An Analysis of The Nurse Practitioner Role in Palliative Care

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Abstract

The purpose of this study was to examine the nature and contribution of the nurse practitioner (NP) role in an oncology palliative clinic. Quantitative and qualitative data were collected from the practice of one NP. Data were obtained on the performance of the NP role functions, the characteristics of the patients seen by the NP, the interventions delivered by the NP, and the outcomes of care. Descriptive and content analyses were used to analyze the data. The results indicate that the NP in an oncology palliative care clinic engages primarily in the clinical component of the role. The emphasis is on symptom management, patient and family education and counseling, coordination of care, and maintaining continuity of care. The method followed in this case study to examine the contribution of the NP role could be used by other NPs to demonstrate the quality, effectiveness, and efficiency of their care.

Background

The utilization of nurse practitioners is rapidly expanding and extending to various health care settings, including primary, acute, and long-term care settings. Acute care nurse practitioners are frequently employed in in-patient units and/or out-patient clinics in tertiary care hospitals. They are primarily assigned to specialized medical or surgical programs such as intensive care, coronary care, neurology, trauma, neonatal intensive care, orthopedics, and pediatric cardiac care (e.g., Callahan, 1996; Davitt & Jensen, 1981; Dillon & George, 1997; Gates, 1993; Kleinpell, 1997; Mitchell, Marrin, Goerze, Willan, Southwell, et al., 1996; Rudisill, 1995; Snyder, Sirio, Angus, Hravnak, Kobert, Sinz, & Rudy, 1994; Spisso, O'Callaghan, McKennan, & Holcroft, 1990; Uzark, LeRoy, Callow, Cameron, & Rosenthal, 1994). Some nurse practitioners are assigned to oncology in hospital or ambulatory services (Kinney, Hawkins, & Hudmon, 1997).

Persons with cancer represent a group of medically vulnerable patients who are acutely and severely ill, and have complex and multidimensional needs. The diagnosis and the progression of cancer are associated with psychological distress (Brant, 1998; Pasacreta & Pickett, 1998). The invasive and aversive nature of its treatment has an adverse impact on the patients' physical, psychological, and social status, resulting in limited functional ability and in low quality of life. These patients require specialized care during the acute phase of illness and the treatment period, as well as comprehensive, coordinated, and continuing care with an emphasis on self-care, symptom prevention and management, and psychological support, that extends to the post acute phase of illness. The nurse practitioners' training and expertise in specialized care, holistic approach to care, and expanded scope of practice that integrates medical and advanced nursing functions enable them to provide services that effectively and efficiently address the complex needs of medically vulnerable patient populations (Anderson, 1997; Keane & Richmond, 1993). Patients with cancer, particularly those requiring palliative care, would benefit from the comprehensive and continuing care provided by nurse practitioners (NPs).

The expected contribution of the NP role to achieve high-quality, economically efficient care (Bajnok, Grinspun, Hubley, & Shamian, 1994; Berger, Eilers, Pattrin, Rolf-Fixley, Pfeifer, Rogge, et al., 1996; Shah, Bruttomesso, Sullivan, & Lattanzio, 1997) encouraged its introduction into ambulatory oncology care settings. An extensive literature review yielded one descriptive study that investigated the characteristics and practices of oncology NPs in the US (Kinney et al., 1997). No report of the implementation of the NP role in an oncology-palliative care clinic was found. This study was conducted to examine the nature and contribution of the NP role in such a setting. The data were obtained from the practice of one NP in such a clinic. The significance of this case study is twofold. First, the results offer a better understanding of the functions assumed by the NP, and of the activities in which the NP engages to provide care for this patient population, which would assist nurse leaders and other NPs in defining and delineating the role responsibilities in similar settings. Maintaining consistency in role definition is necessary for its strategic development and acceptance by others (Hicks & Hennessy, 1999; Torn & McNichol, 1998). Second, the clinical database used in this case study could be used by other NPs to document and monitor their performance, and consequently to demonstrate their effectiveness and contribution within the health care system.

Literature Review

As mentioned earlier, the literature on the NP role in oncology-palliative care is almost non-existent. Related literature, primarily derived from reports about the NP practice in acute care settings, is presented with regards to the characteristics of patients assigned to the NP care, the processes and the outcomes of their care.

Characteristics of patients: The patients assigned to the care of NPs are, in general, characterized as having

severe illness and complex needs (Anderson, 1997; Kleinpell, 1997). They tend to be medically vulnerable; that is, they become acutely ill while having continuing health care needs. As such, they are "no longer interesting to medical practitioners since these patients do not have diseases with identifiable causes or that can be cured" (Keane & Richmond, 1993, p. 282). They require specialized services from various health care professionals, and are described as "lost in the system" (Benoit, 1996; Knaus, Felton, Burton, Fobes, & Davis, 1997; Murphy, Gitterman, & Silver, 1985). The majority of patients seen by oncology NPs were adults, receiving medical treatment on an out-patient basis (Kinney et al., 1997).

Processes of care: Most reports indicated that NPs in acute and oncology care settings spend up to 80% of their time in the clinical component of the role, encompassing activities related to diagnosis of the patients' problems; planning and delivering short and long-term care to address their physical, psychosocial, and learning needs; and coordinating the in-hospital and post-discharge care to ensure continuity (Bond, Wilkie, Simpon, Leime, & Whitney, 1996; Buchanan, 1996; Davitt & Jensen, 1981; Hylka & Beschle, 1995; Murphy et al., 1985; Shah et al., 1997; Spisso et al., 1990; Rudy, Davidson, Daly, Clochesy, Sereika, Baldisseri et al., 1998). The NPs in acute care settings engaged most frequently in the following specific activities: conducting a physical examination, obtaining patient history, writing orders, doing patient rounds, performing procedures, initiating transfer, consultation, and writing discharge summaries (Kleinpell, 1997). NPs in oncology programs most commonly performed the following clinical functions and procedures: making recommendations to hospital staff through informal communication; writing progress notes; writing orders and prescribing medications and chemotherapy; and performing procedures like pap smears, bone marrow biopsy, lumbar puncture, and paracentesis (Kinney et al., 1997).

Outcomes of care: Multiple outcomes have been considered as indicators of the NPs' effectiveness in achieving high-quality and economically efficient care. Examples of outcomes are: increased patient satisfaction with care, increased patient access to care, improved functional status and adherence to treatment, decreased morbidity and mortality rates, decreased health services utilization, reduced length of hospital stay, and decreased cost of care. The outcomes that have been consistently examined are mortality, morbidity or development of complications, satisfaction with care, and cost. The results of few studies supported the effectiveness of the NPs in producing these outcomes, as indicated by non-significant differences in the outcomes for patients assigned primarily to the NPs' or to the medical residents' care (Buchanan, 1996; Mitchell et al., 1996; Rudy et al., 1998; Spisso et al., 1990; Uzark et al., 1994).

The previous findings ascertain that NPs have an expanded scope of practice, encompassing medical as well as advanced nursing functions. The findings also begin to identify the contribution of the NPs within the health care system. These findings, however, may not be applicable to oncology-palliative care in an out-patient clinic. The nature of the role and its anticipated outcomes may vary as a result of the needs or concerns of the patient population. This study explored the NP role in such a setting.

Methods

Design and Setting: A case study, mixed method design was used to examine the role and contribution of an NP in oncology-palliative care. The case study design was used as only one NP was found to be assigned to this type of clinical program. The NP was employed in the palliative ambulatory clinic at a cancer center located in a large city in Southern Ontario. The case study represents a collaborative research effort between the NP and a researcher not affiliated with the clinic. The NP provided the data, while the researcher was responsible for designing the study and the data collection tools, and for analyzing the quantitative and qualitative data. The NP completed a self-report questionnaire inquiring about the performance of the NP role functions through her engagement in specific activities. The NP initiated and maintained a qualitative, clinical database of her practice pattern. These data were content analyzed to describe the patient population assigned to her care, the interventions used to address the patients' presenting problems, and the outcomes achieved for or with the patients subsequent to the care delivered by the NP. The quantitative and qualitative data were complementary and provided a comprehensive documentation of the NP's role and contribution.

Professional characteristics of the NP: The NP was a Master's prepared advanced practice nurse. She was an experienced RN, with more than 15 years of practice in various clinical settings. She successfully completed the Nurse Practitioner Training Program offered by the University of Toronto. Her area of specialization as a NP focused on adult oncology- palliative care. She has been employed as a NP in the oncology-palliative care clinic for almost a year.

Variables and data collection procedure:

Quantitative data: The NP completed a questionnaire as a means for determining the extent to which she is able to implement the functions expected of the role, at a convenient place and time. The questionnaire was developed by Sidani, Irvine, Porter, LeFort, O'Brien-Pallas and Zahn (1999) to assess implementation of the NP role in acute care settings. The questionnaire contained a list of activities in which the NPs engage to fulfill their role functions. The list of activities was compiled from an extensive review of the literature describing the role of acute care nurse practitioners. It was pilot-tested with three experienced nurse

practitioners working in various medical and surgical programs. The results supported its content validity, comprehensiveness, and clarity. The specific activities listed encompass the NP role functions, including clinical (i.e., diagnostic, planning, delivery, and coordination of care), administrative or management, education, and research. The questionnaire inquires about the frequency with which each listed activity is performed and the time spent performing the activity, on a "typical working day". This time referent was selected to obtain an estimate of the NPs' usual practice pattern, and is consistent with data collection methods used in large scale studies aimed at investigating the NPs' practice profiles (e.g., Kleinpell, 1997; Kinney et al., 1997).

Qualitative data: The qualitative data were obtained from the clinical database maintained by the NP to document the quality, effectiveness, and productivity of her practice. The NP used a clinical encounter form to generate and maintain the database, as suggested by Courtney and Rice (1995) and O'Connor, Hameister and Kershaw (2000). The clinical encounter form was developed by the researcher in consultation with the NP to facilitate the recording of pertinent clinical information. The form consisted of two sections. The first section involved demographic (age and gender) and illness-related (primary cancer site and site of metastasis, if any) characteristics of patients cared for by the NP. The NP completed this section once for each patient, upon referral to her services. The second section elicited key information of each patient encounter: the nature of the encounter (clinic visit or phone call), the patient's presenting problems(s), the intervention(s) given by the NP to address each identified problem, and the outcome(s) of the care/intervention(s) delivered in relation to each problem. The clinical encounter form was semi-structured in that the NP recorded the required information obtained during the patient encounter. A semi-structured format for documentation was used to ensure that the database is comprehensive, relevant and applicable to oncology-palliative care setting, and to reflect the actual practice of the NP. The NP completed the second section of the clinical encounter form for each encounter with each patient. The NP took notes during or at the completion of the encounter with each patient and entered the data on all patients seen at the end of the day. The data were entered in a database file created in Microsoft Access. The NP has incorporated the clinical encounter form into her everyday practice and has maintained the database as a means for documenting, monitoring, and improving the quality of her practice. In other words, the data were collected for purposes of quality assurance and improvement. The data obtained on all patients' encounters during a three-month period were used in this case study. Although patient consent to use the data was not indicated in this situation, patients' anonymity was maintained as only code numbers were made available to the researcher who analyzed the data.

Data analysis: Descriptive statistics were used to analyze the quantitative data. The qualitative clinical data were content analyzed by the researcher. The latter analysis consisted of identifying the type of problems or concerns the patients presented with, the type of interventions applied by the NP to address the problems, and the outcomes expected and/or achieved as a result of the interventions. The information recorded for all patients were read carefully and were coded using the NP's words. A frequency count was done to characterize the NP's practice pattern. The results were given to the NP for review and comment.

Results

The results of the quantitative and qualitative data analysis were integrated to address this case study objectives of examining the nature and contribution of the NP role in an oncology-palliative ambulatory clinic. Specifically, the results are presented in relation to the role functions, practice patterns (i.e., characteristics of patients and types of interventions), and outcomes sensitive to the NP care.

Role functions: The NP performed activities reflective of the advanced functions expected of the NP role. She engaged in diagnostic activities aimed at identifying the patients' presenting problems. These activities included: reviewing the results of laboratory and radiology tests, conducting a physical assessment, and obtaining a patient and family health history. She consulted with other health care providers, formally and informally, regarding the condition and/or the treatment plan for the patients referred to her care, and for patients seen in the same or other clinics. The NP coordinated the care of patients within the clinic and at home, through 1) arranging appointments for tests or procedures to be performed, for follow-up visits, and for transfer of patients to other agencies such as home care; 2) ensuring the home care services are given as needed; and 3) discussing, formally or informally, the patients' condition and plan of care with other health care providers. She provided education and/or counseling to patients and their families, and discussed with them their condition and their treatment/management plan. The NP engaged in formal educational activities such as serving as a clinical preceptor for students, and giving presentations to colleagues. She participated in hospital and community committee work, and in research projects. The NP reported that she usually does not write medical orders, provide hand-on treatments, and perform medical or surgical procedures. Non-performance of these three activities is consistent with her role description.

The NP spent the majority of her time in a typical working week performing the following activities: providing education/counseling to patients and their family members, and discussing the patients' condition and plan of care with them (37.5% of the time); diagnostic activities (28.3%); and coordination (23.5%). She spent much less time on the other activities: consultation (5.1%), administrative/management

(2.5%), formal education to staff and students (1.7%), and documentation (1.3%). She reported having difficulties estimating the time spent in research activities, since the latter were "on-going in the clinic".

Practice pattern: The NP works in collaboration with members of the health care team at the oncology-palliative care clinic. The NP follows patients, who are referred by physicians, throughout the radiation therapy period. Upon referral, the NP conducts a comprehensive assessment of the patients' condition to identify their physical, psychosocial, and learning needs, and provides education on the disease, its progress and treatment; strategies to prevent and/or manage the common side effects of radiation therapy; and community resources available for the patients and family. Once in treatment, the NP assesses the patients' condition, monitors the symptoms, evaluates the effectiveness of the symptom management strategies, provides and/or reinforces education on the symptoms and symptom management strategies, discusses alternative interventions as needed, refers patients to community support and coordinates community care, and addresses any problem that may arise during this period. Upon completion of radiation therapy, the NP assessed the patients' condition and support available at home, and refers them to necessary community services.

On average, the NP dealt with 2-4 patients per day. Patient encounters were in the form of face-to-face visit at the clinic or phone call initiated by the NP or the patient/family member. The number of encounters made with any one patient varied from 1 to 7, with an average of 2 per patient. The number of clinic visits ranged between 0 and 5 (mean = 1.5 visits per patient); and phone calls between 0 and 5 (mean = 1.1 call per patient). The NP spent about 1-2 hours per visit and about 10-15 minutes per phone call.

The description of the patients' characteristics was derived from the profile kept by the NP as part of the clinical database. Data were obtained on 69 patients with cancer, referred for palliative radiation treatment. Of these, 20 (32%) had cancer confined to a primary site, and 49 (68%) had metastasis to the bone, brain, or other sites. The most frequently reported primary cancer sites were lung (45% of the 69 patients), breast (15%), prostate (12%), and kidney/renal (6%). The patients presented with multiple problems. The number of problems identified and addressed by the NP during an encounter with a patient varied between 1 and 7, with an average of 2.2 problems per patients per encounter. The most frequently identified problems (57% of all identified problems for all patients across all encounters) were symptoms associated with cancer and its treatment. Pain, constipation, nausea and vomiting, fatigue, poor appetite, and difficulty sleeping were commonly reported symptoms. The NP identified additional problems: 1) inadequate knowledge (13.5% of identified problems) of palliative care, of the disease and its progression, the treatment and its side effects, and of newly introduced therapy or medications; 2) psychosocial concerns (5.5%) such as desire to return to work, anxiety, inadequate coping with illness and its treatment, inadequate home support, stress, and frustration; 3) physical/physiological changes (3.0%) such as urinary tract infection, hypercalcemia, neutropenia, seizure, and reduced mobility; 4) care-related concerns (2.2%) such as refusal of treatment, lack of receipt of prescribed therapy, and dissatisfaction with home care services; 5) financial concerns (0.8%) such as lack of coverage for a particular treatment; and 6) desire of patient to die at home (expressed by 3 patients).

The NP used several interventions to address the patients' presenting problems. The number of interventions used to address a specific concern ranged from 1 to 11, with a mean of 3 interventions per concern. The largest number of interventions was used to manage the patients' symptoms, in particular pain, constipation, nausea and vomiting, and fatigue; psychosocial concerns; and inadequate knowledge. The specific interventions delivered differed, based on the nature of the problem at hand. However, they can be classified into the following categories, which reflect the steps of the nursing or problem-solving process:

1. Assess the presenting problems (nature, intensity, and frequency).
2. Identify the reason for or the factors contributing to the presenting problem.
3. Discuss the patient's condition and treatment with the patient and/or family member.
4. Assess the nature and effectiveness of the strategies used by the patient to manage the problem.
5. Suggest or prescribe and deliver alternative strategies.
6. Provide education to the patient/family member about the problem, and give instructions on how to carry out the strategies to manage it.
7. Inform other health care providers, at the same or different clinical settings (such as home care agency) of the patient's condition, and discuss with them the patient's plan of care.
8. Refer the patient to other health care providers or to community resources for further management, as needed.

Outcomes: The NP monitored and evaluated the outcomes of the care she delivered to her patients. The outcomes were often very specific to the problem identified and the interventions given to address it. The outcomes pertain to the patient/family or to other health care providers. The patient outcomes are: 1) improved knowledge of the disease, treatment, side effects of treatment, and self-care strategies; 2) feeling comfortable with the prescribed therapy and the plan of care; 3) adherence to treatment and follow-up appointments; 4) feeling "in control" of the situation; 5) enhanced ability to cope, in a positive manner, with the diagnosis of cancer, the treatment, and the condition at home;

6) maintaining biochemical values within normal range; 7) adequate symptom control; 8) prevention of complications; 9) satisfaction with care; 10) improved physical and psychosocial functioning; and 11) improved quality of life. The health care providers outcomes are: increased knowledge of the patients' condition, needs, and plan of care; and prompt delivery of the services needed by the patients. Increasing the physicians' and home health nurses' knowledge of the patients' situation was considered as important for maintaining continuity of patient care within the clinic and across settings.

Conclusions

The nature of the NP role in this oncology-palliative clinic differs, to some extent, from the role of NPs in acute care and/or oncology settings, as described in previous studies. In all settings, the NPs focus on assessing the patients' condition, identifying their physical, psychosocial, and learning needs, and coordinating patients' care in order to maintain continuity of care across settings (e.g., Bond et al., 1996; Kinney et al., 1997; Kleinpell, 1997; Shah et al., 1997). The difference in the role implementation is observed in the performance of two activities. The NP in the oncology-palliative clinic engaged less frequently than NPs in acute and in other oncology settings in writing medical orders, and performing diagnostic and/or therapeutic procedures.

These differences in role functions implemented by NPs in various settings are anticipated and can be attributed to the characteristics and the needs of the specific patient population cared for by the NP, and subsequently to the type of services required to meet the patients' needs (Hicks & Hennessy, 1999). The patients attending the oncology-palliative care clinic are severely ill and have multiple, complex, and continuing health care needs. They presented with an average of two problems at each encounter with the NP. The problems pertained to the lack of understanding and to the occurrence of symptoms reflective of the progressive nature of the illness, and the side effects of treatment, which were also associated with psychosocial concerns. These problems demand effective and continuous management, requiring the patients' active participation in their care at home. However, the number and nature of the symptoms experienced by palliative patients are debilitating, thereby limiting their abilities to perform daily activities and functions (Brant, 1998). Thus, the need for family and/or home care support is increased. To manage the patients' condition effectively, the NP assumes primarily the following responsibilities: conducting a comprehensive and systematic assessment of the patient and family needs, and of the home care situation; discussing these needs and the home condition with the patient and family members; providing extensive counseling and education related to treatment and self-care strategies; and coordinating home care with other health care providers.

The role functions and responsibilities assumed by the NP are appropriate to address the types of problems with which this patient population presents. The specific activities performed by the NP were focused on assisting the patients in managing their symptom at home, maintaining their level of functioning, and in enhancing their physical and psychosocial comfort. There may have been less need for medical interventions, such as diagnostic and therapeutic procedures, to achieve these goals of palliative care. The NP's functions reflect a holistic, family-centered approach to care, with an emphasis on understanding the patients' physical, psychosocial, and educational needs, on empowering the patient through education and involvement in self-care, and on promoting health. The holistic approach to care with an emphasis on health is consistent with the nursing perspective that is characteristic of advanced nursing practice. It has been reported as guiding the practice of about 75% of the NPs working in acute care settings (Sidani, Irvine, Porter, O'Brien-Pallas, Simpson, McGillis Hall, et al., 1998). These findings indicate a strong nursing orientation underlying the NP role implementation in Ontario.

The NP at the oncology-palliative clinic reported limited ability to write medical orders. The limited prescriptive privilege was also reported by about one third of the NPs in acute care settings (Sidani et al., 1998). The NPs explained that the medical orders they can write and sign are defined by medical directives approved by the hospital medical advisory council. They identified the limited prescriptive privilege as a barrier to the implementation of the NP role to its fullest, resulting from a lack of legislation for the NP role in acute care settings in Ontario. They further elaborated that the lack of legislation, along with differences in the characteristics of the patient population, lead to variability in the role development and implementation across settings.

The contribution of the NP in oncology-palliative care is associated with the advanced nursing functions carried out to assist patients in managing their symptoms, maintaining their quality of life, and "dying with dignity" (Brant, 1998). Her contribution is indicated by 1) attending to the physical, psychosocial, and learning needs of patients; 2) promoting patients' and family members' participation in care; 3) maintaining continuity of care across the phases of radiation therapy, and across settings; 4) ensuring the care needed by the patients/ family is delivered in a timely manner; 5) enhanced patients' compliance with treatment and self-care ability; 6) improved symptom management or control; 7) increased sense of well-being, comfort, and quality of life for the patients and their family.

Although not generalizable, the results of this case study offer a better understanding of the NP role functions and practice pattern. The results begin to identify the contribution of the NP in terms of the processes underlying the effectiveness of the care provided and of the outcomes to be expected as a result of the NP care.

The semi-structured format used to maintain the clinical database was found useful in documenting the NP practice. The form enables the NP to keep records of 1) the problems identified for the patients at each encounter; 2) the interventions provided and/or symptom management strategies taught to the patients; and 3) the outcomes achieved. The records were helpful in monitoring the patients' condition and progress during the care episode, in evaluating the effectiveness of the interventions in producing the expected outcomes, and in providing mechanisms for continuous quality improvement initiatives. NPs may find the clinical encounter form useful to develop their database; they could use the database to examine or demonstrate their contribution to patient care and the health care system.

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