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Clinical Inquiry Project

Development of an Online Certified Hospice and Palliative Nurse (CHPN)

Certification Review Course

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Description of the Problem

There may not be enough hospice and palliative care specialized Registered Nurses (RNs) to care for the Baby Boomer generation as they age (Advancing Expert Care, 2014). The Bureau of Labor Statistics estimates that number of RN jobs will increase by 22.2% by 2018, more than any other occupation, as elderly individuals constitute a larger portion of the population and the demand for health services grows, and as the population ages, the needs for hospice and palliative care increases (Lacey & Wright, 2009). Now is the time to prepare for the upcoming demand by putting initiatives in place focused on the shortage of hospice and palliative professionals needed to care for this aging population. A plan to address the shortage of hospice and palliative professional starts with education and training. Preparing more nurses for certification as hospice and palliative nurses will address this education gap, as the path to certification requires substantial expert content instruction by recognized authorities in the field. A recent Institute of Medicine (IOM) report on the state of palliative care in America found deficiencies in professional education and development (Institute of Medicine [IOM], 2014). The report found recent evidence-based knowledge gains in hospice/palliative care have not necessarily translated into improved patient care. This may be due to the insufficient supply of trained and certified palliative care and hospice specialists. As a consequence, many patients

with serious advanced illness must rely on clinicians to provide care who lack the training and experience necessary to meet their patients' palliative care needs (IOM, 2014). The 21-member IOM committee that authored the report found that, despite efforts to improve access to hospice and palliative care over the past decade, there are still major gaps, including a shortage of caregivers proficient or certified in palliative care (Advancing Expert Care, 2014). The IOM report recommends that educational institutions, professional societies, accrediting organizations, certifying bodies, health care delivery organizations, and medical centers take measures to both increase the number of palliative care specialists and expand the knowledge base for all clinicians. Increasing access to preparation for certification as a hospice/palliative care specialist is one approach to dealing with the deficit of trained individuals.

Approximately one month after the release of the 2014 IOM report, the Hospice and Palliative Nurses Association (HPNA), the Hospice and Palliative Nurses Foundation (HPNF), and the Hospice and Palliative Credentialing Center (HPCC) launched a five million dollar campaign aimed at increasing the number of certified hospice and palliative care nurses, advancing research into best practices of hospice and palliative care, elevating palliative nursing leadership at the local and national levels, and enhancing nursing competence through certification (Advancing Expert Care, 2014). Currently, there are approximately 13,000 nurses certified by the HPCC in hospice and palliative care. As part of the Advancing Expert Care Campaign, the three organizations plan to develop and implement strategies to collect palliative nursing workforce data to better understand and fulfill the need (Advancing Expert Care, 2014). The HPNA, HPNF and HPCC recognize that increasing the number of certified nurses will create a more skilled hospice and palliative nurse workforce who can help close the gap in what

could be a critical shortage of professionals (Advancing Expert Care, 2014). The only certification for RNs in the field of palliative care is the Certified Hospice and Palliative Nurse (CHPN) which is obtained through an examination process administered by the HPCC.

Recent data from the HPCC shows that the total number of CHPNs is increasing, but over the last two years the number of nurses taking the CHPN exam has decreased (HPCC, 2014). Additionally the pass rate on the CHPN exam went from a high of 82% in 2011 to 76% in 2015 (HPCC, 2015). The reasons why the numbers of RNs taking and passing the CHPN exam are decreasing are not clear, but the HPNA has recognized a need to focus on several strategies to increase the numbers of CHPNs.

The Advancing Expert Care Campaign has identified enhancing nursing competence through certification and the creation of programs to support and increase the number of nurses certified in hospice and palliative care as two of the six core strategies to address the shortage of palliative professionals (Advancing Expert Care, 2014). Although the detailed plans for addressing each of the core strategies are not yet determined, the need for innovations in exam preparation strategies is evident. This project was designed to develop an innovative online exam preparation course as one possible strategy to increase access to certification exam preparation.

Population affected.

As the population in the United States ages, the number of people with serious illness is growing, thus increasing the gap between the number of patients requiring hospice and palliative care and the number of certified hospice and palliative caregivers to provide this care

(Advancing Expert Care, 2014). Overall the problem of not having enough palliative care specialists will affect all patients living with life limiting illnesses.

Nursing is the population most affected by the lack of palliative specialists as nurses are on the frontlines of the health care system. The IOM report (2014) recommends that primary palliative care should be a core skill of every frontline health care clinician dealing with patients with advanced or serious illnesses regardless of the site of care including outpatient departments, primary care provider offices, hospitals, and community settings (Hinds & Meghani, 2014). In order to meet this recommendation, all nurses should develop primary palliative care competencies including skills in symptom management, patient/family communication, and interprofessional collaboration (Hinds & Meghani, 2014). Nurses who are certified in hospice and palliative care (CHPNs) are the specialists who can fill the gap and provide education and mentoring in the settings aforementioned.

Epidemiology.

The exact number of nurses who are engaged in providing hospice and palliative care has not been measured, however, the number of nurses currently certified as a CHPN is 11,347 (HPCC newsletter, 2015). There are over 5, 800 hospice programs in the United States (National Hospice and Palliative Care Organization [NHPCO], 2014). The number of palliative care programs in hospitals with 50 or more beds increased from 658 (24.5%) to 1,486 (58.5%) from 2000 to 2008 (Center to Advance Palliative Care, [CAPC], 2010). This growth in palliative care programs should correlate with a growth in the number of CHPNs, but as indicated in the 2014 IOM report there are deficiencies in the training of palliative care clinicians across all

disciplines. Consequently, many generalist nurses are practicing in these new palliative care programs and they are most likely not certified. Therefore it seems reasonable to conclude that there are not sufficient numbers of CHPNs.

By designing and offering resources, programs, and education for nurses and other professionals that take into account changes in the healthcare delivery models, advances in technology, and shifting patient demographics, we will not only create more skilled hospice and palliative professionals, but also grow the number of certified caregivers that can help close the gap in what could be a critical shortage of professionals (Advancing Expert Care, 2014). One method to increase the number of certified nurses is to provide education and support in the form of exam preparation. One approach that has been successful in other nursing specialties is development of certification review courses.

Purpose of the project.

Through the Advancing Expert Care Campaign the HPNA, HPNF and HPCC have called for the establishment of appropriate training and certification methods to increase the palliative care knowledge and skills of nurses and address the future nursing expertise which will be needed to care for the increasingly older Baby Boomer generation. There are several areas which can be addressed to increase the number of CHPNs, but the one area that HPNA has selected as a priority is assisting nurses with exam preparation. This project was designed to address the lack of availability of CHPN exam preparation through the development of a high quality, content expert reviewed, online CHPN review course sponsored through the HPNA.

Review of the Literature

Review of Relevant Literature

The purpose of this literature review was to identify strategies to encourage and increase the number of nurses with CHPN certification with a focus was on best practices to promote certification among nurses.

Search strategies.

The literature search strategy included electronic databases Cumulative Index to Nursing and Allied Health Literature (CINAHL), MEDLINE (Ovid) and PubMed. The key word *certification* was combined with nursing, review courses, specialty certification and best practices. Manual searches of specific journals, such as The Journal of Hospice and Palliative Care Nursing, The Journal of Continuing Education in Nursing, Journal of Nursing Care Quality, and Journal for Nurses in Staff Development were completed searching back five years for articles with certification in the title. Titles and abstracts from all articles retrieved were reviewed for key words certification and nursing. Professional organization websites, the Oncology Nurses Society (ONS), Hospice and Palliative Nurses Association (HPNA), American Association of Critical Care Nurses (AACN), American Association of Colleges of Nursing (AACN), Hospice and Palliative Credentialing Center (HPCC) which is formerly known as the National Board for Certification of Hospice and Palliative Nurses (NBCHPN), American Board for Nursing Specialties (ABNS) and the American Nurses Credentialing Center (ANCC) were reviewed for specialty specific information, certification processes, review courses and exam statistics. Because professional organizations are the portal through which specialty certification

information is obtained, it was essential to review these websites. The professional organization websites yielded the baseline standards of certification and offered links to documents supporting certification. The final articles included in the literature review were limited to those that included certification as a variable related to certification review practices or courses. The intended focus was to be on the CHPN specialty but because the literature is extremely limited, much of the certification information is from a variety of nursing specialties. The main topics discussed in this review of literature will include challenges associated with increasing the number of certified nurses and a discussion of the development and impact of review courses.

Benefits of certification.

The increasingly complex health care needs of patients are best met when RNs certified in specialty practice, provide nursing care (American Board of Nursing Specialties, [ABNS], 2005). In addition to the ABNS statement regarding quality, public perception of nursing competence is a factor which may be influenced by nursing certification. Radwin, Cabral and Wilkes (2008) found that expertise as verified by the external standard of professional association certification was positively related to patients' perceptions of the nurses' proficiency.

As a standard of excellence, certification demonstrates to the employer that the nurses are taking responsibility for their own professional development (Kaplow, 2011). As organizations and the public see specialty certification as a marker of excellence, this may encourage more nurses to consider certification. Ultimately the decision to become certified in a nursing specialty is the individual nurse's choice.

Barriers to certification.

As nurses first begin to think about certification, they may not have all the information needed to make the decision, which may impact their readiness to take the exam. Some nurses report that they lack the experience and/or qualifications to become certified and question the relevance of certification to their practice and whether certification is actually associated with increased competency (Altman, 2011). Nurses may fear failure, (Fleishman, Meyer & Watson, 2011) or find the idea of taking an examination to demonstrate their knowledge frightening (Teal, 2011) or intimidating, creating test anxiety (Valente, 2010).

In addition to the personal concerns about readiness to take the exam, other challenges include the actual application process which may be difficult and time-consuming (Hiscoe, Wisser & Bowman, 2002), and the cost of certification could be prohibitive for some nurses (Karvonen, Sayre & Wyant, 2004; Teal, 2011). Certifications expire and maintenance of certification may be costly and resource intensive, which may cause some nurses to forgo recertification. Some of the challenges are more concrete and include lack of access to written resource materials, books to help prepare for the exam, and the fact that most must take computer based tests (Altman, 2011). The ability to access exam preparation materials via a review course may influence nurses' decisions about certification.

Preparation for the exam may be one area that if addressed, could encourage nurses to obtain certification. Teal (2011) identified that nurses expressed concerns about exam preparation as a barrier in the certification process. Numerous pathways such as certification review courses, self-study in the form of reading and reviewing exam preparation materials,

study groups and employer sponsored review materials exist to help nurses who may have concerns about studying and preparing for the exam. One of the most common methods used to prepare nurses to take certification exams is through certification review courses (Sayre, Wyant & Karvonen, 2010).

Review courses as a strategy to overcome barriers to certification.

Once a nurse makes the decision they are going to pursue a certification, most begin preparing for the exam. One way to prepare for the exam is to attend a certification review course. Karvonen et al. (2004) found in developing a medical-surgical review course that some nurses admitted to lacking the self-confidence necessary to sit for the examination without support, and felt a review course was necessary. Nurses who participated in a medical certification review course reported increased confidence and competence in their role as nurses (Sayre, Wyant & Karvonen, 2010).

There are numerous professional nursing organizations offering certification review courses. The review courses vary in content according to specialty and delivery method in various geographical sites. The ANCC offers specialty certifications and certification review courses for some specialty areas not managed by a professional organization. Professional nursing organizations' also offer various forms of certification review courses. In addition to review courses held by the aforementioned specialty organizations, courses are also developed and held through private companies and health care institutions.

Whether the review courses are held through a professional organization or through private institutions, overall the face-to-face review courses are typically more costly than self-

paced or online review courses. The cost is not only determined by course registration cost, but considerations of meals, lodging and cost of travel to and from the course. The fact that face-to-face courses cost more for students to take and for organizations to offer may be due to the fact that they require more logistical support in the form of location, materials, instructors and planning. On the other hand, online self-paced courses usually require larger initial and periodic development costs. Cost is a significant barrier which influences a nurse's decision to obtain certification and has been well documented in the literature (Sanford & Best, 2013; Teal, 2011; Valente, 2010). Not only is cost a factor, but accessibility of review courses is an issue as many working nurses cannot take time to attend a review course (Teal, 2011).

Options for review courses and key considerations.

Review courses may be offered for various lengths of time depending on content being taught and other issues such as working with staffing schedules. Coordination and organization of the schedule for a course can be a key component to creating a successful course (Karvonen, et al., 2004). One day or multiple day regional intensive courses can be effective (Sanford & Best, 2013; Teal, 2011; Valente, 2010) and can work in specialties where it is difficult to offer a course over multiple weeks. A needs assessment can address the challenging issues of identifying areas of content for review, and determining the best time to schedule a course, if the course is to be held within an institution.

Karvonen et al. (2004) used a needs assessment and found that the majority of nurses requested the classes be held from four to seven in the evening and that the course be presented in weekly topics spanning 12 to 13 weeks. In order to respond to the needs of the staff

they used volunteer experts and Advanced Practice Registered Nurses (APRNs) in the facility with flexible schedules to teach the course. Karvonen et al. (2004) also found the length of the course, 13 weeks, was successful in that it gave nurses a chance to integrate and process the material they were learning and met the outcomes of increased medical-surgical knowledge and successful certification testing. The participants did not identify the length of the course as a barrier and the facilitators noted unexpected benefits from the program such as the nurses began forming bonds with each other and offered emotional support and encouragement to each other.

Teal (2011) developed a two day certification review course put on by the local AACN chapter. The chapter brought in a speaker to teach the first course, but the feedback was not as positive as expected so they developed their own course using other Critical Care Certified Registered Nurses (CCRN) s in the chapter which was successful (Teal, 2011). The course was then offered throughout the year in two to three hour blocks of time over ten weeks and resulted in an 81% pass rate on the certification exam. Sanford and Best (2013) developed a review course for orthopedic nurse certification which included two hour, weekly, on-site classes held over a six week period; the two courses held resulted in certification pass rates of 100% and 88% which exceeded that national rate of 86.5%. Valente (2010) described a system wide initiative incorporating certification review courses in one facility for various nursing specialties which resulted in an increase in overall specialty certification from 8% to 30% and a certification pass rate of 88-100%. These are just three examples from different specialty areas showing the variety of ways certification review courses can be developed and presented.

The actual development of a review course can be extremely time and cost intensive (Karvonen et al., 2004). Core curriculum and review books along with exam content outlines can serve as guides to curriculum development. Other costs and considerations when developing or holding review courses include classroom space, audiovisual equipment, speakers, course facilitators, contact hour credit, and duplication of educational materials, review texts, compensation for instructors. The time commitment of faculty needs to be considered in the form of development and preparation time. Karvonen et al. (2004) found that preparation time commitment for a two hour session was approximately fifteen hours for the initial offering of their review course.

In addition to allowing adequate time for course preparation, other options include videotaping presentations for future reference and those who are unable to attend and ensuring contact hours are awarded for each session attended (Valente, 2010). Altman (2011) recommended that staff members who attended their review course register for the examination before attending the course as motivator and to decreases the number of staff who attend the course but never take the examination. Sanford & Best (2013) found key to the success of their review course was the support from administration, including an education budget for the program and financial reimbursement for class attendance.

Benefits of review courses.

Certification review courses have been shown to increase certification rates (Valente, 2010; Teal, 2011; Sanford & Best, 2013). Much of the literature supporting the certification review course outcomes has come from various nursing specialties and is focused on the face-to-

face, or a traditional classroom setting for course delivery. Although several professional nursing

organizations such as the ONS and AACN offer online versions of certification review courses,

no studies could be found showing the effectiveness of the online version compared to the face-

to-face version of the review courses. However, the limited evidence available about the

challenges and best practices in the development of certification review courses using traditional

classroom delivery methods seems to support the usefulness of these courses to help nurses

better prepare for a certification exam. Even though the majority of the literature on certification

and review courses has come from various nursing specialties such a critical care and medical

surgical nursing, the examination preparation process is probably similar. Therefore, the

specialty of hospice and palliative care, as a newer nursing specialty with certification as an

option, can probably use what has been found about supporting nurses in the certification process

from other specialties.

Current HPNA certification review practices.

As an organization the HPNA does not consistently offer CHPN certification review

courses and the location and times offered are extremely limited. As noted earlier exam

preparation is an area that numerous nursing specialties have chosen to address to increase

certification rates (Hagler, Poindexter & Lindell, 2014; Sanford & Best, 2013; Teal, 2011). A

review of the current processes at the HPNA revealed that improvements in course offerings

could support the goal to increase the number of CHPNs.

The HPNA currently uses nurses who are Approved Educators to teach hospice and

palliative care content provided by HPNA. The HPNA Approved Educators have completed a

course that prepares them to teach hospice and palliative approved review course content

modules titled "The Clinical Review for the Generalist Hospice and Palliative Nurse." To

become an approved educator the RN must be a CHPN, show proof of purchasing the *Core*

Curriculum for the Hospice and Palliative Registered Nurse (Martinez & Berry, 2015), and take

an online course which includes the clinical practice review as well as instructions on how to

present and teach the material and submit an application. The Approved Educator status is good

for one year and annual renewal is required. Each Approved Educator has access to the teaching

plan, slides, and other resources to present the material. The Approved Educators who are

located across the country are then listed on the HPNA website, and members can contact them

to present content. Currently there are approximately 650 approved educators in 48 states and

Puerto Rico (HPNA, 2014).

The *Clinical Review for the Generalist Hospice and Palliative Nurse* (the title of the

approved continuing education course curriculum) which can be taught by the Approved

Educators includes the following eight modules whose titles are as follow: "Care Goals and

Decisions", "Pain Management", "Symptom Management", "Care at the Time of Dying", "Grief

and Bereavement", "Self-Care for the Hospice and Palliative Care Professional" and "Spirituality

and Geriatric Palliative Care". The content of the *Clinical Review for the Generalist Hospice and*

Palliative Nurse does not completely correlate with the HPCC "Detailed Content Outline"

information for the CHPN exam located in the CHPN Candidate Handbook (NBCHPN, 2014)

and the HPNA *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez &

Berry, 2015), which are the two main study guides for the exam.

The Approved Educators can use the modules in a variety of ways such as conducting orientation for employees new to hospice and palliative care, conducting review courses to begin the preparation for a certification exam, and/or providing presentations on updated hospice and palliative clinical practice for nurses and/or continuing education. Although Approved Educators use these modules to educate hospice and palliative nurses, and may use them to conduct a CHPN review course, the materials are not specifically designed to be a CHPN review course. Additionally, many facilities do not have HPNA Approved Educators and therefore do not have access to the certification review course materials. There may also be variation in the way the review courses are taught.

Access may also be an issue as not all RNs have the ability to take a CHPN review course in their local area. Schmal and Derreve (2012) reviewed the HPNA website and found of the 48 HPNA chapters only one chapter was found to have posted an upcoming CHPN review course through the Approved Educators. They also completed an Internet search and found of the private institutions offering courses listed as certification review courses, only one was associated with an HPNA chapter (Schmal & Derreve, 2012). This shows that although Approved Educators might be holding review courses they are not advertising them through HPNA. They concluded "It seems that most hospice and palliative professionals rely on individualized study or study groups for examination preparation because of limited access to review courses" (Schmal & Derreve, 2012, p. 180). An Internet search for "CHPN review courses" found a variety of offerings, several by local HPNA chapters or Approved Educators. The costs varied from free to employees of a specific health system to $260 for "non-members." The majority of the courses were advertised as one or two day courses. This search validates

Schmaltz and Derreve's findings. The availability of review courses varies across the country depending on the location of the Approved Educators. An equitable course delivery process needs to be developed to ensure that RNs who want to take a CHPN review course prior to taking the exam have the ability to do so. Discussion of the CHPN testing data from previous years is important to support the need to create new delivery methods.

CHPN certification pass rate.

The total number of CHPNs has been increasing (HPCC, 2014) which supports palliative care as a growing nursing specialty. The HPCC publishes yearly statistics of the CHPN exam results and the data show the number of nurses taking the exam is decreasing. In addition, passing rate of the exam is declining. In 2011, 3,543 nurses took the exam, but the numbers declined to 3,409 in 2013, and 3,102 in 2014 (HPCC, 2015). The CHPN exam pass rate has fallen from 82% in 2011 to 76% in 2014.   Because the rate of 76% is comparable with the 2013 Oncology Certified Nurse (OCN) pass rate of 72% (Oncology Nurse Credentialing Center [ONCC], 2014) and the CCRN 2013 pass rate of 71% (AACN, 2014), it is not clear what these trends in the pass rate mean. Research would be needed to explore reasons why the pass rates and number of nurses taking the exam have been decreasing. Only two articles were found in the literature search on CHPN certification, and neither discussed the outcome of review courses or trends in CHPN certification numbers. Additionally on the HPCC website, the data on exam statistics was published, but no assumptions or discussion of the statistics was found.

Potential benefits of CHPN online course delivery.

Although there is no obvious reason for the decline in nurses taking and passing the CHPN exam, some assumptions could be made. Nurses have many personal and professional demands and need to balance the benefits of extra credentials such as certification with the time and financial investment required. In hospice and palliative care, nurses may work in the acute setting or they may do home care. In either setting it may be difficult for the nurse to leave the setting to attend a certification review course to prepare for the CHPN exam. The increasing competing demands for nurses' time will mandate the need for quality programs that are accessible, cost effective, and beneficial to busy nurses. One possible way to address the decreasing testing and pass rates is to increase the accessibility of, and standardization of available CHPN review course opportunities for practicing nurses. An online review course that uses the HPCC developed CHPN "Detailed Content Outline Information" located in the CHPN Candidate Handbook (NBCHPN, 2014) and the *HPNA Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015), could encourage more nurses to prepare for the exam, and for them to do better on the exam if they do take it. The current trend in online education offers a newer and more innovative way to deliver the course content to increase the availability of the course. Online learning can fill the accessibly and standardization of training gap and facilitate learning that is cost effective and fits within a busy schedule. For lifelong learning to be in synergy with work and family, education needs to be accessible, affordable and flexible (Bromley, 2010). Much of the research has shown that online nursing courses result in positive student experiences and outcomes (Bromley, 2010). The online format allows the

student to take charge of what, how, why and when they learn, and overcome the geographic and time constraints.

Pros and cons and special considerations of online learning.

Because online learning is a different way of learning it may not be the preferred method of learning for some nurses. Studies have revealed disadvantages expressed by students taking online courses such as in inadequate communication and the time and effort required may be more than a traditional course (Kohtz, Gowda, Stockert, White, & Kennel, 2012). Online coursework requires self-discipline and organization (Patterson, Krouse, & Roy, 2012) and for some the technology can be overwhelming (Moore, Hunt, Darlison, Russell, & Brighton, 2012; Patterson et al, 2012; Sherman, Comer, Putnam, & Freeman, 2012). Depending on how the course is organized the pace could be too slow or too fast for students (Moore, et al., 2012).

The infrastructure of an online continuing education course is critical. The infrastructure is related to the overall functionality of the course and includes the learning management system, computer requirements, software needs, technology, and the organization of course materials into clear and consistent components. Along with structural modifications in how courses are presented, evaluation procedures must also be altered when offering continuing education programs online (Gormley, 2013).

Conclusions.

In spite of the above identified special considerations and limitations, there are also many positive benefits of online learning cited in the literature. Themes that have shown to be associated with reasons nurses take online courses include flexibility (Kohtz, et al., 2012),

networking and cooperative learning (Moore et al., 2012; Sherman et al, 2012, Patterson, et al, 2012). Online courses eliminate the need to allocate time for travel and commuting (Kohtz, et al., 2012). Depending on how the course is developed the availability to take the course in a self-paced format has been shown to be advantageous (Sherman et al., 2012). Additionally, online accessibility and lower cost (Garrison, 2011, Toole, Stichler, Ecoff, & Kath, 2013) may entice nurses to take online courses. Accessibility is the key feature of online learning that makes it an attractive option for addressing the problems described with offering more review courses for hospice and palliative care nurses. Hence, this is the approach that was chosen for this project.

Gaps

There is evidence showing certification review courses increase certification rates and this was reviewed in this overview, but no evidence specific to online certification review course outcomes could be found. The evidence regarding certification review course outcomes such as increasing pass rates is documented for other nursing specialties such med/surg and critical care but not hospice and palliative care (Sayre et al, 2010; Teal, 2011). The studies list a variety of techniques and various approaches to offering the course, but no solid evidence for one method over another. Although there is no literature to support the outcomes of online certification review courses, it is well documented that learning outcomes are similar when traditional and online courses in other areas were compared (Sherman et al., 2012).

Other Relevant Sources of Evidence

As cited previously the IOM report calls for increased education and certification of palliative care professionals. *The Clinical Practice Guidelines for Quality Palliative Care*

published by the National Consensus Project (NCP) (2013) recommend that specialist level of care is provided with the specific education, credentialing and experiences to meet the palliative patient and family's needs. The NCP guidelines recommend that palliative specialists are appropriately trained, and ideally certified in hospice and palliative care. The National Quality Forum (NQF) recommends "Hospice care and specialized palliative care professionals should be appropriately trained credentialed, and/or certified in their area of expertise." (NQF, 2006, p. 16)

The Literature as it Relates to the HPNA

The HPNA, HPNF and HPCC have decided that increasing the number of certified nurses is one core strategy to responding to the a lack of hospice and palliative care trained professionals as identified by the recent IOM report on dying in America. As these organizations embark on the Advancing Expert Care Campaign, they need to incorporate the best practices other professional organizations use to support nurses in the certification process. Certification review courses have been shown to be effective in increasing the numbers of certified nurses and online courses are a well-supported course delivery method.

Summary of the Literature

Certification is one avenue to show to the public, employers and patients that a nurse is committed to a specialty area and that there are sufficient nurses trained to address the complex care needs of hospice and palliative care patients. HPNA, HPNF and HPCC have recognized CHPN certification as a marker of excellence and therefore have made increasing the amount of CHPN's a core strategy to advancing expert care. The number of nurses taking and passing the

CHPN exam has decreased in 2012, 2013 and 2014, which presents a challenging situation in light of the desire to increase the number of CHPNs due to the population changes associated with increasing numbers of older adults, who are more likely to need hospice and palliative care.

Although the reasons for the decrease in numbers of nurses taking the CHPN certification exam is not clear, it could be assumed that one possible reason is that nurses simply are not prepared to take the CHPN exam. Exam preparation techniques vary from independent study and study groups to formalized certification review courses. The literature from other nursing specialties has shown that review courses are an effective technique to prepare nurses for certification exams (Karvonen, Sayre & Wyant, 2004). The literature has also shown that certification pass rates increase when nurses take a review course (Sanford and Best, 2013; Teal, 2011; Valente, 2010). In addition, though no studies were found that addressed the outcomes of online certification review courses, the literature does support online education as an effective educational delivery method. Online courses are convenient, accessible and most studies show similar outcomes when compared with the traditional lecture classroom format (Bromley, 2010).

A variety of approaches can be taken to increase the number of CHPNs. This project focused on the creation of an online CHPN review course that is easy to navigate, with clear and simple modules that cover the required content from the 2015 HPNA *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015) and the CHPN Detailed Content Outline Information (NBCHPN, 2014). The course was designed to be delivered in an innovative way, to meet the needs of the nursing workforce who work shifts or live in areas without access to review courses. The design of the materials took into consideration the

principles of best practices for development of online education as outlined by Ko and Rossen (2010). The HPNA creates and manages the exam preparation materials, and therefore were included in the review of these materials to ensure that they match the CHPN "Detailed Content Outline Information" (NBCHPN) and were consistent with *the Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry). In summary, the goal of this project was to develop an online CHPN review course, while collecting feedback from reviewers about whether or not the content of the developed course was delivered appropriately and matched the content outline, and that the methods used to construct the online modules were the best that could be achieved with the HPNA online delivery system, and that potential students would view the materials as usable and helpful for certification preparation.

Approach to the Conduct of the Project

Setting

Description of the project setting.

As noted previously the HPNA, HPNF and HPCC aim to increase the number of CHPNs. The three organizations share a similar mission statement "To advance expert care in serious illness through a focus on: (advancing expert pain and symptom management, coordination and transitions of care, HPNA) (Continuing competence, HPNF) and (strategic partnerships and public engagement, HPNF) by engaging members through the four pillars of education, advocacy, leadership and research to achieve the vision of transforming the care and culture of serious illness." The Hospice and Palliative Nurses Foundation (HPNF) is dedicated to raising funds to support the professional development of hospice and palliative nursing professionals.

HPNF is a 501(c) (3) which provides scholarships for education, conferences and certification along with nursing research grants and leadership awards. The HPCC (formerly the National Board for Certification of Hospice and Palliative Nurses [NBCHPN]) provides specialty exams for all levels of the nursing team. HPNA serves as the member organization for individual members of the nursing team specializing in palliative care and hospice. All three organizations are physically located in shared office space in Pittsburgh, Pennsylvania.

HPCC administers the CHPN exam and provides a content outline for the exam, as the member organization, HPNA offers the educational products and materials needed to develop review courses for their members. Currently HPNA publishes a *CHPN Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015), and a study guide that the Approved Educator programs use to prepare nurses for the CHPN exam. HPNA has realized that the opportunities for nurses to access a review course are limited and therefore have begun to offer certification review courses.

As a former HPNA volunteer West Coast District chapter leader and Educational Product Committee member, I was aware that the HPNA desired to develop a certification review course. The HPNA understands that a standardized CHPN review course curriculum needs to be developed and delivered in multiple modes to reach the greatest number of nurses. With the approval of the Director of Education and Chief Executive Officer (CEO) of HPNA, I developed the online CHPN review course based on the *CHPN Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015), as part of my DNP project at OHSU. This course is available to any RN who needs this knowledge and a discount is given for HPNA

members. The HPNA will manage course enrollment through HPNA's current learning management system on their website.

Function of the setting.

The HPNA is the national, professional nursing organization, which represents the specialty of hospice and palliative nursing. The HPNA's membership includes over 11,000 hospice and palliative nurses and other members of the interdisciplinary team. HPNA has approximately 50 chapters nationwide (HPNA, 2014).

The HPNA's readiness to change.

The HPNA has developed educational materials which are available for Approved Educator's use when holding face to face or traditional classroom courses, but they only available to Approved Educators. Prior to the development of this course, the only online courses available to HPNA members were continuing education lectures on various individual topics through the HPNA website. HPNA recognized that the current process of using Approved Educators was only one method to provide education. They desired development of an online course specific to CHPN exam preparation using the system currently used for continuing education topics. As previously mentioned, the Advancing Expert Care campaign demonstrated HPNA, HPNF and HPCC's commitment to developing new educational models that will potentially increase the number of CHPNs. Additionally in November, 2014 the NBCHPN changed its name to the HPCC to reflect the mission of the organization to manage certification of a variety of hospice and palliative professionals.

In October 2013 the HPNA held the very first HPNA sponsored one day review course as

a preconference for the annual clinical forum and has subsequently offered two national review courses. Enrollment for the courses was very good (all open slots for the course were filled), indicating nurses are interested in taking the certification review course to prepare for the CHPN exam. The CHPN review courses were held as a one day course using scaled down modules from the Clinical Review for the Generalist Hospice and Palliative Nurse. The HPNA plans to continue the one day review courses, but recognizes that the travel and course costs may be prohibitive for many nurses desiring to take the review course. Understanding the gaps in content and course delivery, the HPNA approved the development of this online CHPN review course based on a curriculum which will incorporate the HPCC CHPN "Detailed Content Outline Information" (NBCHPN, 2014) and the *CHPN Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015).

HPNA currently uses the Learning Management System (LMS) sponsored by the Nurse's Learning Network (NLN). Unfortunately, the LMS provides a limited number of options for course development. Voice over PowerPoint lectures can be posted on the site, as well as readings. There is a capacity for developing tests and quizzes and these can be organized in line with the PowerPoint presentations and readings for the content modules. At present, the program lacks the capacity for creating discussion boards, or other multimedia materials. Though the LMS is limited, it is sufficient for at least posting lectures on each module, and then providing post-test functions so that students can assess at a rudimentary level their mastery of the content. The NLN courses are managed by an administrator and technical assistant at the HPNA headquarters in Pittsburgh, Pennsylvania. Because of the nature of online course development system, completed modules were emailed to the HPNA and after an internal review process they

were placed on the NLN.

Anticipated barriers, facilitators and challenges.

Anticipated barriers to development of a self-directed online learning CHPN review

course include additional limitations within the information technology infrastructure as

described above. Challenges with recording lectures and sharing large files was anticipated and

therefore a "drop box" was created to allow sharing of the large files. To improve the visual

appeal of the Voice Over PowerPoint presentations, images were needed; although cost,

permissions and copyright concerns limited the use of images. The HPNA was able to provide

images they had purchased previously and these images were used in the modules, thus

eliminating copyright concerns.

Facilitators included the commitment from the HPNA to support the development of this

review course and use it as the official review course. The HPNA made available the 2015

CHPN Core Curriculum electronic copy for use in developing the course as the manual was not

published until February 2015. This ensured the most up to date material was used in developing

the course. The NLN administrator committed to doing the actual technical work of putting the

course online as it was completed. The Director of Education and Director of Educational

Products were both involved in discussions about this project from the beginning and provided

support and communication throughout the HPNA. The timing to create an online review course

was also a facilitator as the HPNA realized the importance of providing resources for its

members. Under the HPNA's 2012-2015 strategic plan, two strategies supported changes to

enhance educational offerings; "Optimizing technology to support changing demographics" and

"Improve understanding and mechanism for flexibility and timely response to educational needs"
(HPNA, 2013).

Challenges included making the course appealing enough to encourage prospective
recipients who may be reluctant to try an online course. Creating social presence is typically one
method used in online courses to enhance networking between students and instructors. Social
presence is "the ability of participants to identify with the group or course of study, communicate
purposefully in a trusting environment, and develop personal and affective relationships
progressively by way of projecting their individual personalities (Garrison, p. 34, 2011). The
course is limited by the features of the LMS system which does not allow for discussion among
participants or discussion with the instructor, therefore the course was created to be a self-paced
course, without a method of creating social presence. There could be some potential alternatives
to facilitate this communication, but this was not an option for this iteration of the review course.
Because of the limitations of the LMS, considerations were given to make the instruction
interesting through development of compelling PowerPoint presentations which included
graphics and instructions for following along in the core curriculum book. Additionally the voice
recording was intentionally created in a lively and engaging tone to keep the interest of the
learner.

The work was completed in collaboration with HPNA only. As the official testing
agency, the HPCC cannot be involved in any of the exam preparation activities or course
development. HPCC does publish the CHPN "Detailed Content Outline Information"
(NBCHPN, 2014) which was used for guiding review course design, but HPCC was not involved

in course development. Although it would have been be nice to discuss the specifics of this

project with the HPCC, this did not occur and communication was directly with the HPNA only.

Additionally the HPNA provided support from the LMS administrator, Director of Education

and Director of Educational products. They provided support throughout the development

process and managed the details of the course once it was completed.

Participants/Population

As stated in the purpose statement, this project developed a self-directed and self-paced

online CHPN review course, through modules which covered the required content from the 2015

Core Curriculum for the Hospice and Palliative Registered Nurse (Martinez & Berry, 2015). In

the section titled "Intervention and Implementation Procedures," the plan for how this course

was created is described. One of the goals of the project was to develop a course that meets as

much as possible with the LMS limitation, the principles of best practice for online education

and course development as outlined by Ko and Rossen, (2010).

First, an evaluation by two content experts in hospice/palliative care at HPNA was done

to verify the online course has accurately and completely represented the approved content for

the course in the course materials. The experts at HPNA reviewed every module built for the

course and communicated comments and made changes for incorporation into the modules.

Second, an evaluation and by two experts in online course development was completed to verify

that the online course structure and materials are the best that can be constructed given the LMS

limitations. This was conducted after the first draft of one of the course modules was developed

and reviewed and accepted by the HPNA content experts. This was the module focused on

symptom management. Third, to test the user friendliness and appeal of the course to potential students, peers and RNs working in the field of hospice and palliative care were asked to review the same selected course module that the online experts reviewed. Both sets of reviewers were given access to the posted selected course module. This feedback (described under data collection) was used to improve the course and provide information for HPNA review for use as one of their strategies to promote more accessible certification exam preparation. The goal was to develop the best self-directed, self-paced online CHPN review course possible for nurses seeking assistance to prepare for taking the CHPN certifying exam.

Inclusion and exclusion criteria.

The CHPN review course is based on the *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015), which has been developed and reviewed by hospice and palliative care content experts, therefore HPNA determined no further content review was required. The HPNA Director of Education and Director of Educational Products reviewed every module created for the online CHPN review course to ensure content accuracy. For the online course expert reviewers, criteria for inclusion was at least 3 years of experience with teaching or instructional design in online learning. Two reviewers who met criteria were identified among faculty and the experts in the Teaching and Learning Center at OHSU. The peer evaluators who looked at the usability of the course were RNs who were willing to devote time to reviewing the course materials and then respond to the open ended review questions posed in an email. Peer evaluators were recruited from other DNP students and or other hospice palliative care colleagues.

Size and rationale.

The Director of Education and the Director of Educational Products at HPNA validated the content was based on *the Core Curriculum for the Generalist Hospice and Palliative Nurse* (Martinez & Berry, 2015). The Directors were appointed by the HPNA organization to review each course module as part of HPNAs commitment and collaboration in developing the online CHPN certification review course. Two online course developer experts agreed to review the CHPN Review Course, Symptom Management-Part 1, Symptom Management-Part 2 and Symptom Management-Part 3 modules to provide comments about possible improvements. Six peer reviewers were asked to review the same selected online course modules as the online experts. The peer reviewers provided important feedback about the modules from the potential student perspective.

The reviews requested from the online experts and peers involved appraisal of the symptom management course modules, which generated usable feedback to improve the course even keeping in mind the limitations of the LMS system. It was expected that usable ideas for improving the course or making necessary corrections would be obtained with only two online course expert reviewers given their level of expertise. For the peers, it was determined that five to six reviewers should be able to identify if there were substantial problems with the course usability.

Recruitment plan.

Content expert reviewers were the HPNA Director of Education and Director of Educational Products. They reviewed every module developed for the CHPN Review Course as

part of their support for this project.

The two online course experts are from the faculty and the OHSU Teaching and Learning Center. Two experts agreed to perform this review. Just to reconfirm their willingness to perform the review, they were approached via email to explain the requested review and ascertain willingness to do the review (see Attachment A with email script). The peer reviewers were also approached via email with a description of the request (see Attachment B). The peers were identified among the DNP student cohort and or other hospice and palliative care colleagues. After confirmation that reviewers could participate a second email was sent for each set of reviewers which contained a link to the online course symptom modules, a username, password and a list of the questions to address (also included in Attachments A and B).

Protection of participants.

Specific comments made by the reviewers are identified; however the names of the reviewers are not included. The reviewers did not sign a consent form, instead, their completion of the review was taken as their acknowledgment of their willingness to participate. Because this project does not involve high risk human subjects participation; and the data collection is focused on reviewers evaluation of an educational activity with no participant specific data being collected, the Institutional Review Board (IRB) agreed to a request for determination which excluded the need to submit materials for an expedited review.

Proposed Implementation and Outcome Evaluation

Intervention: Course Development Procedures

The course was developed using the 2015 *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015) using the HPCC developed "Detailed Content Outline Information" (NBCHPN, 2014) as a curriculum guide. The following nine modules were developed:

1. Overview of Hospice and Palliative Care (1 hour lecture)

2. Patterns of Disease Progression (1.5 hour lecture)

3. Pain Management (Part 1 and 2) (1 hour lecture each part 1 and 2)

4. Basic Opioid Conversions, Calculations (30 minute lecture)

5. Symptom Management (Part 1, 2 and 3) (part 1 & part 2 are 1 hour lecture and part 3 is a 1.5 hour lecture)

6. Care of the Family (30 minute lecture)

7. Final Days (30 minute lecture)

8. Professional Issues (40 minute lecture)

9. Ethical Issues (40 minute lecture)

The modules were developed using PowerPoint with a voice over for lecture. The modules varied in length from 30 minutes to 1.5 hours. Continuing Education Units (CEU)s were granted for each module, based on the length of the module. In total, 10.5 CEUs can be obtained after completion of all modules. Modules have example test questions and a ten question multiple choice post test. Some modules have case study examples. The course was developed to

be taken in a self-directed, self-paced format through the learning management system on the HPNA website. Course development was guided by recommendations in the book "Teaching Online" by Ko and Rossen (2010) and the content was derived (as mentioned above) from the *2015 Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015), published by HPNA which is developed by subject matter contributors and reviewed through a process by expert reviewers. The project involved only development of the modules, and reviewing them as described above. The actual delivery of the developed course will be managed by HPNA.

Once modules were developed, the course administrator from HPNA placed the modules in the LMS. A link and access to the course was provided to the online course experts, and peer reviewers via email, and there were asked to review all three sections of the symptom management modules using the provided review instructions. Adjustments to course materials and design were made based on the comments and recommendations of the reviewers. Adjustments were made in collaboration with HPNA educational staff.

Proposed Measures/Outcomes

   Data collection sources, processes, procedures.

As noted previously, the LMS is very limited. The system lacks many of the tools and features of other online courses. For example, it was not be possible to add an interaction element to the course with discussion boards, email tools to permit contact among students, or an announcement feature. Interaction is further limited using this system because HPNA asked that the course be totally self-directed and self-paced, so there will be no interaction with a faculty

person or other students. The system allows development of a resources page where the link to the Voice-Over-PowerPoint is placed, readings, and links to outside resources. For learning assessments, the system supports a test and quizzes feature that was used for post-tests. Hence, the focus of the questions posed to both the online experts and peer reviewers were on what is possible to do within these constraints. One additional open-ended question asked for suggestions of ways to improve the course should a more advanced learning system become available to use instead of the LMS, or if HPNA finds a way to offer the courses with instructors to supervise and direct the learning.

After explaining that the content cannot be altered (as it is determined and reviewed by HPNA content experts), each set of reviewers (online experts and student reviewers) answered the following questions directed at obtaining suggestions of how to improve the presentation of the content via email:

1. How does the VOIP presentation look? (Are the slides interesting? are the slides clear? Was the audio adequate? Other thoughts?)

2. Was the pace of the VOIP presentation okay? (Too fast? Too slow? Uneven? Other thoughts?)

3. How do they like the way it is presented? (Did you like the organization of the presentation? If not, why not? Was there too much content per slide, or not enough? Was the narration clear? Or were their points you did not understand? Other thoughts?)

4. Was there any difficulty navigating between the VOIP, the tests and quizzes, and the readings and links?

5. Was the post-test helpful in your review of the content?

6. What suggestions would you have to improve the course if it was possible to add more online course features?

The responses to these questions that were returned by the reviewers via email were organized into a set of recommendations per each question. Suggestions that could feasibly be incorporated into the CHPN Certification Review Course, were also added. Suggestions that could not be incorporated, but seem like potential valuable future improvements were collated into a set of recommendations forwarded on to the HPNA.

Use of information systems and technology.

The technology that was used is the LMS at HPNA. The presentations were developed using a Voice Over PowerPoint presentation method. The HPNA used a video editing software program to edit and enhance content for each module. This allowed accessibility to the highest quality video and audio to viewers with access to the LMS.

Implementation of Project/Module Development

Module development was approached through frequent coordination with the HPNA education staff. As this project was being developed, the 2015 *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015) was published; this publication was the foundation for course development. The HPNA wanted a course to mirror this publication in so that the RN taking the course would use the publication to follow along with the online course presentations. Initially it was discussed that each of the 13 chapters in the *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry) would be a module for the

course. The curriculum text has the following 13 chapters:" Overview of Hospice and Palliative Care", "Interdisciplinary Collaborative Practice in Hospice and Palliative Settings", "Patterns of Disease Progression", "Pain Management", "Symptom Management", "Psychiatric/Psychological Symptoms and Diagnoses", "Care of the Family", "Palliative Care Across Settings", "Advance Care Planning and Goals of Care", "Care of the Patient and Family in the Final Days", "Ethical Issues in End-of-Life Care", "Policy and Economic Issues in Palliative Care", "National Guidelines and RN Practice". When The *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry) was compared with the "Detailed Content Outline Information" (NBCHPN, 2014) published by HPCC it was apparent that the *Core Curriculum for the Hospice and Palliative Registered Nurse* contained much more information than was required knowledge for the RN taking the CHPN exam. The content areas of knowledge required for the exam and percentage of each on the exam according to the HPCC "Detailed Content Outline Information" (NBCHPN) are: Life-Limiting Conditions (15%), Pain Management (24%), Symptom Management (24%), Care of the Patient and Family (13%), Education and Advocacy (9%), Interdisciplinary/Collaborative Practice (8%) and Professional Issues (7%). Through multiple discussions with the HPNA and cross referencing information from both the *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry) and the "Detailed Content Outline Information (NBCHPN), it was decided that only modules specific to the content areas on the exam would be developed.

In addition to the cross referencing between the two documents it was also decided a module on equianalgesia would be added to pain management as a way of assisting nurses with understanding calculations and conversions. The module titled "Professional Issues" was

expanded to incorporate exam content outline items from chapters which contained material that might be included in the exam but were not developed into modules. The final decision was to create the following nine modules: Overview of Hospice and Palliative Care, Patterns of Disease Progression, Pain Management (Part 1 and 2), Basic Opioid Conversions/Calculations, Symptom Management (Part 1, 2, and 3), Care of the Family, Final Days, Professional Issues and Ethical Issues.

The first module created was symptom management, as this is the largest content area. Initially it was two modules, but due to the length and HPNA's desire to keep modules at approximately one hour each, it was further divided into three parts. Once the symptom modules were developed they were placed in the LMS by the HPNA. The three symptom management modules were then reviewed by peer and online expert reviewers. As the symptom modules were being placed on the LMS and reviewed, drafts of the additional modules were created. As the creator of the modules, I had access to the LMS to view the modules as they were placed on the system. The results of the online expert and peer review follow.

Data Collection Results Obtained from Reviews

Data from the six peer reviewers (Appendix C) and the two online course development experts (Appendix D) was collected, organized into two tables (Table 1. Peer Reviewer Feedback; Table 2 Online Expert Feedback), then discussed with the educational team at the HPNA. The demographics collected from the peer reviewers indicated that all were at least BSN educated and all but one had experience with online courses (see Table 3 Characteristics of Peer Reviewers in Appendix E).

Responses to question 1 "how does the VOIP look?"

Regarding the VOIP, two of the six peer reviewers and both online expert reviewers suggested increasing the images on the slides to make the slides more interesting. Ko & Rossen (2010) suggest using graphics or other visual means to enliven presentations, and this was considered during development. Peer reviewers and both online expert reviewers agreed the voice and the pace of the voice over was clear and appropriate, although they did highlight concerns with the timing of the transitions on the introduction slides.

Responses to question 2 "was the pace of the VOIP okay?"

All but two peer reviewers agreed that the pace of the VOIP was appropriate. Concerns with the pace from the two reviewers mentioned the instruction slides at the beginning going too fast and the need for slides with heavy content to have more time. An online expert reviewer commented that the pace was appropriate for the more experienced nurse, but may be too fast for a beginning nurse. One peer reviewer commented that the slides did not follow the *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015), but upon discussion it was discovered that she was using an old edition.

Responses to question 3 "How do you like the way it is presented?"

Overall the reviewers liked the presentation, although several peer reviewers had suggestions on how to reorganize the content. An online expert reviewer and two peer reviewers suggested standardizing various aspects of the presentation so that each symptom was presented in a similar format.

Responses to question 4 "Was there any difficulty navigating between the VOIP, quiz, handouts and reference links?

All reviewers reported no difficulty navigating the site, and this may be because the site is very basic with few options. Two reviewers and both online expert reviewers commented on the need for references links within the presentation, or some way to make the references more accessible.

Responses to question 5 "Was the post test helpful in your review of the content?"

The peer reviewers overall agreed the post tests were helpful as a method to evaluate knowledge. One reviewer had a concern that some content was not covered in slides that was on the quiz. One peer reviewer suggested structural changes on several questions. A peer reviewer suggested adding two to five more questions while another suggested adding more questions within the presentation. The online course reviewers recommended several changes to questions and suggested consistency in the anchor of the question.

Responses to question 6 "What suggestions would you have to improve the course if it was possible to add more online course features?"

The peer reviewers recommended several potential improvements to include incorporating case studies, more sample questions in the presentations, video clips and adding topics. The online expert course reviewers suggested organizational changes such as an index or links from a main table of contents. One reviewer also asked if the content was compliant with the Americans with Disabilities Act (ADA).

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Changes Implemented Based on Reviews

The comments from the peer and online expert reviewers were tabulated and sent to the HPNA education representatives for review. After all representatives from HPNA had the opportunity to evaluate the reviewer's comments a conference call was held to discuss the observations.

Responses to feedback question 1 "how does the VOIP look?"

The images that were used in all modules were only images that were currently owned by HPNA. Although the reviewers recommended using more images, it was decided that in order to avoid delays in getting this course online within the timeframe, no changes would be made to images. The timing on the transitions for the introduction slides was a simple technical issue fix and the changes to the timing of the slide transitions was made by the LMS administrator at HPNA. Additionally the introduction slides were changed from automatically advancing to advancing only when clicked on.

Responses to feedback to question 2 "was the pace of the VOIP okay?"

As noted in the aforementioned paragraph the timing in the instruction slides at the beginning of the module was adjusted. This course was developed for the experienced nurse, but the team did understand that should this course be a more introductory type course, considerations would be given to slowing the pace of the content. The comment by the peer reviewer who used a previous edition of the *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015) was significant as it became apparent to the team that emphasizing the importance of using the current edition was crucial. A direct link on the

website to order the current edition was incorporated into the online course registration process.

Responses to feedback to question 3 "how do you like the way it is presented?"

Although in the email sent to reviewers they were informed that the content could not be changed, several peer reviewers made suggestions on reorganizing content. The team did not act on any reorganization suggestions as the content follows the *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015) and this allows the RN to use the book to follow along with the presentation. As recommended by several reviewers the formatting of slides was standardized and this was carried over to development of subsequent modules.

Responses to feedback to question 4 "was there any difficulty navigating between the VOIP, quiz, handouts and reference links?

At the time of the module review the references were listed at the end of the presentations, but were not accessible through other means. An update created a reference list which was included as a printable handout for each module. *The Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015) uses the MLA reference format so references were numbered. Although the content on the slides did not have numbered references, the RN taking the course could easily find numbered references by following the *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry). Due to limitations of the LMS system, hyperlinks to references within the presentation was not an option.

Responses to feedback to question 5 "was the post test helpful in your review of the content?"

The majority of the test questions did have content that was covered in the presentation although there were two questions that were more application of knowledge rather than recall which may have accounted for the one peer reviewer who mentioned some content on the quiz was not mentioned in the slides. No changes were made to the test questions. Several test questions had typos or needed structural changes, these recommended changes were implemented. Each post test was limited to 10 questions as this is the standard HPNA uses for all one hour continuing education programs so no additional questions were added. Although adding questions within the presentation was suggested, this was not implemented as it would have also add time to the presentations which are each at least one hour long. The anchors for each question were revised so that they end with a question mark or colon when appropriate.

Responses to feedback to question 6 "what suggestions would you have to improve the course if it was possible to add more online course features?"

The peer reviewers recommended several potential improvements including incorporating case studies, more sample questions in the presentations, video clips and adding topics. The online expert course reviewers suggested organizational changes such as an index or links from a main table of contents. One reviewer also asked if the content was compliant with the Americans with Disabilities Act (ADA). HPNA does not have a specific policy for ADA accommodations for educational offerings. Courses should be created using the concept of universal design – the idea that all course material should be accessible in different ways, be it

through audio or video or text (Haynie, 2014). The review course follows the *Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015), which is the text for the course has both audio and video, so it does incorporate a variety of methods. The only additional accommodation would be to provide an ADA student with the speaker notes to the slides, which could be available if requested. The HPNA Director of Education discussed ADA accommodation and verbally agreed they would accommodate students on an "as needed" basis.

Changes Considered For Future Courses

This course will be updated according to the HPNA's educational standards and as new options and resources become available changes will be made. Due to the limitations of the current LMS, the HPNA is currently evaluating other LMS' and will use recommendations and experiences from this online review course in the evaluation process. This course could also be offered as an instructor-facilitated course with an interactive component such as discussion forums. A new LMS system may offer the ability to create a more interactive course. Case studies are currently being developed and may be added in the future to modules. It may also be possible to create an additional module focused on test taking techniques and practice questions. This feature would be added by HPNA at a later date.

Monitoring evaluations and comments from participants may result in changes to the format and identify issues that were not evident to the peer and online expert reviewers. Each person who take the CHPN review course will be required to complete and evaluation in order to receive the Continuing Education Credits (CEUs).

This course is very affordable for an HPNA member. Even though it is affordable, it may

still be a financial burden for some who might consider just taking the exam without attending a review course. Currently the HPNA offers scholarships for the face to face review course, therefore offering scholarships for this online review course should be a consideration for the future.

Practice-related implications/recommendations

This online CHPN review course "went live" on May 1st, 2015 (Appendix F) . The course was announced in the HPNA electronic newsletter and advertising will continue through the HPNA. The HPNA will monitor enrollment numbers and collect data on the course evaluations. HPNA will then evaluate if providing an online review course is helping them to achieve their strategic goal to improve certification review course access for their members.

The HPNA education department will review the course evaluations monthly, discuss the overall course (Instructions, directions, evaluations) after the first three month period and make operational edits to the course as needed. The HPNA will contact course presenters if edits or clarification is needed. The course evaluations will be sent to presenters annually and an entire course review will occur every three years.Conclusions

Creation of this online review course allows accessibility to all nurses regardless of where they live. The HPNA decided to price this course very affordably at $150.00 for members and $250.00 for nonmembers. Because this is a self-paced course intended to be used by nurses preparing taking the CHPN exam, it was assumed they would want to review specific modules more than once, therefore the course was set up so once enrolled the RN has access to the course for three months. The three month periods correspond to the four testing dates, so RNs could

have access to review materials in the months preceding taking the exam.

Summary

There are many approaches that are needed to increase the numbers of CHPNs to meet the hospice and palliative care demands anticipated as Baby Boomers age. This project addressed some of the barriers that nurses might face when considering a specialty certification in hospice and palliative care including costs, time, accessibility and knowledge. This online CHPN review course covers all the content areas listed by HPCC on the Detailed Content Outline for the CHPN exam (NBCHPN, 2014) and will serve as another method to prepare nurses to better care for patients. The HPNA has noticed decreasing numbers of RNs taking and passing the CHPN exam and through this course, it is anticipated more nurses will have access to educational materials needed to take the exam. The HPNA has published four editions of the Core Curriculum for the Hospice and Palliative Registered Nurse which contains foundational knowledge needed for CHPN exam preparation; yet even though this information was available, a standardized course to share and teach this content was not developed. The HPNA created an Approved Educators program to teach palliative and hospice content, but the material was not produced to follow *the Core Curriculum for the Hospice and Palliative Registered Nurse* (Martinez & Berry, 2015), and therefore the Approved Educators could use the material for orientation training, certification review courses or in-service training. The commitment to create standardized certification review courses sponsored through HPNA shows the professional organization's desire to utilize every possible avenue to provide education to nurses no matter where they live and work.

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APPENDIX A

First email:

Hello (NAME),

I was a student in your online course development course in the Fall of 2014. As you may remember my DNP project is creating an online CHPN review course for HPNA. The final part of my project is to have peer reviewers and experts in online course development look at a module and provided feedback/comments. I am going to have several reviewers look at the symptom management module as it is the largest (3 modules) and most complex as asking reviewers to look at the entire course would be very time intensive. Would you be interested in reviewing and providing feedback as an online expert reviewer? It would be viewing about 3 hours of the presentation. (I will provide you access and links to the course) and the following would be the questions I would have you answer:

1. How does the VOIP presentation look? (Are the slides interesting? are the slides clear? Was the audio adequate? Other thoughts?)
2. Was the pace of the VOIP presentation okay? (Too fast? Too slow? Uneven? Other thoughts?)
3. How do they like the way it is presented? (Did you like the organization of the presentation? If not, why not? Was there too much content per slide, or not enough? Was the narration clear? Or were their points you did not understand? Other thoughts?)
4. Was there any difficulty navigating between the VOIP, the tests and quizzes, and the readings and links?
5. Was the post-test helpful in your review of the content?
6. What suggestions would you have to improve the course if it was possible to add more online course features?

Thank you for the consideration, Carma Erickson-Hurt, APRN, ACHPN

Second email sent after receiving reply agreeing to participate:

Hello (NAME)

Thank you for agreeing to review part of the CHPN course. I am contacting you to let you know the materials are ready. I would like to ask for your assistance in providing a review of a subset of the materials I have developed to build an online, self-directed, self-paced Certified Hospice and Palliative Nurse (CHPN) Certification Review course. Because your expertise in development of online educational products, I am interested in obtaining your suggestions on how to improve three modules that have been already developed and posted to the Hospice and Palliative Nurses Association's (HPNA) Learning Management System (LMS). The LMS is a sponsored by the Nurse's Learning Network (NLN) and is a basic online course

management system. Though the LMS is limited, it is sufficient for at least posting lectures on each module, and then providing post-test functions so that students can assess their mastery of the content. Please note, the content of the modules in the course cannot be altered as the content is controlled by HPNA. However, it is possible to improve the presentation of the materials and the quiz content – so your feedback will make a valuable contribution to this project.

If you agree to review these three modules: Symptom Management I, II and III, then I would ask you to do the following.

First, click on this link   http://nurseslearning.com/courses/hpna/CHPNSymptomsPT1/index.cfm   to review the course module material and work through the modules.

When you complete the modules you can take the post test from the link on the last slide. (Your grade on the post test is not important, but please review the questions for format). In order to access the post test grade and the see the HPNA evaluation form you will need the following log in information:

Username: (specific to reviewer) Password: (Specific to reviewer

You do not need to complete the HPNA evaluation, as this is a standardized evaluation used by HPNA, it is there to show you how students taking this course will evaluate the course.

Second, please respond to me either by answering the following questions in this email or by copying these questions into a word document, answering them, and then attaching the saved document to a reply to this email. If possible I would like to have replies/comments by 5 APRIL 2015.

1. How does the Voice-Over-PowerPoint (VOIP) presentation look? (Are the slides interesting? are the slides clear? Was the audio adequate? Other thoughts?)
2. Was the pace of the VOIP presentation okay? (Too fast? Too slow? Uneven? Other thoughts?)
3. How do you like the way it is presented? (Did you like the organization of the presentation? If not, why not? Was there too much content per slide, or not enough? Was the narration clear? Or were their points you did not understand? Other thoughts?)
4. Was there any difficulty navigating between the VOIP, the quizzes, handouts and reference links?
5. Was the post-test helpful in your review of the content?
6. What suggestions would you have to improve the course if it was possible to add more online course features?

Thank you,
Carma Erickson-Hurt, APRN, ACHPN
OHSU DNP student

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APPENDIX B

Initial email:

Hello (NAME)

   I am in the final phases of my Doctor of Nursing Practice (DNP) at Oregon Health and Sciences University (OHSU) now and I was wondering if you would be able to be a reviewer on my project. I am creating the online Certified Hospice and Palliative Nurse (CHPN) review course for the Hospice and Palliative Nurses Association (HPNA). As part of my project I need to have peer reviewers look at a module and provided feedback/comments. I am going to have several reviewers look at the symptom management module as it is the largest (3 modules) and most complex as the entire course would take too long. Would you be interested in reviewing and providing feedback? It would be viewing about 3 hours of the presentation and answering the following questions:

1. How does the Voice Over Power Point (VOIP) presentation look? (Are the slides interesting? are the slides clear? Was the audio adequate? Other thoughts?)
2. Was the pace of the VOIP presentation okay? (Too fast? Too slow? Uneven? Other thoughts?)
3. How do they like the way it is presented? (Did you like the organization of the presentation? If not, why not? Was there too much content per slide, or not enough? Was the narration clear? Or were their points you did not understand? Other thoughts?)
4. Was there any difficulty navigating between the VOIP, the tests and quizzes, and the readings and links?
5. Were the pre-tests helpful in introducing the content?
6. Was the post-test helpful in your review of the content?
7. What suggestions would you have to improve the course if it was possible to add more online course features?

Thanks for the consideration,
Carma Erickson-Hurt

Follow up email:

        Hello (NAME)   Thank you for agreeing to review part of the CHPN course. I am contacting you to let you know the materials are ready. I would like to ask for your assistance in providing a review of a subset of the materials I have developed to build an online, self-directed, self-paced Certified Hospice and Palliative Nurse (CHPN) Certification Review course. Because your expertise in education and palliative care, I am interested in obtaining your suggestions on how to improve three modules that have been already developed and posted to the Hospice and Palliative Nurses Association's (HPNA) Learning Management System (LMS). The LMS is a sponsored by the Nurse's Learning Network (NLN) and is a basic online course management system. Though the LMS is limited, it is sufficient for at least posting lectures on each module, and then providing post-test functions so that students can assess their mastery of the

content. Please note, the content of the modules in the course cannot be altered as the content is controlled by HPNA. However, it is possible to improve the presentation of the materials and the quiz content - so your feedback will make a valuable contribution to this project. If you agree to review these three modules: Symptom Management I, II and III, then I would ask you to do the following.

First, click on this link   http://nurseslearning.com/courses/hpna/CHPNSymptomsPT1/index.cfm   to review the course module material and work through the modules.

When you complete the modules you can take the post test from the link on the last slide. (Your grade on the post test is not important, but please review the questions for format). In order to access the post test grade and the see the HPNA evaluation form you will need the following log in information:

Username: (specific for reach reviewer)

Password: (specific for each reviewer)

You do not need to complete the HPNA evaluation, as this is a standardized evaluation used by HPNA, it is there to show you how students taking this course will evaluate the course.

Second, please respond to me either by answering the following questions in this email or by copying these questions into a word document, answering them, and then attaching the saved document to a reply to this email. If possible I would like to have replies/comments by 5 APRIL 2015.

1. How does the Voice-Over-PowerPoint (VOIP) presentation look? (Are the slides interesting? are the slides clear? Was the audio adequate? Other thoughts?)

2. Was the pace of the VOIP presentation okay? (Too fast? Too slow? Uneven? Other thoughts?)

3. How do you like the way it is presented? (Did you like the organization of the presentation? If not, why not? Was there too much content per slide, or not enough? Was the narration clear? Or were their points you did not understand? Other thoughts?)

4. Was there any difficulty navigating between the VOIP, the quizzes, handouts and reference links?

5. Was the post-test helpful in your review of the content?

6. What suggestions would you have to improve the course if it was possible to add more online course features?

Thank you,
Carma Erickson-Hurt, APRN, ACHPN
OHSU DNP student

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APPENDIX C

Table 1. Peer Respondent Feedback

Peer Respondent	Question #1 How does the Voice-Over-PowerPoint (VOIP) presentation look? (Are the slides interesting? Are the slides clear? Was the audio adequate? Other thoughts?)
Reviewer 1	Overall nice presentation. I would add some public domain graphics for interest. Slides are clear/some typos throughout.
Reviewer 2	I would like to see some standardization of the slides as far as content goes. Seemed like some sections had content and some didn't. The slides could be more interesting but I am not sure how. I wouldn't want a lot of pictures unless the pics help present content. Not sure what you mean about the audio being adequate… Also, there are some typographical errors in the quiz and in the VOIP.
Reviewer 3	The general look is well done. However I would suggest adding more pictures, specifically when discussing the pathophysiology content. For instance when you were speaking about the different etiologies/mechanisms/pathways of nausea, a diagram would have helped clarify the details. I also think when talking about delirium/confusion/agitation a table may be helpful
Reviewer 4	VOP - would not change a thing; Audio good; Slides interesting (enough to cover material but not overdone); Illustrations well chosen. (I especially

	liked the wound thickness drawing b/c I'd forgotten the staging requirement, so thanks.)
Reviewer 5	I thought the Voice-Over-PowerPoint presentation (VOIP) was very well done. You have a lot of information to convey in 3 Modules. I was able to follow along easily and take notes. The slides are clear, simple and not too complex or busy. I might have added a bit more light color background with the exception of the patient/family education slides, which were highlighted nicely. The audio was clear and nicely done. My only thought was that some of the pauses between slides in the 3rd Module were longer than Modules 1 and 2.
Reviewer 6	Your voice is very clear and articulate. Nicely spoken! Slides are not too dense, and you use enough bits of pictures and colored lists to keep them interesting
Peer Respondent	**Question #2 Was the pace of the VOIP presentation okay? (Too fast? Too slow? Uneven? Other thoughts?)**
Reviewer 1	Pace of the content is generally even but title/objectives/directions generally set too fast.
Reviewer 2	I think the pace should be a little slower as it seemed rushed.
Reviewer 3	Presentation pace was appropriate.
Reviewer 4	Again, would not change a word. You enunciated clearly, paused when student would need more time, etc.

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Reviewer 5	The pace of the presentation was slow enough to take notes for the participant. I was easily able to follow along and keep up. You don't want to go too fast so I thought this was a perfect pace. Module 3 seemed to have longer pauses between slides than Modules 1 and 2.
Reviewer 6	The instructions moved a bit too fast for me, particularly when I viewed them the first time. Can you put the instructions section on manual only – so the learners can review them at their own pace? The first time through, I literally had to manually go back 3 or 4 times in order to read through and understand the instructions before I started. Part 1: flipped through the objectives too fast for me to read. On some of your slides (for example the one on dysphagia and the one where you define types of seizures), you are giving a whole lot of excellent information. But you are moving very fast… too fast to allow the learner to take notes in many instances. I would suggest that you either slow down some or write more information on the slide itself so your learner doesn't have to scramble to write this all down. (Or is it perhaps detailed in the curriculum book so they can just follow along with the book?) An example is the lists of different etiologies you give. If I were not familiar with this, I would want to write them down, but you are listing them too fast. So again: list them in a way that I can take notes – or better - list them on the slide so I don't have to, especially when you are listing items in a specific category
Peer Respondent	**Question #3 How do you like the way it is presented? (Did you like the**

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	organization of the presentation? If not, why not? Was there too much content per slide, or not enough? Was the narration clear? Or were their points you did not understand? Other thoughts?)
Reviewer 1	Narration is clear; nice pace and voice tone ☺ When trying to follow in the book, the organization is not consistent with the book; this was frustrating, causing me to pause at each new symptom to find that symptom in the book. Although organizing per symptom as you have done seems more logical to me, the book is organized alphabetically; I would conform to book organization (In this case follow up with this reviewer, it was noted she was using the old curriculum, not the new one)
Reviewer 2	Some slides had more content than others. If you are intending that the slides can be used as reference material than I would say more info. The narration was clear. I was wondering how you might focus more on palliative/hospice material as opposed to a review of basics like wound staging. Do we assume that the audience has a nursing foundation and build on it?
Reviewer 3	Organization of the slides. I would separate slides with diagnosis/definition from the etiologies. Example Obviously you do not need to bullet point everything but the main ideas: In Part 2, N/V: would suggest separating nausea from vomiting, there is a lot of information. Under nausea add a diagram and make sub topics of the different pathways with their associated etiologies. b) Constipation, when you are discussing

	constipation I would separate the opioid induced constipation from the non-opioid constipation.
Reviewer 4	Very well organized. When subjects have a clear outline, with expectations, and they are met, and your outline does all that! Very clear. Easily understood.
Reviewer 5	I really did like the way it was presented. There is a lot of information on symptom management to cover. Slide content was simple, adequate but not too complex. The content was not too busy and enticed the participant to take notes. Narration was clear. But I felt Module 3 had too much information and could be integrated into the other modules like this: This is how I might organize it: Module 1: Cardiovascular, Respiratory, Immune/Lymphatic, and Metabolic Module 2: Genitourinary, Gastrointestinal, Nutritional, Skin and Mucous Membranes (These seem to tie in together). Module 3: Neurological, Psychological, Emotional and Spiritual (These seemed to tie in together)
Reviewer 6	This is very nicely done, Carma! Clear narration, well designed slides. Excellent product!
Peer Respondent	**Question #4 Was there any difficulty navigating between the VOIP, the quizzes, handouts and reference links?**
Reviewer 1	Generally fine; I would correlate/clearly describe how and where to go to find each resource in the direction slides

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Reviewer 2	No difficulty at all navigating between – would it be possible for the reference links to be in the slides?
Reviewer 3	NO, however there were long pauses between some of the slides, I counted one it was more than 30 seconds. I mention this because in Part 1, I didn't notice any time delays but in part 2 it was pronounced, at one point I thought the presentation was over. Of course the learner can manually click the next button to move on but because it wasn't necessary in part 1 I wasn't expecting to have to do this in Part 2. Part 3 also has a few slides with an extended delay in the auto forwarding as well but part 2 had the longest delays. In a few of the slide transitions your voice over is cut off especially in part 1 in the cardiovascular portion.
Reviewer 4	NO
Reviewer 5	I had no trouble navigating between the VOIP, the quizzes, handouts and reference links. Great job!
Reviewer 6	None – nicely organized!
Peer Respondent	**Question #5 Was the post-test helpful in your review of the content?**
Reviewer 1	In general post-test was well written at basic content level See specific notes above
Reviewer 2	The post test was helpful but I felt like some content wasn't covered in the

	slides that was on the quiz.
Reviewer 3	I was unable to access the tests again. I did write a few notes but didn't write the questions verbatim**.** Yes, please see the following comments: Exam Section 2 **Question 2:** You mentioned in your presentation that laboratory values may be appropriate including a renal panel, however the question states the nurse does all of the following except and the right answer being not get electrolyte values. **Question 7** has a typo ...headache that... **question 9** wording may needs adjusting; Something like the following: A terminally ill patient, who has already receiving fentanyl TD, has been prescribed hydromorphone for BTP. The nurse knows that an important part of the plan of care is... **There is another question, but I forgot to write the number, that may need tweaking. It may be question 10** The nurse is caring for a patient with a history of constipation, he/she knows that it is important to assess for s/s of ....fecal impaction.
Reviewer 4	Yes. Helped me focus more.
Reviewer 5	The post-test(s) were helpful in the overall review of the content. I might have added 2-5 more questions but this is subjective. But the questions were well written and encouraged critical thinking
Reviewer 6	Very helpful. You might want to include a few more review questions in your presentation itself as you go along. Comments on Part 1 post-test has

	a typo on question 7. Question 8 and 9 seem very similar?
Peer Respondent	**Question #6 What suggestions would you have to improve the course if it was possible to add more online course features?**
Reviewer 1	Wish List: video of assessment for some /most of the symptoms. May just be a staged patient with a history assessment Sample questions for each symptom in case format with the voice over rationale discussion- great to "walk through" the user re: how to arrive at the answer! Thank you for the opportunity to review!
Reviewer 2	Maybe adding a few case studies would be helpful? I also wanted to mention that we have a patient right now with seizures from advanced Alzheimer's and this was not in the content. Maybe this is not common or not proven to be directly related? Thanks for the opportunity to be involved. I am planning to take the certification soon
Reviewer 3	Overall well paced, good information. I understand the content cannot be changed but when speaking about medications at times you discuss doses and mechanism of action. DO you want to discuss that for all the medications or just the few you mentioned? If you are only going to highlight a few by talking about dose and MOA you may want to say that at the beginning of the pharmacological section, " I will be discussing pharmacological interventions next, the intention of this section is to discuss drug classes in general, however in some cases I will discuss the

	doses and MOA's for a few of the medications, " or something similar
Reviewer 4	I don't know what else you've covered besides those three, so really can't add. My passion wasn't addressed, which is the spiritual & psychological aspects included. On section 3 Skin/mucous slide, misspelled ONDANSELRON Missing the first N I like the outline on ANOREXIC with the words (can't think of the word for the graphic like that) GREAT mental outline
Reviewer 5	My only suggestion is the modules layout of information as I described in question #3. That was what kept echoing in my mind as I went through the presentation(s). I don't know if you would want to add more online course features for these modules as I feel they are long enough already
Reviewer 6	Would consider adding case studies to your slides, perhaps to introduce each topic? I believe that cases make the information more meaningful to the practicing clinician.
	One reviewer had these additional comments in addition to responses to questions: General comments - Auto-advance of slides is great, but set a little fast in the instructions only. Some may find that stressful right out of the box. Suggest saving auto-advance for content, not directions. - Instructions are somewhat vague and assume that user may have done this before. Very clear step-directions are needed - Basic Introduction (continued): do individuals know where the "course web page" is? Grammatical errors in both paragraphs; info re: contact hours is confusing – is there one course or multiple

	courses? What constitutes a course? If not familiar with the courses, I may not know what the differences. • Voice is easy to listen to, good pace with content! **Symptom Management 1:** • Objectives- slide advances too fast • If following the core curriculum, consider ordering slides to be in the same order as encountered in the book. • Consider more sample questions, especially for metabolic disorders, since they can be less-often encountered. Sample and rationale discussion was a great addition. • Question 7 – typo in stem • Q 8 and 9 are confusing- too close to one another with the same answer. **Symptom Management 2:** • Instructions seem to be set slower (good!) • Timing of title slide is very long; I eventually had to manually forward it; then objectives was too fast to read thoroughly. • I would not repeat any question: (sample question re: ascites is question #1 in test • I chose a couple of incorrect answers to see what happens: (questions 4, 6, and 7) - only question 7 provided a rationale answer. Consider that in Q.6 dexamethasone can also decrease GI secretions **Symptom Management 3:** • I would not repeat any question: (sample question re: appetite stimulant is question #3 in test • Wound care section is particularly well done!

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APPENDIX D

Table 2. Online Expert Feedback

Online Expert	Question #1 How does the Voice-Over-PowerPoint (VOIP) presentation look? (Are the slides Interesting? Are the slides clear? Was the audio adequate? Other thoughts?)
Reviewer 1	The slides are very clear, perhaps not as interesting as very few have Anything on them besides words although that limits distractions. You are presenting more fact-based information rather than abstract ideas; hence, the format seems reasonable. Audio was completely adequate-- there were a few times that I had to manually press the forward tab to move the presentation along. I wonder why that is and if it can be fixed. I was Listening while I was doing something else with my hands so I had to stop What I was doing to keep the presentation going on those few occasions.
Reviewer 2	Look: I'd like to see more images, especially on the slides with descriptions of conditions and treatments, Instead of full wording (e.g. When you're giving technical instructions, like checking O2 tank, show a Picture of an O2 tank and mark where these readings could be). I realize this may be difficult when you're Working on a public platform. Love the Interventions for each condition and the cascading illustration of interventions. Include slide timing and countdown of total

	presentation (to gauge where you are in the presentation). Also, Having a slide sorter would be good so if I student needs to leave, they can come back to where they left off. Slides clear: Very clear Slides interesting: I'm not the best judge of this, as it is not my area of expertise. The narration was nice And cadence was good. Sound: Very good/clear. General: For the first instructions part of each presentation, if possible, don't have slides advance automatically (it's fine on the narrated part). Students should be able to pace themselves without having to constantly keep clicking back to stay on the same slide. Perhaps you could separate the navigation and course Instructions part from the lecture and have two separate links? The slide timing on the disclosures and objectives seem to be a little off. Can you give a little more time to the disclosures slide (enough to read the slide)? Would you mind narrating/reading the Objectives slide? When I play that one, it just skips over both the disclosures and objectives slides in about 2 seconds each.
Online Expert	**Question #2 Was the pace of the VOIP presentation okay? (Too fast? Too slow? Uneven? Other thoughts?)**
Reviewer 1	I think it is a bit fast for a beginning nurse who may have little experience with the symptoms or their management. However, if your audience has Some basic experience, I think the pace is good. I really

	liked your conversational tone and couldn't tell if you had a script or were speaking on the fly or with brief notes. Whichever, it was clear that you were comfortable presenting and knew your stuff!
Reviewer 2	Pace was great!
Online Expert	**Question #3 How do you like the way it is presented? (Did you like the organization of the presentation? If not, why not? Was there too much content per slide, or not enough? Was the narration clear? Or were their points you did not understand? Other thoughts?)**
Reviewer 1	I did like the organization of the presentation--it was very methodical and predictable--for this type of information, I think that is good. However, In some ways, I wanted the elements of the slides to actually be the same between symptoms, e.g., the slides for assessment of all symptoms would be presented in the same format so the user knows when that header appears what kind of information will be presented. As you did the intervention slides in a unique, recognizable format, I'm wondering if that could be done with assessment and etiologies.
Reviewer 2	See feedback to #1 above.
Online Expert	**Question #4 Was there any difficulty navigating between the VOIP, the quizzes, handouts and reference links?**

Reviewer 1	NO, although I didn't find any reference links and wasn't sure why the references weren't organized in some sort of format, either by body system, symptom, or at least alphabetically? I think this would help your learner enormously to use them! Of course, my preference would always be to cite them in the presentation, but at the very least, they need to be more usable.
Reviewer 2	Ideally, I'd like to see all the links (including the link to the quiz) in a central location, not embedded within the presentation, so that students can navigate to where they need to go from one central location.
Online Expert	**Question #5 Was the post-test helpful in your review of the content?**
Reviewer 1	#7 has a typo, I think—"chat" when I think you mean "that" Why would someone with a brain tumor only need hemorrhage precautions and not seizure precautions? If this truly is the answer, I think it deserves a bit of explanation. On all of the test questions, I would highly recommend that you be consistent in how the anchor part of the Question ends--that is, either a colon (:) or a question mark (?). Some of them right now are just bare, which makes most test-takers just a bit nervous (as though the anchor might be incomplete). There may well be some of the 'bare spots' in Module #1 as well--please review all.

Reviewer 2	I can't evaluate the content and whether the questions accurately covered what was presented. I did like the post-test and the feedback given, as well as the ability to retake the test. Can you show which answer is correct if you get the question wrong, say, 3 times?
Online Expert	**Question #6 What suggestions would you have to improve the course if it was possible to add more online course features?**
Reviewer 1	I think it would be useful to have an index by symptom and/or body system at the front of the course so that the user could go back to review a particular symptom before the posttest or use the information as a reference resource. Also, I like to see the presenter's name on the first slide. This may be prohibited by HPNA, but if not, I think it would be good (perhaps it's not original to you--not sure).
Reviewer 2	Note: Have you made sure your content is ADA compliant? General Layout: I'd put the intro information and each module on a separate page, linked from a main table of contents/intro Page. Kind of like this (because in general, you don't want people to have to scroll down too much):

Symptom Management"

Presented by Carma Erickson-Hurt, RN, MSN, APRN,

ACHPN (Presenter Information).

Course Description:

The symptom management modules are designed to review predominant symptoms encountered in palliative and hospice nursing care. Each symptom is defined with further discussion of the pathophysiology, prevalence, and common…

 (Ellipsis represents all the other textual information at the bottom of the page).

Part 1 – Neurological, Cardiovascular and Respiratory Symptom Management (linked to this module's page, where objectives and links will be listed)

Part 2 – Gastrointestinal Symptom Management (linked to this

	module's page, where objectives and Links will be listed)
	Part 3 – Genitourinary, Skin and Mucous Membranes, Psychological, Nutritional and Metabolic,
	Immune/Lymphatic System Symptom Management (linked to this module's page, where objectives and Links will be listed)
	Need help or have questions? Send an e-mail to nancylynnb@hpna.org
	Optional suggestions:
	• Give them questions at the end of each condition and walk through a question (giving them time
	• To answer for themselves in their heads). You did this well in Module 3 (e.g. On the sample
	• Question after the Xerostomia and Oral Pain Interventions). Or if you could design an interactive
	• Quiz question a couple of times throughout the presentation that would be great. I'm pretty sure
	• That is possible using the program you used.
	• Make the content mobile and iPad-friendly (it currently uses flash, which only works on Mac and

	• PC) and provide MP3s of the lectures so that students can download and listen to later.

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APPENDIX E

Table 3 Characteristics of Peer Reviewers

Reviewer	License	Degree	Years as an RN	Background/ specialty area	Taken an online course previously	Taught an online course?
1	RN	MSN	30	Medical oncology	At least a dozen	Many, 25+
2	RN	BSN	20	Med surg, oncology, home health, hospice	Yes, more than 10	no
3	RN	MSN	14	Veteran homeless case manager	several	no
4	APRN	MSN	35	Palliative care, gerontology, education	no	no
5	RN	MSN	24	med/surg, Public health	Yes, my MSN program was	Yes, one course

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					all online	
6	APRN	DNP	32	Oncology, pain management, palliative care	Yes my DNP was all online	Hybrid courses, but not a fully online course

Running head: CERTIFIED HOSPICE AND PALLIATIVE NURSE REVIEW COURSE

APPENDIX F