Creating opportunities to support oncology nursing practice: Surviving and thriving

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Abstract

There is a growing body of evidence to support that specialization in nursing leads to improved outcomes for patients, including increased QOL, improved symptom management, and fewer hospital admissions. Oncology nurses face several challenges in pursuing specialization, due to individual and system issues such as limited time and resources. To address these challenges, de Souza Institute launched a province-wide study group for nurses in Ontario who planned to write the Canadian Nurses Association (CNA) Oncology Certification Exam. The study group was led by educators from de Souza and Princess Margaret Hospital and drew expertise from nursing leaders across Ontario who shared the same vision of oncology nursing excellence. The study group was innovative by embracing telemedicine and web-based technology, which enabled flexibility for nurses' work schedules, learning styles, physical location and practice experience. The study group utilized several theoretical perspectives and frameworks to guide the curriculum: Adult Learning Theories, Cooperative Learning, Generational Learning Styles, CANO standards for practice and the CNA exam competencies. This approach enabled 107 oncology nurses across the province in 17 different sites to connect, as a group, study interactively and fully engage in their learning. A detailed evaluation method was utilized to assess baseline knowledge, learning needs, cooperative group process, exam success rates, and document unexpected outcomes. Ninety-four per cent of participants passed the CNA Oncology Exam. Lessons learned and future implications are discussed. The commitment remains to enable thriving through generating new possibilities, building communities of practice, mentoring nurses and fostering excellence in oncology practice.

It has been a great honour to receive this lectureship, which commemorates Helene Hudson. Helene Hudson left her imprint in Canadian oncology nursing, as a nurse, CANO member and leader. Unfortunately, we did not have the opportunity to know her personally, and yet her legacy is with us and guides us. Through this lectureship we hope to honour her and her commitment to excellence in cancer care in Canada. In addition, we would like to thank the nurses in Ontario who participated in the Collaborative Study Group for the Canadian Nurses Association's [CNA] Oncology Certification Exam and the nurses who supported and mentored the participants. This lectureship shares the story of this group and community, and it echoes the 2009 conference themes of support, surviving and thriving. This lectureship will review the elements considered during the development and implementation of the study group, including the program need and design, implementation strategies, evaluation and impact. Future directions will also be discussed.

To begin, we would like to share one oncology nurse's story of her journey in preparing to write the CNA Oncology Nursing Certification:

"I am a surgical oncology nurse ... I am also a single mother of a newly teenaged son. I wanted to be certified, but I heard rumours that the test was difficult ... The hospital was promoting being certified, but I was very worried ... In comes the de Souza with a fantastic program. I didn't have to take time off work or figure out rearranging my schedule ... if I missed a session. I could watch it later ... I had decided that even if I didn't pass, my practice, as a nurse, was changed. I was giving screen-

ing information to visiting families and having discussions that I wouldn't have considered before. Thankfully, I did pass, but it is only because of the study group. I could never have done that alone" (Shawne Gray, personal communication, 2009).

Shawne's journey speaks to the commitment and challenges faced in preparing to write the exam and the impact this had on her oncology nursing practice. In addition to describing the journey of nurses preparing for the exam, the lectureship also highlights the vision and dream of nursing educators and leaders, believing in what's possible when you are willing to risk and take a leap of faith.

Problem statement

Having specialized certification is an important indicator that the certified nurse is qualified, competent, experienced and holds specialized knowledge that is current in a nursing specialty area of practice (Miller & Boyle, 2008). According to literature, nurses view the certification process as having a positive impact both personally and professionally. Additionally, specialization leads to improved outcomes for patients, reduced rates of failure to rescue and lower patient mortality (Cary, 2001). In the United States, oncology certified nurses scored higher than the non-certified nurses in knowledge on symptom management, job satisfaction, and patient satisfaction (Coleman et al., 2009). This difference may be due to greater knowledge of guidelines among certified nurses, thereby allowing them to manage symptoms adequately, leading to greater patient satisfaction (Coleman et al., 2009).

Wade (2009) conducted a systematic review of the literature on the perceived effects of specialty nurse certification and found overall positive association between certification and job satisfaction, sense of empowerment, sense of collaboration with other health care team members, patient satisfaction, and nursing competence and expertise. Oncology nursing organizations, such as the Canadian Association of Nurses in Oncology [CANO] and the Oncology Nursing Society, strongly support specialty certification. Oncology certification confirms currency of knowledge in the specialty, demonstrates sincere commitment to the profession, signifies that the nurse has specialty knowledge, increases credibility and marketability of the nurse, strengthens patients' confidence in their caregivers and benefits the employers. Although there is growing body of research to support the benefit of oncology certification, the number of oncology certified nurses in Ontario is not representative of the number of oncology nurses providing care. This may be due to several challenges, including a lack of financial resources and limited time to study (Wade, 2009).

In 2008, several nurse leaders across Ontario identified that a study group was needed in their organizations. Although there were already a few study groups formed in various organizations across

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Ontario, these study groups were sporadic, difficult to sustain on a yearly basis, and logistical challenges were present in supporting nurses in smaller centres and rural areas. The development of a provincial study group for the CNA oncology exam was ideal and, yet, there were several challenges associated with its development that needed to be addressed in order for it to be feasible. These issues included: (1) obtaining financial resources to support the operation of the study group; (2) meeting the diverse learning styles of the nurses; (3) accommodating nursing work schedules; (4) ensuring accessibility across Ontario; (5) finding content experts; and (6) developing and delivering the program guided by teaching/learning theories.

The first province-wide study group was launched in 2008 by de Souza Institute, a new oncology nursing knowledge transfer centre, to meet nurses' needs for support to obtain oncology specialty certification. The de Souza Institute was established in 2008 by Princess Margaret Hospital/University Health Network, and Cancer Care Ontario in partnership with and funding from the Ontario Ministry of Health and Long-Term Care to provide evidence-based education to nurses across Ontario. Led by educators from de Souza Institute and Princess Margaret Hospital, the study group used a combination of teaching methods to reach nurses across the province.

Theoretical perspectives underpinning the program design

Several teaching and learning theories and frameworks were used to guide the design of the study group to ensure that the learning needs of the participants were met. This was important, as the participants came with varying experiences, ranging from novice to expert, with different learning needs, learning styles and preferences. The teaching and learning theories that underpinned the design and mode of delivery of the study group included adult learning theory, generational learning and cooperative learning.

Adult learning theory

Malcolm Knowles (1998) identified the core characteristics of an adult learner as the following: (1) autonomous and self-directed, (2) capable of integrating past experiences and knowledge, (3) goal oriented, (4) relevancy oriented, (5) practical, and (6) valuing respect. Adult learning theory was incorporated into the design of this project for oncology nurses who have diverse work and life experiences and challenging work-life schedules. Web-based technology enabled accessibility, and the ability for the participants to be self-directed, allowing them to complete the sessions at their own pace. The case studies drew on nurses' existing work experiences and knowledge, enabling active group discussions. The CNA exam blueprint (2007) and CANO (2006) standards for the specialized oncology nurse were incorporated into the content of the course, providing relevancy. Participants were actively involved in the development of multiple choice questions ensuring their familiarity and comfort level with the exam format.

Generational learning

Acknowledging the various learning styles of the participants in the study group was also a crucial step in the development of the program. The learners of the study group were diverse in age group with each generation having distinct learning styles. The theory indicates that baby boomers are more comfortable with didactic learning and group work, while the generation Xers and Yers prefer technology-based learning (Billings & Kowalski, 2004; Johnson & Romanello, 2005). These learning differences were acknowledged and met by incorporating the different teaching-learning strategies in each week's session. Strategies included assigned pre-readings, a 45-minute live videoconference lecture followed by case studies, identification of areas of enduring understanding, and a question and answer period. A series of multiple choice questions wrapped up the session. All sessions were available online in archived format.

Cooperative learning

Cooperative learning is a successful teaching strategy in which team members of different levels of ability help each other to improve their understanding of a subject (Johnson, Johnson, & Smith, 1998). The basic elements of cooperative learning include positive interdependence, individual accountability, face-to-face promotive interaction, interpersonal and small group skills development and group processing (Johnson et al., 1998). The participants of the study group formed many local small groups working together throughout the duration of the study group. Each of the small groups was assigned to develop questions (multiple choice or true or false) to be shared with the larger group. This process facilitated positive interdependence between members of the smaller group, and also accountability to the larger group. It also ensured that the participants were actively involved in the study group, as opposed to being passive recipients of information. The case studies, developed and facilitated by nurses who are experts on the topics, allowed the participants to learn not only from the experts, but also from each other, as they were able to discuss and draw on their own experiences. Johnson et al. described the benefits of having face to face interaction and teaching to facilitate cooperative learning. The live videoconferencing enabled this aspect.

In terms of the study group curriculum topic areas, depth and breadth, the competencies that guided the certification exam's development (CNA, 2007) were foundational. Weekly sessions were based on one or several of the seven exam competency areas, with the extent of time or resources utilized based on the approximate weighting of the competency category on the CNA exam. Additionally, the weekly study group content integrated contextual variables, including age and gender issues, and the three levels of cognitive ability (*knowledge/ comprehension, application and critical thinking*), which are included in the CNA exam blueprint. Through this integration, participants studied in a manner consistent with how the content would be organized and tested on the exam.

Implementing the Collaborative Study Group

Sixty-five per cent of the total 107 participants indicated they intended to write the CNA Oncology Certification Exam that year. Additional nurses participated in the sessions based on their self-identified learning needs. Participants came from 17 different health care centres ranging from cancer centres, local hospitals, regional satellite centres and homecare. Of the 14 provincial regions, 12 were involved. Participants' average age was 39, and their average years of oncology experience were eight. The top two areas of practice experience, in relation to treatment modalities and specific cancers, are as follows: chemotherapy care and palliative care; and breast cancer care and malignant hematology. Participants connected each week for 16 weeks by videoconference on the Ontario Telemedicine Network (OTN) with sessions running for three hours in the evening. To cover the breadth and depth of content on the exam within the three months' study group duration, multiple competency areas were covered in each study session. Guest oncology nursing experts were invited each week to lecture on their areas of specialty, following a detailed curriculum syllabus. A de Souza educator was present at each session to facilitate and enable continuity, consistency and quality in the approach.

An essential partner in the videoconference was the volunteer, site-specific, study group leader. The site leaders organized the study groups in their centres, and facilitated the booking of videoconference equipment with local telehealth coordinators, distributed materials and facilitated study group processes. Additionally, the study group leaders provided support and mentorship to the participants in their organizations. Individuals who were unable to participate in the designated videoconference due to scheduling challenges had access to the archived videoconference session on their computers.

A one-day symposium was held in March, in advance of the CNA exam. The content for the symposium was selected based on the participants' knowledge gaps and confidence scores, which were identified via a pre-evaluation survey. The following areas were covered: chemotherapy and biotherapy care, malignant hematology, pediatric oncology, and oncology emergencies. A modified problem-based learning approach was used to address each area. The symposium also offered participants the opportunity to develop their multiple choice exam writing skills with guidance provided by an exam writing expert, and practice in writing a mock exam as well. Participants reviewed their mock exam results and completed an analysis of their knowledge gaps, which informed their final weeks of exam preparation. The mock exam was developed with 12 oncology nursing experts in Ontario, using the CNA (2007) blueprint as a guide. The de Souza Institute supported expenses for the event.

Evaluation and impact

A comprehensive evaluation was carried out with the primary goal being quality. Participants' feedback was kept anonymous by using ID numbers. The evaluation was guided by the theoretical perspective underpinning the study group process, and further informed by ongoing feedback from participants and local site leaders. The following evaluations were completed: a pre-evaluation, weekly evaluation, midterm evaluation, webcast evaluation, symposium day evaluation and a post study group evaluation. The pre-evaluation gathered data on learner demographics and their knowledge and confidence level prior to the study group. To assess knowledge, a short multiple choice test was implemented. The assessment of confidence was based on CANO Practice Standards and Competencies for the Specialized Oncology Nurse (CANO, 2006), and the CNA (2007) exam competencies.

Weekly evaluations

Weekly evaluations were completed to enable fine-tuning of the study group process over the 16 weeks, and to provide the expert speakers with feedback. Several adjustments to the process were made based on this feedback, such as timing adjustments for activities, integration of the blog for distribution of study group material, communication strategy adjustments, and adjustments to teaching methods. A key learning from the weekly evaluations was that the content was too compressed. There was a diversity of suggestions on how to improve the process, which reflected the diversity of the learners.

Midterm evaluation

The midterm evaluation focused on the cooperative group learning experience, respondents' perception of the effectiveness of the study group, and on group process issues. The feedback from the midterm must be interpreted with caution, as participants who did not find the process effective, may not have replied. The response rate for the attendees of the videoconference sessions was 42 per cent, from the total 107 study group participants. Ninety-one per cent of respondents indicated that they were receiving adequate support in their studies. Additionally, they indicated that they appreciated the feedback loop used to ensure that their concerns were addressed by the study group organizers. Respondents also expressed that they found the study group to be effective and beneficial for their exam preparation. In relation to the cooperative groups, they indicated that it was rare for the whole group to meet once a week, as their ability to attend the videoconference session varied based on their work schedules. Respondents also indicated how well their cooperative group functioned, in relation to other groups they have worked with in the past. Areas that were identified as more difficult for the cooperative groups were communicated on a regular basis. One respondent did not have a cooperative group to participate with, and shared that the cooperative approach of the study group was challenging.

Archived webcast evaluation

The archived webcast evaluation was completed by eight participants. Although the number is small, all indicated the ease to access as a major strength, and that it met their learning needs and style. These participants had a greater ability to self-direct their learning experience, although many of them would like, but did not have, the opportunity to participate in cooperative learning activities that were only offered via videoconference.

Symposium evaluation

The symposium day was attended by 61 nurses and the evaluation focused on the quality of problem-based learning (PBL) activities and the mock exam. On a scale of one to five, the overall symposium day workshop was ranked 4.5 (n=61). Respondents indicated that they appreciated the opportunity to ask questions of experts. Additionally, they appreciated the PBL sessions, the ability to network with colleagues across Ontario, and the ability to complete a mock exam. Respondents stated that it solidified their knowledge and provided them with an opportunity to identify areas for further study prior to the exam. The mock exam average mark was 80 out of 100. This was a significant improvement from a baseline knowledge test (pre-test) mark of 67 out of 100 ($p < 0.001$). Although the pre-test was different from the mock exam in terms of not following the CNA (2007) exam blueprint and at a lower level of question difficulty, participants scored higher in the mock exam. The observation that nurses scored higher on a more difficult test post study group suggests a true increase of knowledge.

Final evaluation

The final evaluation focused on the study group processes, changes in confidence in content areas, and suggestions for study group enhancement. The response rate for the final evaluation was low, at 31 per cent (n=33). This rate may reflect the timing of the evaluation, as it was completed after the participants wrote their CNA exam. This choice was made to ensure participants could focus on final exam preparation, as opposed to completing a study group evaluation survey. This approach, however, makes the pre and post comparison of confidence nearly impossible.

Respondents rated the overall effectiveness of the study group on a scale of one to five. The symposium day was seen as the most effective element of the study group. All other elements, excluding depth of content, were ranked at least three out of five, indicating acceptable effectiveness. Depth of content rated lower and needs greater focus for future groups. Respondents were also asked to indicate which aspects of the collaborative study group they liked the most. Additionally, they indicated that they appreciated the content covered, the learning experience, the expert lecturers, the community of nurses and the ability to share practice experiences and discussion across the province. Respondents appreciated:

"Meeting with such highly educated nurses who were deeply committed and motivated to share their knowledge about their specialty"; "Meeting each week and ensuring that all aspects of the exam were being covered ... Meeting with the different cancer centres and hearing people speak with different experiences and expertise."

Respondents also provided input on areas to enhance in the study group. These areas include time management and greater time to study, increased practice questions and increased direction from the experts on the type of questions they would encounter on the exam.

In terms of the impact of the study group, respondents described increased understanding of disease processes and cancer treatments, as well as increased confidence in their work. Some indicated that the study group has motivated them to return to school or to seek out additional professional development oppor-

tunities. In addition, a few respondents indicated that practice changes were being explored based on the evidence presented in the group.

"I feel more knowledgeable and inquisitive. Every day, I continue to develop my knowledge base"; "I am more confident in many areas of discussion with my patients. I learned a lot and I am very positive in my caring of ... hematological patients."

The CNA oncology exam success rate for nurses who participated in at least one format of study group was 94% (n = 72). This success rate was tracked via participant self-report and via study group lead report. Participants shared their stories of success with the study group facilitators with great joy and pride:

"I was out of town and returned today to find a nice big brown envelope with my pin, certificate, etc. Quite frankly, I was not at all confident that I had passed... I appreciate all the support that we received during the study sessions, and without that I feel that I would not have been successful. I would certainly encourage any of my colleagues who are considering certification to participate in the program..."

"Yes... I have passed! Crazy happy dance here! Again, I would like to thank you and your colleagues at the de Souza Institute for their incredible guidance and encouragement while pursuing my goal. It would not have been possible without the dedication of my fellow sister and brother nursing colleagues from across the province..."

Lessons learned

Many lessons were learned through the development, implementation and evaluation of the provincial study group, which will inform future oncology study groups. We realized the importance of clearly defining the target audience, as many participants had different goals, and this impacted our ability to be learner-centred. Additionally, we discovered that the cooperative groups were difficult to implement at sites that had low participant numbers, and for individuals who participated via archived webcasts. In relation to the evaluations, there were several challenges and lessons learned. Evaluations were completed in advance of the study group, at midterm and on completion, as well as weekly. The number of evaluations and duration of the study group may have led to evaluation fatigue. Additionally, the method for return had potential for technical difficulties and required the study group lead to be responsible for evaluation collections. Over the 16-week period, the return numbers decreased. Post exam stress may also have contributed to the low returns of the final evaluation, as well as increased potential for bias due to negative feelings incurred when writing the exam. Participants circulated an email following the exam, titled as an "exam post mortem", describing shock and

feelings of failure. In light of these learnings, evaluations in subsequent study groups will be streamlined and modified to increase returns. Additionally, the final evaluation will be completed prior to the CNA exam.

Future recommendations include selecting a teaching modality that facilitates greater flexibility for nurses' schedules, whilst also facilitating community building and active participation. Additionally, the teaching modality should have a system to support tracking and evaluation of participant progress and study group quality. A learning management system may be the ideal tool to foster these requirements. Furthermore, additional study time is required for participants to ensure they are able to cover all exam competencies in depth, as well as increased numbers of multiple choice questions consistent with exam blueprint (CNA, 2007). The symposium day was an essential component for success, and will be considered in future study group endeavours.

Conclusion

With a community of oncology nurses and a dream, all things are possible. The de Souza study group was a successful approach to support nurses in preparing for and passing the CNA oncology exam. A collaborative, cooperative community approach was valued by all participants, and was an essential component of success. This provincial study group is a template for what is feasible at a national level. Further evaluations are warranted. The de Souza Institute will continue to facilitate yearly oncology study groups with future evaluations of multiple cohorts enabling further generalizations on effective methods and processes for a study group. The 2008 study group was an opportunity to support surviving and thriving of nurses, and an opportunity for novice nurse educators to fully explore the scope of their roles. In doing so, teaching and learning theories were applied, that led to participants engaging in activities that directly impacted their oncology nursing practice. ☒

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