member with whom the team needs to communicate, negotiate, and set boundaries. Obviously, physicians and APNs need to sort out who does what. However, what might not be as obvious is that nurses and APNs also need to undergo the same negotiations to determine what the boundaries of practice will be between team members. Research shows that the introduction of an APN often requires that nurses reflect and rediscover their role on the team (Reay, Golden-Biddle, & Germann, 2003). Part of this process involves reflecting on how team members interact. For us in particular, the team interaction presented some unique challenges. First, I was a nurse who had already worked in this institution for many years. Given the familiar face, one would think this would ease the transition; instead, time was often required to explain to staff that I was now working in a new role involving additional and different responsibilities.

Whenever change takes place in health care delivery, a ripple effect can be felt by all the team members (Golden-Biddle & Hinings, 2004; Irvine et al., 2000). This can be positive or negative depending on a number of factors including:

1. How clearly the role is defined prior to implementation

2. How committed and supportive nursing, medicine and the organization are towards the new role

3. Whether the organization can execute changes in a timely fashion

How well the proposed change is explained to patients and family members.

These factors will be explored in more detail. The first factor of role definition often is categorized narrowly and over-simplified as a job description. In reality, paper definitions are only part of this process. At the Cross Cancer Institute, role definition actually began when student APNs were completing their clinical time with the oncologists. Long before an APN was employed at the Cross Cancer Institute, clinic nurses and physicians frequently called upon the student APNs to show them "how the role would work". Obviously, there were no role models as no APNs were yet on staff. This meant student APNs, along with the first APN hired, were responsible for the majority of boundary setting and role evolution. Judgment calls with regard to which patients required assessment by a medical oncologist versus an APN were largely left to the APN. Clear role definition makes the transition easier for staff.

APNs will not succeed unless organizations support them to work to their full scope of practice. Implementing a new role often requires individual(s) to "champion the cause". The individual who helps execute the required changes and is most supportive of the role is often a senior nursing leader. But, the person or persons who facilitate this change can also be a physician director or a hospital administrator. These individuals are largely responsible for planning, implementation, evaluation and adaptation of the role within the organizational structure. Unfortunately, the week this position was implemented at the Cross Cancer Institute, the director of nursing left. Three months later, the next most senior nursing manager left as well. As can occur in any institution, it took more than a year to recruit and hire a new director of nursing. The remaining nursing leaders would all agree that our plans to implement this new role had not been explored much beyond the hiring stage. Transitional issues including policy changes, resource allocation and clinical support will inevitably be present in the early phases of the role implementation and must be dealt with. These transitional issues usually fall to a nurse manager or team of senior staff assigned to oversee implementation of the role. For us, one of the lessons learned was that it is very demanding for the APN to participate in the negotiation of these changes when novice APNs need to focus energy on developing clinical practice. Unfortunately, even when nursing, medicine and the organization as a whole support the addition of APNs, it can be difficult to effect change in a timely fashion. In our situation, the organization

changed quickly and did well considering that we implemented a new role during a time in which we had minimal senior nursing management.

We believed that patients and family members needed to understand who was providing their cancer care and that every patient would have a medical oncologist overseeing their care. Physicians explained to breast cancer patients during their initial consultation that subsequent appointments and primary care throughout their chemotherapy would be with an APN. Many patients were not familiar with the terminology APN or a nurse practitioner. To clarify this, the clinic nurses and I regularly explained to families who I was and what I did. Patients often initially expressed concerns when they heard they would not be seeing a doctor. In these cases, it was important that I personally remind all my patients that the medical oncologist was available to both of us for consultation and support should there be questions or problems that I could not resolve. My experience was that patients or family members initially were concerned. Perhaps they felt an APN would not be able to answer their questions sufficiently. Notwithstanding initial concern, after one appointment, patients normally indicated they were content. I frequently would close each appointment by asking if all their concerns had been addressed. I found this allowed patients and family members ample opportunity to express any outstanding uncertainties.

Patient and staff opinions on APN care and work

Overall, staff and patients have expressed positive opinions about the addition of an APN to the team. Staff members were informally surveyed and they stated that they found the role to be a supportive addition to the health care team. Many of the nurses felt having an APN on staff provided another supportive resource to them. Some felt that an APN was more approachable than a physician. Nurses commented that when they raised patient concerns with an APN, they felt the issues were "taken seriously" as APNs viewed patients in a holistic care paradigm. The literature also reflects these views. However, in our experience, we also found that the staff's adjustment to the new role was facilitated by the fact that the APN had spent clinical time during her Master's degree, working with the physicians. This increased the confidence the physician had in the clinical ability of the APN. Bush and Watters (2001) found that physicians often have difficulty giving up "control" of their patients to an APN. In our shared clinic work, some of the oncologists agreed with this finding. When we surveyed our physicians, we found that some still expressed concerns about who is legally responsible for a patient should things go wrong. Nurses offered different concerns. They expressed concern that the APN was being overwhelmed with clinical work leaving the APN to function as a "mini doctor". Although the nurses were aware that the first year of practice as an APN focused on building clinical knowledge, they expressed concerns that the role would then not evolve to include the important components of research and education.

We also informally surveyed patients who had completed their care under the guidance of an APN. We asked what their care experience was like and if they felt there was a difference in the care delivered between an APN and a physician. Overall, feedback provided by the patients was positive. Most patients identified and could articulate difference between the care provided by an APN or by a physician and many were enthusiastic. Comments from one young woman who was treated for breast cancer included: "It is the best of both worlds. I've gotten lots of good scientific information along with the compassion that nurses give. It was a great experience for me". A 49-year-old woman who underwent adjuvant chemotherapy summarized her feelings by stating "APNs are the way of future health care. For me, it was a total care experience. I think APNs provided holistic care and I highly recommend incorporating them into our health care system." Once both patients and staff are satisfied with the care provided by an APN, we need to ask how we can ensure the working environment supports the integration. The research shows there are a number of factors that make a successful implementation and a supportive working environment (Irvine et al., 2000). Four main factors that enable health care teams to successfully integrate APNs into the workplace are:

- 1. Effective administrative process that guides access to clinical privileges and allows for performance reviews
- 2. Institutional support of an interdisciplinary team
- 3. Organizational commitment to a model of shared governance
- 4. Shared decision making and formal communication between senior clinical and administrative leadership serving to guide APNs in the development of their practice.

In addition to these research findings, we also learned there is work to be done by our organization that would further facilitate the implementation of the APN role. Improving communication between APNs and physicians would smooth the process of care delivery and foster the growth of APNs in their practice. One way to encourage communication, we believe, would be to locate APN offices near the physician group. By locating APNs and physicians next to each other, informal communication can take place. Moreover, this proximity improves access to support staff such as administrative assistants.

We have also learned that when nurses become APNs, they shift into a culture of belonging to two different peer groups; physicians and nurses. By assigning each APN a formal mentor for the initial year, adaptation to working within two peer groups would be eased (Arena & Page, 1999). For me, the addition of a mentor was needed to guide my acquisition of knowledge in oncology research. Each APN should determine what kind of mentoring they need depending on the knowledge base of the APN. Some APNs might find they need a clinical mentor. I found my clinical questions tended to be issues that needed immediate attention. Because of this, whichever physician was available mentored me at that time. Accordingly, I did not feel the need for a formal clinical mentor.

Références

- Arena, D.M., & Page, N.E. (1999). The imposter phenomenon in the clinical nurse specialist role. Image: The Journal of Nursing Scholarship, 24(2), 121-125.
- Association des infirmières et des infirmiers du Canada. La pratique infirmière avancée : Cadre national (2002). Consulté en septembre 2004 à http://cnaaiic.ca/CNA/practice/advanced/default_f.aspx
- Association des infirmières et des infirmiers du Canada. La pratique infirmière de niveau avancée au premier plan - Zoom sur les soins infirmiers - Enjeux et tendances dans la profession infirmière au Canada - 1997 No. 2.
- Brown, M.A., & Draye, M.A. (2003). Experiences of pioneer nurse practitioners in establishing advanced practice roles. Journal of Nursing Scholarship, 35(4), 391-397.
- Bush, N.J., & Watters, T. (2001). The emerging role of the oncology nurse practitioner: A collaborative model within the private practice setting. **Oncology Nursing Forum**, 28(9), 1425-1431.
- Cummings, G.G., Fraser, K., & Tarlier, D.S. (2003). Implementing advanced nurse practitioner roles in acute care. Journal of Nursing Administration, 33(3), 139-145.
- Cunningham, R.S. (2004). Advanced practice nursing outcomes: A review of selected empirical literature. **Oncology Nursing** Forum, **31**(2), 219-232.
- Feldman, M.J., Ventura, M.R., & Crosby, F. (1987). Studies of nurse practitioner effectiveness. **Nursing Research**, **36**(5), 303-308.

However, I believe that in the future, once the initial stress of functioning in an advanced clinical setting has decreased, I would benefit from having other mentors in such areas as leadership or research.

Government also needs to take action to enable APNs to deliver cost-effective care. In Alberta, this means moving forward with the proclamation of the Health Professions Act. As well, governments must show support through funding for education programs and development bursaries. Money spent now can save millions in future health care expenses. By helping APNs enter the workforce, all Canadians will benefit. Specialists can function where needed, while APNs can offer greater care to patients with less acuity.

When asked the question "Are APNs here to stay?" confidently, I can answer "yes". I am very optimistic. Health care will continue to need more APNs and, in turn, APNs will need to continue to demonstrate their merit. Just as nurses continue to define their scope of practice and value to the public, APNs must do the same. We need to delineate the unique contributions of APNs, not as physician substitutes, but as health care practitioners who enhance nursing services and patient care. Research into APN care has largely focused on efficacy. This must evolve to include measurements of other critical indicators such as patient satisfaction, uniqueness of the role and effectiveness of patient care. If these issues are addressed, APNs are here to stay.

In summary, I'd like to end with a quote from Sandra Day O'Connor, the first woman justice to sit on the Supreme Court of the United States. Her words illustrate what I believe is the cooperative reality of the addition of APNs to health care. She said:

"We do not accomplish anything in this world alone.... And whatever happens is the result of the whole tapestry of one's life and all the weavings of individual threads from one to another that creates something".

- Golden-Biddle, K., Hinings, C.R. (2004). **Implementing change: The crucial role of middle managers**. Retrieved October 20, 2004, from http://www.healthorgchange.com.
- Hamric, A.B. (1996). A definition of advanced nursing practice. In
 A.B. Hamric, J.A. Spross, & C.M. Hanson (Eds.), Advanced
 Nursing Practice: An Integrating Approach (chap. 3, 42-56).
 Philadelphia: WB Saunders Co.
- Irvine, D., Sidani, S., Porter, H., O'Brien-Pallas, L., Simpson, B., McGillis Hall, L., et al. (2000). Organizational factors influencing nurse practitioners' role implementation in acute care settings. Canadian Journal of Nursing Leadership, 13(3), 28-34.
- King, K.B., Parrinello, K.M., & Baggs, J.G. (1996). Collaboration and advanced practice nursing. In Hickey, J.V., Ouimette, R.M., Venegoni, S.L. (Eds.), Advanced Practice Nursing: Changing Roles and Clinical Applications (chap. 10, 146-162). Philadelphia: Lippincott.
- Kinnersley, P., Anderson, E., Parry, K., Clement, J., Archard, L., Turton, P., Stainthrope, A., et al. (2000). Randomized controlled trial of nurse practitioner versus general practitioner care for patients requesting "same day" consultations in primary care. British Journal of Medicine, 320, 1043-1048.
- Knaus, V.L., Felten, S., Burton, S., Fobes, P., & Davis K. (1997). The use of nurse practitioners in the acute care setting. Journal of Nursing Administration, 27(2), 20-27.

- Magdic, K., & Rosenzweig, M.Q. (1997). Integrating the acute care nurse practitioner into clinical practice: strategies for success. Dimensions of Critical Care Nursing, 16(4), 208-214.
- McDermott-Blackburn, K. (1998). Roles of advanced practice nurses in oncology. **Oncology**, **12**(4), 591-603.
- McGrath, S. (1990). The cost-effectiveness of nurse practitioners. Health Care Issues, 15(7), 40-42.
- Mick, D.J., & Ackerman, M.H. (2000). Advanced practice nursing role delineation in acute and critical care: Application of the strong model of advanced practice. Heart and Lung, The Journal of Acute and Critical Care, 29(3), 210-221.
- Mundinger, M. (1994). Advanced practice nursing: Good medicine for physicians? New England Journal of Medicine, 330, 211-214.
- Mundinger, M.O., Kane, R.L., Lenz, E.R., Totten, A.M., Tsai, W., Cleary, P.D., et al. (2000). Primary care outcomes in patients treated by nurse practitioners or physicians: A randomized trial. JAMA, 283, 59-68.

- Murphy-Ende, K. (2002). Advanced practice nursing: Reflections on the past, issues for the future. **Oncology Nursing Forum, 29**(1), 106-111.
- Reay, T., Golden-Biddle, K., & Germann, K. (2003). Challenges and leadership strategies for managers of nurse practitioners. Journal of Nursing Management, 11, 396-403.
- Richmond, T.S., & Keane, A. (1996). Acute-care nurse practitioners. In Hickey, J.V., Ouimette, R.M., Venegoni, S.L. (Eds.), Advanced Practice Nursing: Changing Roles and Clinical Applications (chap. 19, 316-326). Philadelphia: Lippincott.
- Shah, H.S., Bruttomesso, K.A., Sullivan, D.T., & Lattanzio, J. (1997). An evaluation of the role and practices of the acute-care nurse practitioner. American Association of Critical-Care Nurses, 8(1), 147-155.
- Spross, J.A., & Heaney, C.A. (2000). Shaping advanced nursing practice in the new millennium. Seminars in Oncology Nursing, 16(1), 12-24.