

Oncology nursing education within a supportive care framework: An evidence-based undergraduate course

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Abstract

Addressing supportive care needs of individuals affected by cancer is a crucial role for oncology nurses. If these needs are not identified and addressed, then individuals and their families risk experiencing biopsychosocial distress. This paper describes how a group of interested nurses with research and/or cancer knowledge developed, implemented and evaluated an evidence-based university undergraduate course in oncology nursing. The purposes of this course are to provide nurses with specialized knowledge about supportive care in oncology throughout the cancer care continuum and to assist registered nurses in preparing for oncology nursing certification. Theoretical, practical and research-based issues related to the scope of supportive care are incorporated into the assessment, nursing diagnosis, planning and evaluation of client care.

Introduction

Cancer is a major cause of mortality in Canada, with an estimated 129,200 new cases of cancer and 62,700 cancer-related deaths in 1998 (National Cancer Institute of Canada [NCIC], 1998). Primarily a disease of older Canadians, more than 70% of new cancer cases and over 80% of deaths due to cancer occur among those who are at least 60 years old (NCIC). This is expected to continue as the Canadian population ages (Canadian Study of Health and Aging Working Group, 1994; Dalziel, 1996).

The steady rise in demand for cancer care, as well as its increasing complexity, augment the need to provide nurses with the specialized knowledge and skills required to deliver optimal care to persons with cancer. Moreover, there is increased emphasis on the need to ensure that care is based on evidence obtained from current oncologic research. Evidence-based nursing practice is essential for sound clinical decision-making and for identifying the most effective nursing interventions (Fitch, Bolster, Alderson, Kennedy & Harrison Woermke, 1995). However, research reveals that barriers exist to using research in oncology nursing practice (Bakker & McChesney, 1997; Rutledge, Ropka, Greene, Nail, & Mooney, 1998). A frequently cited barrier to evidence-based practice is nurses' lack of research knowledge (Funk, Tomquist, & Champagne, 1995). While knowledge is not the only barrier to research use (Harrison, Logan, Joseph & Graham, 1998; Logan & Graham, 1998), educating nurses about the value of research and exposure to the application of research to clinical problems is a necessary starting point to increase the use of evidence in oncology nursing care.

Despite the critical need to strengthen cancer nurses' knowledge and skill, a limited number of university curriculum hours were devoted to cancer care in the local university baccalaureate of nursing science (BScN) program and no member of the nursing faculty specialized in this field. This paper describes how a group of interested nurses who worked in ambulatory, community and hospital oncology settings developed, implemented and evaluated an evidence-based oncology nursing course at the baccalaureate level.

University linkage

As part of a strategic planning initiative, the University of Ottawa faculties of medicine and health sciences had formed multidisciplinary academic program councils to foster research, education and clinical efforts among faculty and clinicians from multiple disciplines and agencies. As a joint appointee with the school of nursing, the director of nursing research of a major teaching hospital represented the health science faculty on the Academic Program Council for Oncology. She formed a working group of 10 nurses with expertise in research and/or cancer care to develop a proposal for offering a post-RN BScN course in cancer nursing. Prior to submitting the proposal to the school of nursing, the expert group conducted a needs assessment to determine if local clinical staff and university students had an interest in taking such a course.

Needs assessment

The needs assessment was targeted at community and hospital nurses within the catchment area for the school of nursing post-RN program. The expert group anticipated that clinical staff who were not working on their baccalaureate degree might be interested in the course as a review for writing the oncology certification examination or as a means of acquiring the professional development necessary for providing care and building a career in a competitive work environment. In addition, students who were currently enrolled in the program were also included in the needs assessment.

A simple seven-item questionnaire was developed to determine the interest of clinical nurses in taking such a course and to identify their reasons for doing so. The course was briefly described and questions asked about whether the respondent was interested in taking the course, if so, was the intent university credit, certification or professional development. Questions about the cost and timing of the course were also asked. This information was used to support the proposal and to market the course. Of the 281 respondents to the questionnaire, 73% stated they would take the course. Most of these nurses (69%) indicated they would take the course to improve their oncology nursing knowledge. In addition, 12% indicated they would take the course to gain university credit while another 10% were writing the oncology certification examination. Half of the respondents stated they would be willing to take the course by teleconference.

The results of the needs assessment were included in the course proposal which was subsequently accepted by the school of nursing curriculum committee. Fortunately, in the post-RN program there existed a course listed as "Special topics in nursing" in which content on a specific clinical specialty could be offered. Using an existing course code shortened the academic process of new course approval and allowed this course to start within six months of submitting the proposal.

Course faculty

The nurses from the region who shared their expertise in this process included administrators, educators, researchers and clinical nurse

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specialists. They were employed in tertiary care hospitals, the regional cancer and palliative care centres, and the health department. The majority of group members had a Masters degree; the researchers were either in the process of completing or had completed a PhD; and many group members held joint appointments with the school of nursing.

A full-time faculty member from the school of nursing guided the expert group through the administrative tasks required for course development and teaching. One group member assumed responsibility for the necessary course administrative work.

Evidence-based oncology nursing course

Course format

The purposes of this course are to provide nurses with the specialized knowledge and skills necessary to deliver optimal supportive care in oncology and to assist nurses in preparing for oncology nursing certification. Specific objectives are listed in Table One. These objectives were developed to address the challenge of merging university course requirements for theoretical content with the clinical information needed to pass a specialty certification examination. The Supportive Care Framework (SCF) was used as the conceptual basis for the course (Fitch, 1994). Supportive care is defined as "the provision of necessary services for those living with or affected by cancer..." (Fitch, p. 15), and addresses practical, spiritual, psychosocial, informational, emotional and physical needs throughout the spectrum of experience along the cancer care continuum (i.e., prevention and health promotion, screening, pre-diagnosis, diagnosis, dialogue/referral, treatment, rehabilitation, survivorship, recurrent disease, palliation and bereavement).

Figure One illustrates how the existing SCF was adapted for use in the nursing course. The intent was to link the phases of the cancer care continuum with both client needs and the clinical decision making in the nursing process. Therefore, the nursing process steps were added into the original framework. This facilitated students' understanding of how they would use their clinical skills to address particular needs during the different phases of the cancer continuum. In addition, a "health promotion" phase was incorporated into the original framework to make this activity explicit to students. The addition of paediatric content was explored, however time constraints limited the course design to the nursing of adults. Although courses in palliative care existed locally, aspects of this topic were included to complete the cancer trajectory within the SCF.

The faculty group was determined to emphasize research use as a course thread, therefore research findings and methodology were incorporated into each class. Current research findings were provided to enable students to learn about the content and to demonstrate how

research could inform their practice. Students were taught how to incorporate research evidence into their assessment, nursing diagnosis, plan of supportive care and evaluation during the various phases of the cancer continuum. One or two research articles were discussed in each class and additional studies were included in the lecture content. Students who had not yet taken the compulsory BScN research course were referred to **Reading Research: A User Friendly Guide for Nurses and Other Health Professionals** (Davies & Logan, 1997) for assistance.

The course content included major theoretical and practice issues related to the scope of supportive care. Lecture and in-class discussions were the major teaching strategies over the 13-week course. Faculty presented a different phase in the cancer care continuum each week and focused on the supportive care related to one or more client needs that would occur commonly during that phase. Further, a different cancer site was emphasized during each discussion. Students participated in a case study discussion to apply the theoretical knowledge into clinical practice situations. Multiple choice questions preceded many class sessions as a means of stimulating discussion. The textbook and additional readings augmented lecture material. Table Two presents a description of the course outline. The outline provides considerable detail as it was used to keep each lecturer aware of the content being covered by others, since the need to provide continuity and to prevent content overlap among the numerous presenters was another challenge.

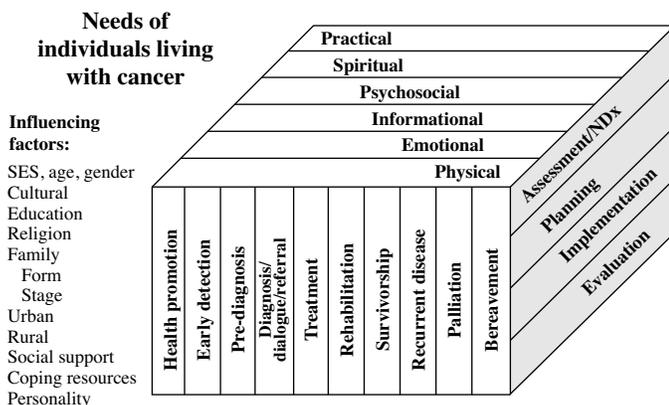
Teaching assistance

The teaching assistant, a Masters of Science in Nursing student with a clinical focus in oncology and palliative care, provided the additional continuity that was essential to the course. She acted as a resource for the students, evaluated student presentations and papers and ensured that extra reading and course notes were placed on reserve in the library. She also set up tutoring sessions to help those who were interested in writing the certification examination.

Student evaluation

Students were evaluated by several methods that were designed to match the course objectives. Mid-term and final examinations, worth 25% and 45% respectively, used multiple choice questions to help prepare students for similar format on the certification examination. A group assignment was designed to mimic a presentation at a research or clinical meeting and so included the preparation of an abstract, oral presentation and paper. Students were instructed to: 1) pick a phase in the cancer continuum, such as survivorship; 2) select a specific supportive care need, such as practical need; 3) identify a key issue related to that need, such as work re-entry; 4) choose a cancer site as the basis for a case presentation, such as testicular cancer; and 5) develop evidence-based nursing interventions and evaluation strategies to meet the client's supportive care need. Abstracts were prepared according to the Canadian Association of Nurses in Oncology (CANO) instructions for abstract submission. Abstracts were used as handouts for classmates prior to their presentations. The oral presentation (worth 15%) reflected

Figure One: Supportive care framework



Adapted from: Fitch, M., (1994) Providing Supportive Care for Individuals Living With Cancer: Report of the OCFR Supportive Care Program Committee, p.10.

Table One: Course objectives

1. Describe the supportive cancer care spectrum of experience.
2. Identify the research base to oncology nursing care.
3. Explain the scientific basis for oncology nursing practice.
4. Identify the supportive care needs of individuals at risk for cancer, with cancer, or those affected by cancer.
5. Define the nurses' role in all phases in the spectrum of cancer care.
6. Discuss the integration of other members of the supportive care team as it relates to individuals affected by cancer.
7. Discuss major theoretical and practice issues related to oncology nursing.
8. Develop clinical presentation and writing skills.

an authentic conference format of a 15-minute presentation followed by a five-minute question period. Each student group also submitted a formal five-page paper based on their oral presentation.

Course evaluation

University course evaluation is mandatory and the standard forms were used. The form has two parts, the first part asks students to rate aspects of the course on a five-point scale. For example, students rate preparation and availability of the teacher, currency of the content, and heaviness of the course workload. The second part of the evaluation is for any comments students wish to make about the course or teachers. For this course, students also filled out a card to provide faculty with other information about their background and reasons for taking the course.

Forty-one students enrolled in the course; seven were from the fourth year of the generic program and 34 were registered nurses, many of whom were registered in the post-RN program. Although most RN students were working in some type of cancer-related setting, a few were taking the course as an elective simply because it was clinically focused or the evening hour suited their schedule. There were a number of students in the course who had never taken a university course and who were 'testing the water' regarding a decision to obtain a BScN. They rated the course as clinically relevant to their practice.

While the class average was 81%, somewhat high by the standards of other courses, 50% of students rated the course workload as "heavier than average". The students also enjoyed having the different teachers whom they considered to be both knowledgeable and enthusiastic about their topics. Overall, the evaluation was very positive and encouraging.

Of the 41 course participants, six wrote and passed the first Canadian oncology nursing certification examination within the year following completion of the course. Four nurses were contacted within two months of writing the examination to obtain their feedback on the course. When asked about how the course helped them to prepare for the examination, they responded: "Great review of material"; "Got me back into a study mode and writing exams"; and, "Course focused on nursing rather than

pathophysiology as (was) reflected within the exam". When asked what might have been added or deleted from the course content to help better prepare for the exam, respondents had the following suggestions/comments: "Add paediatrics"; "Nothing, as (I) used most of course notes to study for the exam"; "Not sure the paper assignment was beneficial"; and "Spend more time on the specific cancers". Three of the four respondents stated the course had increased their confidence to write the examination and helped establish a study plan.

In addition one group of students, who prepared their abstract, presentation and paper on the information needs of women undergoing vulvectomies, went on to develop a client teaching booklet. They also had their abstract accepted and then presented their paper at an annual CANO conference.

Conclusion

This team-taught, evidence-based oncology nursing course was considered to be successful based on the student evaluations and their success in the course and so is continuing to be offered. It is now teleconferenced to additional sites in other cities of two provinces. In the last two years, the number of students registered has increased with 80 nurses participating in the most recent course. The majority of these students have not been nurses with oncology experience. Thus far their marks and evaluations have been similar to the first class that was predominantly cancer nurses.

Through the experience, experts in the region have networked with professional peers representing diverse aspects of health care and academia. This course format demonstrates that the expertise in local health care agencies can be mobilized to strengthen evidence-based knowledge of nurse clinicians in areas where faculty specialization may not exist. The network linkages provide an excellent role model for students who are or will be working in clinical environments where collaboration among those with different perspectives is increasingly valued.

Table Two: Course outline

Week 1

- A. Professional oncology nursing practice*
- Theory-based practice, research utilization
 - Nursing diagnosis
 - Standards for oncology nursing practice, education & client/family education

B. Supportive care framework

Week 2

A. Cancer pathophysiology

- Epidemiology
- Carcinogenesis
- Immunologic surveillance
- Cancer genetics

B. Health promotion & cancer prevention

- Risk factors
- Cancer prevention strategies

C. Cancer screening & early detection

- Characteristics of screening programs
- Screening guidelines for specific cancers
- Personal health practices for early detection

Week 3

A. Pre-diagnosis phase

- Health history
- Diagnostic investigations

B. Diagnosis Phase

- Tumour classifications
- Staging & grading

C. Dialogue/referral stage

- Goals of treatment
- Treatment approaches/modalities overview

Week 4

A. Treatment phase

- Radiation
- Skin integrity
- Elimination
- Nutrition

Week 5

A. Treatment phase

- Surgery

B. Treatment phase

- Chemotherapy

Week 6 MID TERM EXAMINATION

A. Complementary therapies

Week 7

A. Treatment phase

- Biologic response modifiers
- Immune function, hematopoietic function & sensorimotor

B. Treatment phase

- Bone marrow transplant

Week 8

A. Rehabilitation phase

- Cancer rehabilitation
- Fatigue & exercise
- Quality of life

Week 9

A. Survivorship

- Employability, insurability, quality of life
- Sexuality

Week 10

A. Recurrent disease phase

- Signs & symptoms of recurrent disease, diagnostic work-up & treatment
- Oncologic emergencies

Week 11

A. Palliative phase

- Definition, objectives, principles, delivery models

B. Bereavement phase

- Definitions & issues

Week 12

A. End-of-life decisions

B. Professional issues & future directions

*Supportive care needs assessment & interventions discussed each week

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