AMERICAN UNIVERSITY OF BEIRUT

REDESIGNING CONTINUING NURSING EDUCATION PROGRAMS

by

RAWAN YOUSSEF RAAD

A project
submitted in partial fulfillment of the requirements
for the degree of Master of Science in Nursing Administration
to the Hariri School of Nursing
of the Faculty of Medicine
at the American University of Beirut

Beirut, Lebanon
September 2014

AMERICAN UNIVERSITY OF BEIRUT

REDESIGNING CONTINUING NURSING EDUCATION PROGRAMS

by

RAWAN YOUSSEF RAAD

Approved by:

Dr. Nuhad Yazbek Dumit, Assistant Professor
Hariri School of Nursing
First Reader

Dr. Michael Edward Clinton, Professor
Hariri School of Nursing
Second Reader

Date of project presentation: September 16, 2014

AMERICAN UNIVERSITY OF BEIRUT

THESIS, DISSERTATION, PROJECT RELEASE FORM

Student Name: RAAD (Last) RAWAN (First) YOUSSEF (Middle)

◯ Master's Thesis ⊗ Master's Project ◯ Doctoral Dissertation

☑ I authorize the American University of Beirut to: (a) reproduce hard or electronic copies of my thesis, dissertation, or project; (b) include such copies in the archives and digital repositories of the University; and (c) make freely available such copies to third parties for research or educational purposes.

☐ I authorize the American University of Beirut, **three years after the date of submitting my thesis, dissertation, or project,** to: (a) reproduce hard or electronic copies of it; (b) include such copies in the archives and digital repositories of the University; and (c) make freely available such copies to third parties for research or educational purposes.

Signature September 30, 2014

Date

This form is signed when submitting the thesis, dissertation, or project to the University Libraries

ACKNOWLEDGNENTS

I would like to thank Dr. Nuhad Dumit, as my first reader, for her generous support and guidance all through the development of my project and Dr. Michael Clinton, as my second reader, for his constructive feedback and input.

I would also like to thank my advisor Dr. Samar Noureddine for her kind follow up of my progress during my study years and Dr. Huda Abu-Saad Huijer for embracing all Hariri school of Nursing students with her full interest.

My recognition and gratitude are addressed to my dear parents, husband and all my family for their love, patience and motivation for me to reach this point. I will be forever grateful for having you in my life.

Special thanks to Bahman Hospital administration represented by its General Manager Mr. Ali Krayem, Human Resources Manager Mrs. Amal Houdeib and Medical Director Dr. Hassan Nassar for their support and assistance.

Finally, my sincere appreciation goes to all my dear friends for their love and care that helped me to continue and succeed.

Thank you all.

AN ABSTRACT OF THE PROJECT OF

Rawan Raad for Master of Science
Major: Nursing Administration

Title: Redesigning Continuing Nursing Education Programs

Continuing nursing education (CNE) is a mandate to the development of nurses' knowledge, skills and attitudes to deliver quality nursing care that responds to the continuous updates in the healthcare system. It is also a significant contributor to nurses' satisfaction and retention.

In Lebanon, hospital accreditation standards mandate the allocation of 30 training hours for all the nursing staff. Yet, there is no evidence-based model that exists to help nurse educators in formulating effective programs that responds to the needs of the nursing staff. Thus, a scientific model is needed to ensure the proper development of CNE programs.

Based on scientific CNE concepts found in literature, a model was created for developing CNE programs through a continuous process perspective with input, throughput and output. The CNE input includes human and non-human resources, needs assessment, setting program objectives and designing the program. CNE throughput involves the implementation and monitoring of the program. CNE output involves the evaluation of the program output and further outcomes on patients' health.

Healthcare organizations are recommended to adopt the CNE model to formulate successful CNE programs and to host the program in a CNE department that better serve and develop CNE practice. Organizations are also recommended to collaborate with the Order of nurses through its CNE committee to ensure the delivery of quality CNE offerings.

CONTENTS

ILLUSTRATIONS

Figures

TABLES

Table

CHAPTER I

INTROUCTION

Healthcare systems are continuously witnessing major changes and reforms to improve the quality of healthcare delivery and patients' health outcomes (Drey, Gould, & Allen, 2009; Griscti & Jacono, 2005). These changes are necessitating the continuous update and development of healthcare professionals' knowledge, skills and practice in order to support them in responding to different emerging challenges pertaining to the healthcare needs of the patients (Katsikitis, McAllister, Sharman, Raith, Faithfull-Byrne, & Prialux, 2013).

Though continuing education is mainly needed to update and advance nurses' competence to deliver quality care, research is showing that it may be a source of dissatisfaction and thus contribute to nurse migration or turnover. Continuing education was found to be one of the significant factors associated with job satisfaction, retention and professional commitment (El-Jardali et al., 2009; Griscti & Jacono, 2005; Katsikitis et al., 2013). The effect of continuing education on job satisfaction and retention might be significantly contributing to the global nursing shortage. This is an alarming fact facing healthcare stakeholders and policymakers, especially in Lebanon that has the 8th lowest nurse density in the Eastern Mediterranean Region (El-Jardali, Dimassi, Dumit, Jamal & Mouro, 2009).

In 2010, the American Nurses Association and the National Nursing Staff Development Organization defined Continuing Nursing education (CNE) as "systematic professional learning experiences designed to augment the knowledge, skills, and attributes of nurses and therefore enrich the nurses' contributions to quality health care

and their pursuit of professional career goals" (Spring, 2012, p. 1). Moreover, the American Nurses Credentialing Center went to describe the CE activities as "those learning activities intended to build upon the educational and experiential bases of the professional RN for the enhancement of practice, education, administration, research, or theory development, to the end of improving the health of the public and RN's pursuit of their professional career goals" (Spring, 2012, p. 1). Out of these two definitions, it is important to differentiate between post-basic educational activities that advance the nurses' knowledge and widen the scope of practice and those mandatory trainings that orient nurses to their job descriptions or assist them in retaining basic nursing skills such as cardiopulmonary resuscitation.

Because of its importance in updating nurses' knowledge and skills, continuing nursing education was introduced into the Nursing Standards of practice in the USA. It was imbedded in the 2001 American Nurses Association *Code of Ethics for Nurses with Interpretive Statements* and in 2010 in the *Nursing Professional Development: Scope and Standards of Practice* (Spring, 2012). In Canada, continuing nursing education was reflected in the Canadian Nurses Association Policy Statement since 1998 (Griscti & Jacono, 2005). Moreover, as a part of registration renewal, the Nursing and Midwifery Board of Australia has set regulations for practicing nurses and midwives to present a number of continuing education hours and eligible activities to obtain license to practice (Katsikitis et al., 2013).

In Lebanon, this concept was introduced into the Lebanese Hospital Accreditation Standards that states that each nurse is required to take 30 hours of continuing education yearly (HAS, 2010). Yet, this requirement was not addressed in terms of quality of trainings neither in relation to needs assessment nor credits from

certifying bodies. Nonetheless, the Lebanese Order of Nurses, through its Continuing Nursing Education (CNE) Committee, has initiated its process for offering Continuing Education units (CEUs) to non-academic educational activities.

The process mandates that each nurse completes 15 CEUs endorsed by the Order every three years for continuing educational activities that are beyond the basic education and competencies required to practice nursing. Thus, the Order would be able to guarantee quality continuing education offering as part of the requirements mandated for nurses in practice by the Ministry of Health. In this matter, the Order through its CNE committee has offered support to nursing services in hospitals through reviewing the CNE activities that hospitals apply for credits. The committee plays a major role in setting the guidelines to what is considered CNE and the process that hospitals need to follow to obtain CEUs. Moreover, the committee appraises continuing nursing education activities submitted for credit by healthcare organizations such as the speakers' qualifications, the program, and other parameters for allocating nursing credits.

A. Background

Based on my experience in the Nursing Staff Development department and information gained from colleagues in other hospitals, it was apparent for me that there are no guiding principles or framework of how CNE should be structured and how to set its program based on scientific evidence. During meetings attended in the Order of Nurses to discuss the CNE process, nurse educators, from different hospitals, discussed different definitions of what is considered CNE. For many of them, CNE topics were

selected based on core nursing skills or basic nursing knowledge which is contrary to the definition of CNE.

Moreover, there were no guiding steps for the educators to follow in planning CNE. Every hospital has been following its own CNE ways that is based on the general perception of setting a yearly training program for its nursing staff. The only point that was agreed on during the meetings was the 30 hours requirement for training that is mandated in the Lebanese Hospital standards for accreditation.

The training-related item in the Lebanese Hospital standards mandates that: 30 training hours are to be allocated annually for all nursing staff. In examining this standard, we find no reference to designing the yearly training plan, what is considered CNE topic and the need for having rationale-based topic selection. It also does not demand evaluation of the training plans for continuous improvement.

B. Significance

A scientific model for developing CNE is needed to assist healthcare organizations in general and nurse educators in specific. This model is important to cover all basic principles of planning, designing and evaluating CNE in a step-by-step approach. It shall also ease the work of nurse educators through providing clear and concise guidelines to follow and raise the quality of the training plans by using evidence-based CNE concepts.

Such a framework will also motivate nurses to better engage in the importance of CNE and encourage them for more participation. It shall also help to unify the CNE-designing approach between healthcare organizations thus creating a unified language of training and education between them.

C. Purpose

The purpose of this project is to develop a framework for designing and redesigning continuing nursing education programs for healthcare organizations based on updated models and best practices of CNE. Strategies that motivate and assist nurses to engage in updating their knowledge and skills and to cultivate a culture of life-long learning within the organization will be addressed. A CNE Mission and Vision will be proposed to align CNE services with those of the organization thus ensuring its value to the institution and soliciting commitment and support by the management.

CHAPTER II

LITERATURE REVIEW

This chapter aims to review literature on the importance of CNE, the different concepts and models for designing CNE programs and what are the necessary steps that assist nurse educators to cover all training needs in an effective and evidence-based manner. It shall also address what studies have shown regarding the motivators or barriers that face nurses for engaging in CNE.

The concept of continuing nursing education was first identified in Florence Nightingale's (1859, 1893) annotations that motivated nurses to continue to learn (Gallagher, 2007). In 2007, Lorraine Gallagher presented a conceptual model of continuing education in nursing based on thorough literature review relevant to this topic. This model helps to clarify the concept and differentiate it from other terms such as Continuing Professional Development (CPD) or Life-Long Learning (LLL). The model illustrated three components for continuing education: Attributes, Antecedents and Consequences.

Attributes involve three points. The first point is the direction and goal for nurses. Since they are adult learners, their attitudes to participate in continuing education activities reflect their personal needs and interests. The second point is the dimensions of the profession in which nurses' engagement in continuing education programs enhance professional growth and development. This has lead to the notion saying that continuing education should be mandatory to promote the process of professionalization in nursing. The third point is the domains of practice whereby

continuing education is becoming a mandate for registration renewal in many countries such as the USA and UK (Gallagher, 2007).

Antecedents address the chances that influence the uptake of continuing education. Those involve the economic and socio-political context that affect the rapid changes in patient care due to advancement in knowledge and technology (Gallagher, 2007). It also involves the opportunity for continuing education that includes the barriers that inhibit nurses from engaging in education activities such as staff shortage, lack of awareness and cost (Gallagher, 2007).

The consequences are the added values of continuing education. First value is the improved quality of healthcare through updated nursing knowledge and skills and thus improved performance and patient care (Gallagher, 2007). The second value is the growth and development as a nursing profession through improved standards of nursing care. The third is acquiring credentials to expand the role in specialist clinical areas and managerial positions. Thus, nurses are better able to decide their career plans and develop their professional careers (Gallagher, 2007).

A. Importance of CNE

Drexel et al. (2011) studied the effect of continuing medical education (CME) programs on physicians' performance in Chronic Pulmonary Obstructive Disease (COPD) diagnosis and management. Participants who attended the CME program were significantly more likely to use evidence-based COPD management than physicians' who did not participate.

Another study on the "Impact of educational pain management programme on nurses' pain knowledge and attitudes in Kenya" done by Gladys Machira, Hellen

Kariuki and Linda Martindale showed deficiency in nurses' knowledge and attitudes for pain management (Machira, Kariuki, & Martindale, 2013). After receiving an educational pain management program, nurses scored significantly higher on the Nurses' Knowledge and Attitudes Survey Regarding Pain (NKASRP) at baseline and two follow-up assessments done in a period of two weeks (Machira, Kariuki, & Martindale, 2013).

B. Designing CNE programs

In designing continuing nursing education programs, different concepts and models are being used in practice **(**Griscti & Jacono, 2005; Hawkins & Sherwood, 1999; Institute of Medicine, 2010). Yet, basic steps for designing and evaluation CNE programs were identified as needs assessment, setting program objectives, designing the program, implementing the program and evaluating program outcome and impact (Cervero & Wilson, 1995; Griscti & Jacono, 2005; Hawkins & Sherwood, 1999; Institute of Medicine, 2010). In this chapter, the literature is reviewed on the basis of the mentioned six steps.

1. Needs Assessment

Needs Assessment is the foundation for an effective and efficient training program (Miller & Osinski, 2002). "Training Needs Assessment [TNA] is an ongoing process of gathering data to determine what training needs exists so that training can be developed to help the organization accomplish its objectives" (Brown, p. 569). In other words, it is the process of identifying the gap between the present situation and the desired one that can be translated into training needs (Manual on Training Needs

Assessment). It also assists the organization to determine whether the gap in performance can be addressed through training or not since training may not be the suitable solution for all the organization's problems (Brown, 2002).

As an integral part in TNA, organizers should answer first the why, what, when, who and how questions to ensure proper management of any performance gap (Brown, 2002). *Why* indicates the objective for addressing any deficiency; *what* indicates the best way to obtain the best results; *when* is for the best timing to conduct the training; *who* is for all concerned people in the training process; and *how* can the performance be fixed (Brown, 2002).

The process of Needs Assessment involves three levels: Organizational analysis, Task analysis and Individual analysis (Miller & Osinski, 2002). Organizational analysis determines to what extent the organization is achieving its goals, whether there is a training need and under what conditions training can be implemented (Miller & Osinski, 2002). It also addresses the resources available within the organization that can make the training feasible. Task analysis involves the determination of knowledge, skills and attitudes needed for best performance of the job. Individual analysis targets each employee in person to identify gaps in performance, training needs and what kind of training may best serve to manage these gaps (Miller & Osinski, 2002).

For CNE, an important aspect to consider is the involvement of nurses in the TNA process through considering their feedback of gaps in performance and training needs (Griscti & Jacono, 2005; Katsikitis et al., 2013). This is mandatory for their engagement in the training and develops their sense of life-long learning (Cervero & Wilson, 1995; Griscti & Jacono, 2005; Institute of Medicine, 2010). Engaging nurses in the needs assessment was proven to motivate them and sustain their enthusiasm for

attending trainings. It shall also make them aware of its merit to improve their practice in clinical settings (Cervero & Wilson, 1995; Griscti & Jacono, 2005; Institute of Medicine, 2010).

Healthcare organizations should adopt participatory approach in formulating CNE programs by asking nurses about what they want to learn, their preferred learning styles and strategies, and what issues may hinder their attendance (Griscti & Jacono, 2005). This process could be done through observations, performance evaluation, questionnaires and interviews that encourage nurses to express their needs (Miller & Osinski, 2002).

2. Setting Program Objectives

After identifying the training needs, educators, in collaboration with all the stakeholders concerned, should establish the goals and objectives of the CNE program (Hawkins & Sherwood, 1999). This is the first basic stage of "The Pyramid Model" which is considered the foundation for later evaluation of the program effectiveness. Determining the objectives of the program also plays a role in identifying the target audience, costs, program intensity and timing. Thus organizers shall have a foundation of the what they aim to target in their CNE program before starting to design it (Hawkins & Sherwood, 1999).

Objectives determine what the learner shall be able to do after attending one or more learning experience. Thus, an objective is a unidimensional and short-term behavior that the teacher should specify for the learner at the beginning of the teaching session. And the learner is expected to reach the objective at the conclusion of the teaching session (Bastable, 2003). Objectives should be formulated in the form of

statements that guide the learner step-by-step to reach the overall general goal of the learning process.

Writing behavioral objectives include three important factors: performance, condition and criterion. Performance includes the kinds of behavior that the learner is expected to demonstrate. Condition is the situation where the behavior is expected to occur. Criterion involves the standard, quality level or the expected amount to accept the performance as satisfactory (Bastable, 2003). A subject, who, should be added to ensure that the objective is learner-centered, whether the learner is a nurse, patient or family member. Common errors that face educators during formulating the objectives' statements include describing what the instructor is expected to do, including more than one expected behavior and forgetting to include the three components (Bastable, 2003).

3. Designing the program

In desiging for CNE programs, nurse educators have to consider several issues. The "Pyramid Model" addresses first significance of training needs expressed by nurses so that organizational resources are not wasted (Hawkins & Sherwood, 1999). This is an important aspect since prioritizing choices helps to guide organizers in what to start with. Hawkins and Sherwood (1999) proposed in addition to the "Pyramid Model" the "Impact Model" as a part of the designing phase. It addresses the necessity of the problem, identifies its determinants and the way in which the program will solve it.

In addition, Feasibility is studied to ensure that goals are realistic (Hawkins & Sherwood, 1999). It is studied in relation to the program's impact, which means that programs that are downsized may not produce the desired impact. Thus organizers may choose to switch costs to another program. At last, the model tackles the importance of

having congruent values between all stakeholders to ensure its success (Hawkins & Sherwood, 1999). It notes that nurse educators' values are shown in their selection of program content and teaching styles and the participants' values are shown in the needs assessment and focus groups (Hawkins & Sherwood, 1999).

In designing the program, different educational methods exist that could serve the program's objectives. They may include courses, conferences, lectures, workshops in didactic format or interactive with hands-on experience, seminars and symposia (Forestlund et al., 2012). In addition, Quality Improvement activities such as audit and feedback commonly use interactive meetings that enhance learning (Forestlund et al., 2012).

A 2012 Cochrane review of randomized controlled trials of educational meetings found that interactive workshops that include both educational sessions and interventions were found to be more effective than didactic sessions alone (Forestlund et al., 2012). The 2012 Cochrane review considered several factors in the design of available studies. These factors include the following:

- Type of intervention: whether educational meetings alone or with multifaceted interventions, that is with two or more interventions used
- Contribution of educational meetings
- Intensity of the meetings based on number of participants, format of the meeting whether didactic or interactive, the sources which are the representatives of organizations or researchers, the frequency of educational interventions and the total length of the meeting
- Attendance
- Setting of care

- Format which categorized the meeting as interactive, didactic or mixed
- Complexity of the targeted behavior
- Seriousness of the outcome
- Baseline compliance of all groups before intervention
- Risk of bias

With the findings of this review, it is important for nurse educators, when designing for CNE programs, to consider the factors that appear to increase the impact of educational meetings. The first factor is the attendance rate of the target audience; having more effectiveness with higher attendance (Forestlund et al., 2012). Authors also noted that usually healthcare professionals who attend these workshops are interested in those topics and may be performing well yet attracting those who are not interested may produce higher impact (Forestlund et al., 2012). The second factor to study is the complexity of the behavior, which is according to the review, is not affected by educational meeting. The third factor is having less serious outcomes which appeared to be less effective (Forestlund et al., 2012).

4. Implementing the program

As part of Quality Assurance or control, monitoring the implementation is an ongoing day-to-day process that assists nurse educators to identify problems and revisit the program design for improvements. It starts with the first participant registering and goes throughout the duration of the program. During the implementation, CE programs should be monitored for three quality components as measured by Coverage, Fidelity and Delivery (Hawkins & Sherwood, 1999).

Coverage refers to the extent that the program is able to cover the target population. The difficult part is to specify the total number of wanted participants. For internal trainings, this could be managed by the personnel department, yet for external ones, nursing bodies could be referred to for mailing lists (Hawkins & Sherwood, 1999).

Fidelity refers to "the degree of faithfulness in implementation to the original intent of the program" (Hawkins & Sherwood, 1999, p. 209). Thus, the program is examined for its reliability in delivering the values and principles included in the design phase.

Delivery is measured by the extent to which the target audience was served during the program. Services may include registration, payment of fees, suitable timings, confirmation letters and all related logistics (Hawkins & Sherwood, 1999).

5. Evaluating the program

To measure the effectiveness of the CNE programs, two frameworks shall be addressed. The first framework is "Miller's Triangle of Competence" and the second framework is the "Conceptual framework for planning and assessing continuous medical education" adopted from Moore et al. (2009). Both frameworks target the evaluation of outcomes for planning and assessing CE activities for the learner, clinical performance and patient health outcomes.

Miller evaluates the CE program with four concepts. The first concept, which is the base of Miller's triangle, is the "Knows" which means the sum of information gained by the learners after the end of the educational activity. Then, the triangle moves to the second concept "Knows how" which targets the learners' ability to state how to

do what the activity intended them to know how to do. The third concept is the "Shows how" which addresses the ability of the learners to show in the learning environment the intended performance by the activity (Institute of Medicine, 2010). The top of the triangle is the "Does" which refers to the extent in which the learners are actually implementing what the activity intended them to do in their clinical settings.

In Miller's triangle, the "Knows" and "Knows how" are considered the immediate outputs of the CE programs that can be measured by tests, feedback and demonstration. The "Shows how" is an outcome that may predict changes in clinical performance. The "Does" will reveal the impact of the program on patient health outcomes after the changes occur in clinical setting.

In 2009, Moore et al. created a framework that evaluates the CE program in seven levels of outcomes. The first level is Participation which measures the number of enrolled participants in the CE activity. The second is the satisfaction which stands for to what extent the activity meets the participants' expectations. The third level is the learning which is addressed in two components: the declarative knowledge, which is the "Knows" part in Millers' triangle, and the procedural knowledge, which is the "Knows how" part. The fourth level is the competence which is the same as the "Shows how" and which addresses the learners' skills in implementing what they have been taught to do (Moore et al., 2009).

The fifth level of Moore et al. (2009) framework is the Performance which is measured in the clinical settings, whereby learners actually perform what they are expected to do. The sixth level is Patient health where improvements in patient outcomes are shown based on changes in practice that the CE activity intended to address. The seventh and last level is the Community health, and this is an indicator for

the final impact of CE activity by improving the health outcomes and rates of the whole community (Moore et al., 2009).

C. Exploring the factors that motivate or inhibit nurses from engaging in CNE

One of the main challenges of the CNE process is to encourage nurses to become lifelong learners and motivate them to attend those CNE activities that aim to update their knowledge and improve their skills (Drey, Gould, & Allen, 2009; Griscti & Jacono, 2005; Katsikitis et al., 2013). To increase their interest and motivate them to participate, it is crucial to understand their perceptions and attitudes toward CNE as well as barriers that hinder them from attending.

In 2013, Katsikitis et al. published their study about Australian nurses and midwives' perceptions and attitudes toward continuing professional development practices. Results showed that the majority of nurses understand the requirements for continuing professional development CPD and valued its importance in improving their practice (Katsikitis et al., 2013). Yet, the objectives of the CPD standard and its documentation aspect were not clear for the majority of nurses and midwives. Moreover, it was emphasized that supportive management and workplaces that accept changes are important factors that positively influence nurses and midwives' attitudes toward CPD (Katsikitis et al., 2013). In addition, CPD activities are more prevalent within work hours to manage the difficulties of work shifts. Understaffing and scheduling CPD activities outside working hours were the two major barriers that were shown in this study to hinder nurses and midwives' attendance. Attendance in activities outside working hours is hindered by family needs and commitments (Katsikitis et al., 2013).

In 2013, Ni et al. conducted a study to explore the perceptions of Chinese nurses on continuing education. The study revealed the five most important motivators and barriers for nurses' engagement in continuing education activities. The motivators expressed by participants were: updating knowledge, improving skills in clinical practice, improving comprehensive qualities, obtaining necessary knowledge to achieve professional status and raising academic degrees (Ni et al., 2013). The identified barriers for continuing education CE were time constraints, work commitments, lack of opportunity to attend CE; cost of courses and negative experiences with CE programs (Ni et al., 2013). The study identified another two factors that influence the Chinese nurses' decision to participate in CE activities. The factors are the outdated content of the program and teaching methods.

Another study by Penz et al. in 2007 targeted rural and remote nurses to identify their barriers to participation in continuing education activities. The barriers were isolation and distance concerns, lack of access to, and availability of, educational opportunities within the community or work setting, time constraints and financial limitations (Penz et al., 2007). Nurses who expressed these barriers were found to be without a partner, have dependent children or relatives, work full-time and have a lower satisfaction with scheduling (Penz et al., 2007).

Nurses were found to value the need for quality continuing education (Nalle, Wyatt, & Myers, 2010; Ni et al., 2013; Penz et al., 2007). Thus, it is important for nurse educators and healthcare managers involved in designing CNE programs to address all motivating factors that encourage nurses to attend (Nalle, Wyatt, & Myers, 2010; Ni et al., 2013; Penz et al., 2007). Also, nurses' educational levels influenced their perceptions of CNE. Having advanced degrees in nursing was found to be a positive

predictor for nurses' participation in continuing education (Nalle, Wyatt, & Myers, 2010).

Out of concern that voluntary participation may not yield a good level of nurses' attendance, healthcare managers tend to impose mandatory participation in their policies (Griscti & Jacono, 2005). This issue targets those nurses who do not show any interest at all in participation or learning. They were referred to as "laggards" (Griscti & Jacono, 2005). Yet, acquisition of knowledge is not guaranteed by mere attendance. Nurses need to have a strong interest and motivation to learn and thus pursue CNE.

As a summary of the literature, continuous nursing education is an important concept that includes a lot of factors to address. CNE programs aim to deal with the training needs of the healthcare organizations to provide quality healthcare as well as nurses as individuals to improve their knowledge, skills and attitudes. Yet, in planning, designing and evaluating CNE, nurse educators face many challenges for developing effective training programs. Moreover, nurse educators should work to engage nurses in CNE to ensure the success of training sessions and reaching the ultimate goals.

CHAPTER III

The Continuous Nursing Education Model

This chapter aims at discussing an evidence-based model of the Continuing Nursing Education (CNE) process with its related concepts in practical guidelines that ease its implementation. Since the CNE process aims at the continuous development of knowledge, skills and attitudes of the nurses through training, thus it shall be viewed as part of the "General System's Theory" (Laszlo & Krippner, 1998). This theory encourages human beings to learn for life and get exposed to gathered knowledge. The use of the CNE process in the concept of a system helps to view the relationship of the different components of the CNE process within the organization hosting it, thus maintaining its boundaries (Laszlo & Krippner, 1998).

Out of a system's perspective, the CNE is addressed as a continuous process that has its input, throughput and output. Addressing the CNE as a process allows it to be imbedded within the healthcare system to be easily subjected to clear policies and procedures for nurse educators to follow. Such a model will also provide a unified approach among different healthcare organizations since its concepts are flexible with different patients' services.

Figure 1 portrays the "Continuous Nursing Education Model" with all its concepts imbedded within a system's perspective and process components of input, throughput and output.

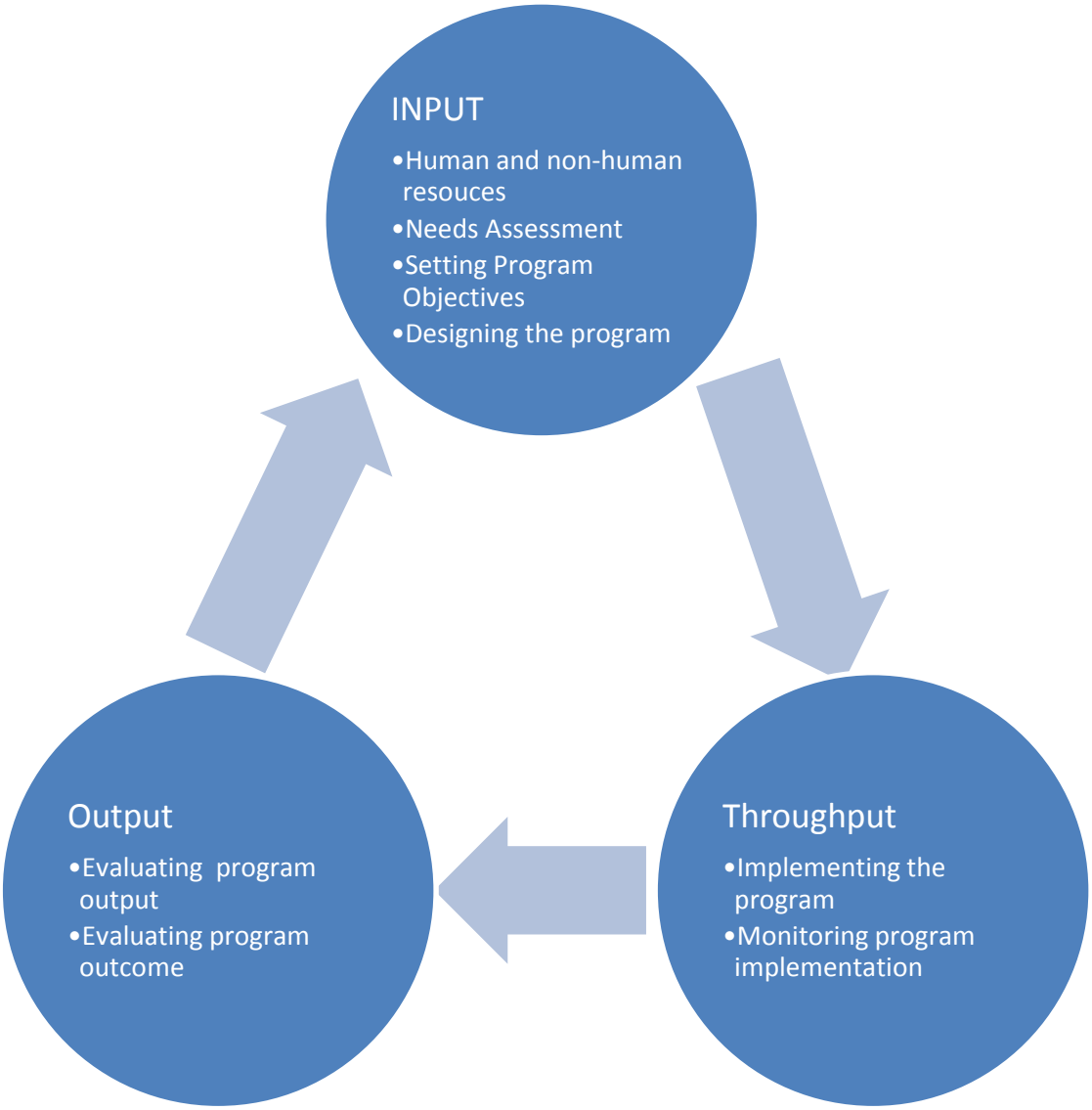

Figure 1: Continuous Nursing Education Model

A. Continuing Nursing Education Input

Starting from the process input, three basic concepts are included: human and non-human resources, needs assessment, setting program objectives and designing the program. These are considered as input since they are prerequisites that should be addressed before the implementation phase. Each shall be dealt with in a step-wise approach to ensure practical guidelines in practice.

1. Human and non-human resources

Once the healthcare organization adopts the CNE model, human and non-human resources shall be provided to be able to launch the process. The human resources that are considered for the CNE department include nurse educators as the full timers, responsible for coordinating the training programs for the different nursing units such as medical/surgical units, critical care units, maternity and childcare units, operating and recovery rooms. A designated secretary is needed to provide the logistics for the training programs.

For the non-human resources, shared services include information technology, maintenance and billing departments, and non-shared services include the auditorium, educators' offices and related stationary such as computers, printers and internet services. The CNE department offices are to be alocated along with the nursing administration offices for easy access and collaboration. The secretary's office is seperated from the nurse educators' offices and is located at the reception for direct service of internal and external customers. The educators' offices are to be seperated and equiped with computer that is connected to both the intranet of the organization and

internet. An equiped conference room is needed for the educators' meetings. This room may be shared with other departments if needed.

2. Needs Assessment

The next step is needs assessment. This concept shall analyze the organizational needs, task needs (according to job description) and individual needs. Every type of need has its own sources of data collection and is related either directly or indirectly to the other types. Nurse educators should have access to all these sources of data to be able to cover all aspects of needs assessment. Otherwise, CNE programs shall not effectively cover gaps in practice or serve to advance the nurses' performance.

First, organizational needs are obtained from different sources. The first source is the Lebanese Hospital Accreditation Standards that addresses several areas related to nursing practice, such as patient safety or evaluation of professional practice. The standards do not mention exactly the topics requested for training yet they can be used to assess the nursing staff needs to fulfill its requirements. The second source is the nursing quality indicators or key performance indicators that reveal gaps in performance and opportunities for improvement. They include a set of nursing-related topics such as Patient's falls and pressure ulcers. Also, they may include topics that may not relate directly to direct patient care or clinical nursing but are important to assist nurses in proper case management and care coordination such as the use of electronic medical records, charging patients' items or managing fixed assets as part of financial management. These are not direct nursing skills yet they are tasks that nurses are required to perform to advance the healthcare system of the organization.

The third source is the nursing policies and procedures that govern the health services of the organization. This means that with any new service or health care specialty that the organization offers, such as the pediatric intensive care unit or a cardiac surgery unit, a need for continuous education training arises for nurses that are designated to serve in this new unit. For example, the hospital administration may decide to start caring for patients with peritoneal dialysis. Nurses who are designated to care for these patients shall be asked to attend a special workshop about peritoneal dialysis concept, different modes, complications and proper nursing care.

In addressing task-learning needs, nurse educators need to review the job description of different nursing positions in the nursing organizational hierarchy to assess advanced or new tasks that need training among different categories of nursing staff members. For example, nurse managers are asked to attend sessions on topics related to management skills such as performance evaluation, developing policies and procedures and staffing whereas nursing supervisors are asked to attend topics related to auditing, quality management and leadership.

The third type is the individual needs. This is to be obtained from both the nurse managers as the direct evaluators for the performance of their nursing teams and the nurses themselves. This is usually done prior to setting the training plans and is considered an important and direct input in choosing the topics and deciding the themes to address for every nursing unit. The nurse managers are asked to set a list of training topics for their nursing staff that include their nursing staff needs based on their observations, patients' complaints, quality audit reports and clinical rounds' findings. Managers are also asked to set their own training needs according to challenges faced in their role. New or emerging medical cases that are admitted for nursing care are also

considered since it may require advancing the nurses' role and adding more responsibilities that are reflected into practice. For example, admitting patients with chemical burns require training the nurses on the use of new materials and topical ointments in applying dressings to patients.

For nurses, a questionnaire shall be used to encourage them to express their needs and learning preferences. A sample of a needs assessment questionnaire is included in appendix A. In case the nurse educators are not able to question the whole nursing staff for any reason, a random sample of nurses that represents at least thirty percent of the nursing staff may be asked to fill the questionnaire. This thirty percent shall be sampled from all nursing units, all shifts (day, evening and night) with weekdays and weekends included. This shall give a clear idea of the topics that nurses perceive as important to learn and improve their practice. It shall also support the idea of engaging nurses, as adult learners, in the CNE process by giving attention to their preferences and what they wish to know about. Thus nurses shall feel that they are partners in the planning process and that their opinions and requests are major contributors to the CNE programs.

Additional data for learning needs can be collected from the process owners of other health-related departments such as Radiology or Infection Control departments since they may have input in problems related to nursing practice. The Biomedical Engineering department may provide topics related to new or advanced medical equipments to be used by nurses. Also, the Dietary department may discuss updated information related to patients' therapeutic diets.

3. Setting Program Objectives

After finishing the needs assessment step, nurse educators need to put all the gathered data, analyze it and transform it into information that helps identifying the topics that need to be addressed in their coming CNE program/s. It is important not to disregard any collected data. Yet, not all topics may be addressed for feasibility concerns. Since a lot of expressed needs may be imbedded into common topics, educators need to present statistics of their gathered data which will correspond to the major gaps in performance to decide the focus of the coming CNE programs. In analyzing the data, it is important to scrutinize the different types of data for similarities, commonalities and variations.

Educators shall discuss with all the stakeholders including the nursing director and nurse managers the available data to agree on common objectives and identify target audience of these objectives. This agreement will help to unify the CNE perspective within the nursing department and with other departments. Also, such discussions shall prioritize objectives and specify the extent of focus of the different program objectives. Some objectives are considered crucial. Thus, these objectives shall be started with at the beginning of the year. Others may be planned for the second half of the year. Some objectives may be postponed till next year.

Meetings with top management should be conducted to discuss the program objectives with clear rationales of the choices, their alignment with the organization's mission and vision, and to obtain approval before starting the designing phase. These meetings will also include discussions of the expected costs according to the intensity of the CNE programs and the number of attendees to be served. They will help the nurse

educators to determine the available resources that can serve the program objectives and the best way to distribute these resources on the different programs intended.

The general mission/purpose of the CNE program is to advance the nursing staff knowledge, skills and attitudes to provide quality and safe nursing care according to evidence-based practice. This mission is to be fulfilled through addressing the learning needs of the nurses according to their performance, job requirements and their different roles in the organization. The specific objectives of the different workshops planned in the CNE program are derived from the general mission of the program. These are formulated according to the specific training needs that necessitated the planning of the workshop. As for the learning outcomes, the attendees are expected to gain knowledge of the addressed topic and be able to transfer what was learned into clinical setting thus improving the quality of patients' care.

Thus, the objectives of the CNE department are: to continuously assess the learning needs of nurses utilizing several resources for data, to design continuous nursing education programs based on needs assessment results and to evaluate effectiveness of the CNE offerings utilizing diversified measures and approaches.

4. Designing the CNE program

In this phase, it is important to consider the specificity of the nursing services for all nursing units such as critical care units, and maternity and/or child care units. Thus, program design shall be done for every nursing unit according to its service in order to categorize its needs and identify its reachable targets based on clear rationales. Nurse educators shall start with prioritizing the training needs according to their significance in relation to nursing practice. Thus educators shall decide what comes first and what

could be postponed for later. This also shall help to decide the needed costs and how to distribute the available budget efficiently and effectively on the different intended objectives. Also, feasibility should be studied in terms of the nature of the CNE topic, the available resources and expected costs. Educators should consider any cutbacks in the program budget in terms of their effect on attaining the program objectives.

Once the topics are decided upon, nurse educators shall decide on the nature of the teaching style intended. According to the 2012 Cochrane Review, it is more effective to design mixed and interactive workshops that include the theoretical sessions and practical ones, rather than theoretical part alone. This structure shall include the provision of the needed information and its application directly to enhance the participants' skills and empower their ability to implement what they were taught (Forestlund et al., 2012).

For preparing the theoretical part, nurse educators are advised to follow the model adopted by MacIntosh-Murray et al. (2006) "Closing the research-practice gaps for health care professionals and continuing education professionals" (Institute of Medicine, 2010). This model ensures delivering quality CNE sessions through ensuring linkage with research and evidence-based practice. Starting from the outcomes, nurse educators aim to improve patient health outcomes and reduce "bad" outcomes. Educators shall study these outcomes using theory-based research that ultimately results in research-based evidence that proved its effectiveness for practice. This evidence is translated into the nursing practice and guidelines thus nursing practice can be considered as evidence-based practice that educators can use to provide reliable information. In that way, learning can be considered practice-based and can be used for

ultimate improvement in patient health outcomes. Thus the cycle continues in the model in light of continuous performance improvement (Institute of Medicine, 2010).

For the practice part, several teaching models can be used such as direct demonstration, simulation or reflection. Some topics such as nursing clinical skills may be addressed in direct demonstrations in the clinical settings to mimic real-life scenarios. Other topics such as cardiopulmonary resuscitation may be tackled through simulation. Nursing protocols or guidelines could be tackled in case-scenarios that address the required nursing management. Thus, the nature of the topic itself shall decide the nature of the practice session intended.

Malcolm Knowles' Adult learning theory/Andragogy shall be adopted in preparing the teaching material. Knowles' six principles of adult learning include the following: adult learners are internally motivated and self directed, bring life experiences and knowledge to learning experiences, are goal-oriented, relevance-oriented, practical and like to be respected (Smith, 2002). These principles provide guidelines for structuring and preparing the delivery of the learning material. Since the CNE process targets mature adults, learning should be more problem-based and collaborative rather than didactic to add meaningfulness to the work of nurses.

Speakers need to address the expressed training needs of the nurses since they are more motivated by their choices of what they want to learn. Training sessions shall include time for open discussions to encourage nurses to share their experiences about any topic thus adding value to the usefulness of the information given. Speakers are to start their sessions with the objectives and goals of learning thus helping attendees to know the purpose of their attendance. Also, speakers should show the relevance and practicality of the information given to the nurses' practice so that they know how to

use it in their clinical settings. Finally, speakers are to respect and value any input from the nurses to encourage them to engage more in training session even if their input is of no added value. All opinions need to be heard and respected.

Training sessions that are presented and discussed within the healthcare organizations are considered internal trainings. These are planned by the nurse educators. Yet, educators may find that some of their planned topics are being offered by other institutions such as the Order of Nurses, universities in the form of courses or other healthcare organizations. These offerings are considered external trainings that may assist the educators in fulfilling the training needs of the nursing staff. External trainings are also helpful in opening the nurses' views on other care practices and shared experiences.

Qualifications of the speakers are an integral issue to consider. Nurse educators should have at least a Bachelor in Science degree in nursing sciences and preferably a Masters degree with a practical experience that exceeds five years. For non-nursing topics, speakers are chosen according to their expertise. For internal trainings within a healthcare organization, senior specialists are usually asked to prepare and present their materials. For external CNE programs, national and international expert speakers may be considered.

The learning environment is another issue to address. Nurse educators should ensure the provision of a comfortable and quiet learning environment for an effective teaching-learning process. This includes considering the number of targeted participants to attend in relation to the nature of the offered training (topic and approach), setting space, lighting, food services and furniture. Long workshops should include more than one or two coffee breaks to help attendees to refocus between sessions. Educators shall

also consider the different ways to distribute seats such as the U-shape, V-shape or Buffet style according to the number of participants, nature of the topic that might involve group work or discussions and suitability of the setting itself.

Marketing for the program is an essential motivator for attendees to come. The marketing style shall consider attractiveness of the sessions, its importance for the nursing practice and "What's in it for the participants?" if they attend. Marketing should consider all ways of communication such as posters, ads, emails or any other available methods. It should also include the registration process and if whether fees are to be considered. For health care organizations, internal trainings are usually free yet organizations are also encouraged to pay for these sessions as a motivator for nurses to come and attend them. This is a major issue that may solve the problem of attending workshops outside working hours. By affording internal trainings and workshops, top management shows its faith in the importance and value of CNE as part of its commitment for developing the knowledge, skills and attitudes of its nursing staff.

A target audience is to be decided in this phase. All nurses in need for the training topic shall be invited. Thus, there may be a need to repeat the workshops to give all nurses the chance to attend. Especially with varied duties of days, evenings and nights, nurses may face a challenge to attend CNE sessions. The number of repetitions can be decided according to the whole number of invited nurses versus the number expected per workshop.

B. Continuing Nursing Education throughput

This part is the CNE program implementation phase starting from the distribution of the program invitation until the end of the program. Nurse educators

need to monitor the program implementation to manage occurring changes and troubleshoot obstacles that may arise. This may also include revisiting some of the planning elements for implementation problems.

For internal trainings within a healthcare organization, nurse educators send the invitations to the nursing units at least one month prior to the planned date/s of the workshop. This step is mandatory to manage the changing schedule of nurses on nursing units and to allow nurse managers to organize their nurses' attendance accordingly. Sometimes feedback regarding the workshop dates, duration or staff shortage may interfere with the CNE plan thus affecting its design.

Nurses are asked to register themselves in the planned workshop according to the registration process. One way is to use the organization's outlook and send internal mails to the program planners/nurse educators confirming their attendance to the workshop or specifying the date of participation for repetitive workshops. Another way is to ask Nurse Managers to send the names of all participants on behalf of their staff. In case there is no internal outlook, a secretary or an assistant could help in receiving calls from interested nurses to attend. The number of attendees should be recorded to arrange for coffee breaks, seats and stationary.

One week prior to the date of the workshop, the nurse educators are to confirm the availability of all needed resources. The speakers shall be contacted to make sure that they are ready and that the training material has been finalized. Nurse educators, as the coordinators of the CNE program, have the right to review other speakers' materials, especially external speakers. They do not review to approve the material but to make sure that there is no marketing or advertising taking place, which may cause conflict of interest. Also, the setting is checked for availability of all logistics such as lighting and

IT services and for the suitable distribution of places that serve the program. Nurse Educators should be present throughout the whole program, supervising the implementation of the planned registration process, the delivery of the prepared lectures and workshops and assuring an interactive environment that enhances learning. They are also present in case of problems or urgent changes.

In monitoring the program implementation, the "Hawkins & Sherwood 1999: Program Monitoring Matrix" shall be adopted. The matrix explains the need to evaluate the program according to the three quality elements "Coverage, fidelity and delivery" using the five data sources of the program "Attendance, Evaluation forms, Program planning reports, Faculty activity reports and Content analysis" (Hawkins & Sherwood, 1999, p. 209). This step is a continuous process throughout the CNE program delivery.

Coverage shall target the extent to which the intended population was reached through attendance rate, their demographic data and educational level, how they were informed and how useful was the content for them. For measuring Fidelity, attendees' perception is considered along with the evaluation forms that can target to what extent the program was true to its original concept. Also, the content of the lectures, handouts and other materials used shall be monitored for usefulness in training. For measuring Delivery, the program will be monitored in relation to the services provided to the attendees i.e. registration, getting the certifications or any other help they needed in addition to the delivery style of the speaker. These three quality components are major contributors for considering and planning other CNE programs. They assist nurse educators to understand what suits the intended audience best.

An integral issue to consider is the evaluation process that shall take place at the end of each lecture, maintaining confidentiality and limiting bias. Evaluation forms

shall be prepared ahead of time to be ready to be distributed after each lecture or workshop delivered. Evaluation forms shall be anonymous and shall not be distributed by the speaker being evaluated. Instead, during the evaluation phase the speaker is asked to leave the setting to ensure no pressure is being placed on the participants. Thus, bias is limited to the maximum. Evaluation shall address the quality of the information delivered (clear, direct, useful, applicable…), the delivery style of the speaker (pace, clear language, related examples…) and the learning environment (comfortable, promotes learning, appropriate temperature…). An open space is left for comments or other input from the participants.

1. Data entry and management

At the conclusion of the program, the data entry phase starts. This is an important phase of the implementation process where all related data of the program shall be entered in an automated system for later statistics and analysis. Nurse Educators are required to determine ahead of time what variables need to be studied and analyzed.

In collaboration with the Information Technology department, an automated training program is created to record all related data. Such data include but are not limited to: invited target audience, attended participants in numbers and names if available, their positions and contact details, start and end times, titles of the topics and workshops delivered, duration of each lecture, names of the speakers, results of the exams or competencies done, number of delivered sessions with repetitions and type of distributed certifications. In addition, evaluation forms or other related documents used shall include important data to consider. Thus, Nurse Educators need to read and record all participants' input carefully.

For workshops that invite external audiences, further data are to be considered. Training programs may include the names of participating companies or healthcare organizations and sponsoring parties. Budget-related data are crucial data to include. Even if they are not included within the training program itself, training fees, expenses and revenues are to be recorded in details.

After all required data are entered, statistics are obtained. Such statistics may include, but are not limited to: attendance rate, absenteeism, percentage of participation from the invited different nursing units or external organizations, delays in arriving to the sessions or starting the sessions, number of continuing education units attended, participants' satisfaction level, suggested future topics and additional input. It is mandatory to closely study these data for continuous business improvement and indentifying gaps in performance. These data can also be used as key performance indicators. Yet, to understand the meaning of such results it is mandatory to relate them to other data such as nurses' turnover, staffing shortage, lack of resources, cutting of budgets and other factors that may affect the success of the CNE program. For external programs, competitive courses and programs with competitive prices shall also be considered. This step is part of studying the market to identify threats and opportunities for improvement to develop attracting and successful CNE programs and avoid repetitions.

Nurse Educators also need to keep an archive of all the training material and documents used such as evaluation forms, attendance sheets, invitation form and certifications. These documents may be archived by the CNE program or by the nursing units especially for internal workshops within a healthcare organization. Soft and hard copies may be used, yet the archive should be in the access of the Nurse Educators only

as their guardians. After the end of the workshops, hard copies of the training material may be provided to the nurses to be kept as reference for later use.

C. Continuing Nursing Education Output

The "Conceptual framework for planning and assessing continuous medical education" by Moore et al. (2009) shall be adopted to evaluate the effectiveness of the CNE program at different levels. The framework presents seven levels for evaluation: participation, satisfaction, learning (declarative and procedural knowledge), competence, performance, patient health and community health. Each level is to be studied at a specific period of time where the first four levels can be considered as outputs of the CNE program that can be studied directly after the end of the CNE program. The last three levels are considered as output since they are studied at least one month after the CNE program ends, and they are studied in the clinical setting and not the educational one to assess applicability in practice, sustainability. The final result is reflected on patients' care activities.

Starting with "Participation", the attendance rate, absenteeism and diversity of the intended audience represent the extent to which the CNE program is needed or sought after. They give an idea of the importance of the program and its need in benefiting the nurses in their daily clinical practice and patient care. They also represent the compliance of the nursing staff to the continuous education concept in their career and how they perceive it (Moore et al., 2009).

Yet, within a healthcare organization, participation is to be studied in comparison with other data, mainly staffing shortage, overtimes, and whether the training hours are paid or unpaid. This step illustrates the different reasons of the low or

high attendance rates. Also, studying the audience diversity in positions (nurses, nurse managers, nursing supervisors or directors) or different organizations highlights those interested participants in developing their career pathways.

The next level to be considered is “Satisfaction”. Satisfaction represents the extent to which the CNE program has met the expectations of the audience and thus how pleased they were with its experience. It represents how worthy the participants considered the training material and the program in total in meeting their needs and having an added value to their career (Moore et al., 2009). Satisfaction is studied through the data obtained from the evaluation forms distributed after each training session. As the evaluation forms were explained in the CNE throughput part, satisfaction is to include participants’ opinion in how valuable the information delivered was, how useful the delivery style of the speaker was and how helpful the setting in promoting learning environment was.

This step assists the nurse educators in specifying, in case of dissatisfaction, the gaps in details. The training material may be excellent yet the speaker may have poor presentation skills that did not assist the audience to stay attentive. In other cases, the speaker may have excellent presentation skills but the training material may be basic and has no added value to the nurses’ current practice. Also, the setting may be considered uncomfortable or a high level of noise disabled educators from creating an interactive learning environment. When gaps or problems are identified, Nurse Educators become better able to improve planning for future programs.

The third level to evaluate the CNE program is “Learning”. Learning represents how much of the information delivered or training material did the participants grasp and state out of what the CNE program intended them to know (Moore et al., 2009).. It

is usually measured according to the type of the training sessions delivered. In some programs, sessions are theoretical and target the knowledge base of the nurses rather than skills. In such cases, the participants are evaluated for their declarative knowledge in the style of questions and answers (multiple choice or open questions) with having a grading system to pass or fail the participants. Other programs may target the nursing skills and practice part in the form of hands-on workshops. Thus, the procedural knowledge is targeted through asking the participants to restate the steps of the procedure that they are intending to learn (Moore et al., 2009). Also, the participants may be evaluated for passing or failing.

Evaluating learning is not just to rate the participants but also to assess the need to repeat such workshops in simpler and easier style and to judge the difficulty of the CNE program as being too advanced in relation to the basic knowledge of the intended audience. Nurse Educators also evaluate "Learning" to be able to provide the audience with certificates of success versus certificates of participation.

The fourth level is assessing "Competence". This comes after the procedural learning and is considered the practical part of the workshops whereby the training material necessitates the direct application and demonstration of what was learned (Moore et al., 2009). In such a case, the CNE program targets the practice skills for direct patient care. It does not just the participants' knowledge of how to do the procedure but their ability to actually do it properly with good dexterity and proper use of time and equipments. Nurse Educators evaluate the audience Competence to predict whether they shall be able to apply the procedure taught later in their clinical setting. The nurses' ability to actually implement the skill is evaluated.

To test Competence, Nurse Educators or the expert trainers should prepare beforehand practice competency forms. The forms include the details of applying the procedure step-by-step, so that during the testing part, the trainer has a reference to rely on in passing or failing the participants. They are also required to inform the participants of what are the failing steps of the competency form to reinforce the important aspects of the procedure taught. In case of failure, the trainer may decide to either repeat the practice immediately with some guidance tips or to allow some time for the participant to read again and study the steps needed.

The fifth level is the "Performance". This level is to be tested on the clinical setting rather than the educational one. It targets the implementation of what was learned in direct patient care and its incorporation within the nursing care plan (Moore et al., 2009). The Nurse Educators need to ask "Are nurses doing in reality what they are supposed to do to achieve the desired results?" This question may be asked to the nurses themselves or their managers who may report change in their nursing staff behavior after the CNE program. Data that emerge out of this question are considered self-reports from the participants and can be used to assess the knowledge applicability in practice.

Other sources of data include patient health records whereby nursing care plan and interventions may be reviewed to check the inclusion of new learned skills in patient care. Also, administrative data may represent the extent of which taught knowledge and skills are being used. Patients may be asked to report the care practices they received according to their cases where they meet the applicability criteria.

The same data sources can be used to evaluate "Patient Health status". In cases where gained knowledge and skills were applied by the participants, the patient health

status is evaluated to check if desired results were reached. Thus, self-reports from the nurses caring for these patients along with their health records shall reveal the degree of the CNE program influence on health results. Moreover, administrative data such as morbidity and mortality rates, nosocomial infections, re-admission rates and others can also be used to assess the success of the CNE program.

"Community Health status" is considered the impact of the CNE process. It is the result of collaborative efforts between different healthcare organizations that adopt the CNE process to improve the practice of its healthcare professionals. Data that show the improvement is generally obtained from the Ministry of Public Health.

Table 1 summarizes the different levels for evaluating the CNE process:

Output	1. Participation: attendance rate, absenteeism, diversity of the attended audience (different nursing positions, different healthcare organizations)
	2. Satisfaction: data from evaluation forms represent satisfaction level, in addition to the written and verbal comments of the attendees about their opinions of the quality of the training sessions.
	3. Learning: a. Declarative: through theoretical exams and case discussions b. Procedural: through stating steps of the procedure
	4. Competence: through conducting real practice competency

Outcome	5. Performance: feedback from nurses or their managers regarding the implementation of what was learned in clinical setting.
	6. Patient health status: results of better patient health outcomes such as decreased re-admission rates and better self-care management post discharge teaching.
Impact	7. Community health status: statistics from the Ministry of Health reveal the impact of better healthcare practice on community health indicators as a whole.

Table 1: Evaluation Continuous Nursing Education Output

CHAPTER IV

BUDGET, RECOMMENDATIONS AND CONCLUSION

This chapter shall address the budget concerns for the human and non-human resources and shall offer the needed recommendations for developing the CNE program into a department. After piloting the program and after implementating it and evaluating it, it is recommended to host the CNE program in a designated CNE department. The development of the CNE department is to be guided with clear policies and procedures that govern its practices and clarify the roles and responsibilities of each member and contributor to the CNE process.

A. CNE Program Budget

With respect to the human resources budget, the healthcare organization is considered to offer all different healthcare services and specialties: Medical/Surgical, Critical care, Maternity/Child care and Operating Room /Post-Anesthesia care. In such case, at least four Nurse Educators are needed with relative experience in the different specialties available along with the department's secretary. A coordinator for the different CNE programs is needed to arrange the work of the different nurse educators and report directly to the Nursing Director. Thus, six full time employees are considered.

For the Nurse educators, the salary scale offered by the Lebanese Order of Nurses shall be adopted. The scale is obtained from the Lebanese Order of Nurses website and states that the minimum basic wage is 1,518,750 Lebanese pounds equivalent to 1012 dollars (1,518,750 LBP ≈ $1,012) for university degree holders. An

additional 15 percent for employee related expenses is added to the minimum wage which is equivalent to 227,812 LBP ≈$152. A transportation fee of 8,000 LBP is calculated for each working day with an average of twenty two working days per month equivalent to 176,000 LBP ≈ $117 monthly. If the educators hold a Masters degree in Nursing, an additional ten percent is added according to the basic wage equivalent to 150,000 LBP ≈$100 and for the assumed tasks and rank a fifteen percent increase is obtained according to the basic wage equivalent to 228,000 LBP ≈ $152. Thus, a total salary for each nurse educator is 2,300,500 LBP ≈$1,534. For four nurse educators, a total salary is set for 9,202,000 LBP ≈$6,135 per month. For the coordinator, another fifteen percent increase shall be considered for her/his rank; thus, a total salary is considered for 2,528,500 LBP ≈ $1,685.

Table 2 illustrates a detailed description for the nurse educator's salary:

Description	Amount in LBP	Amount in dollars
Minimum Wage for university holder with 15% ERE	1,518,750 LBP +227,812 LBP = 1,746,500 LBP	1,164$
Transportation fee of 8,000/working day for average of 22 working day/ month	176,000 LBP	117$
10% increase for Masters degree	150,000 LBP	100$
15% increase for rank and assumed responsibilities	228,000 LBP	152$
Total salary	2,300,500 LBP	1,534$

Table 2: Description of Nurse Educator salary

Secretarial services in different institutions may vary according to the importance of the tasks assumed, the extended role or job description and the required qualifications and competencies. For the CNE department secretary, an average salary of 1,000,000 LBP ≈ $667 shall be considered with needed computer skills, internet use, and knowledge in the mailing process and relative experience in the position. Thus, the human resources total budget is set for 152,760,000 LBP ≈ $101,840.

Table 3 illustrates the required budget for the human resources HR:

Position	Number of FTE	Salary/FTE	Total budget
Coordinator	1	2,528,500 LBP ≈ $1685	2,528,500 LBP ≈ $1,685
Secretary	1	1,000,000 LBP ≈ $667	1,000,000 LBP≈ $667
Nurse Educator	4	2,300,500 LBP ≈ $1,534	9,202,000 LBP ≈$6,135
Total HR Budget/month =			12,730,500 LBP ≈ $8,487
Total HR Budget/year =			152,760,000 LBP ≈ $101,840

Table 3: Continuing Nursing Education-Human Resources Budget

With respect to the non-human resources, the CNE department shall be equipped with 5 desks for the five employees with each desk having a file closet, two chairs, a computer and relative stationary. A designated space of twenty five square meters is required where by offices can be separated by gypsum-board partitions to provide space for individual staff. An average cost for each item shall be considered in the following budget table 4:

Item	Cost/item	Number of items	Total cost
Desk	200,000 LBP	5	1,000,000 LBP ≈$667
File closet	150,000 LBP	5	750,000 LBP ≈$500
Chair	100,000 LBP	10	1,000,000 LBP ≈$667
Computer	1,000,000 LBP	5	5,000,000 LBP ≈$3,333
Stationary/desk	50,000 LBP	5	250,000 LBP ≈$167
Total non-HR budget=			8,000,000 LBP ≈$ 5,333

Table 4: Continuing Nursing Education-Non Human Resources Budget

Additional continuous costs over the year are considered for housekeeping services and maintenance including electricity and water use. The table below illustrates the continuous costs:

Item	Cost/item	Number of items	Total cost
Housekeeping services	2,000 LBP/m^2	25 m^2	50,000 LBP ≈$33
Maintenance services (lighting and airing)	10,000 LBP/m^2	25m^2	250,000 LBP ≈$167
Total cost/month=			300,000 LBP ≈$200
Total yearly cost=			3,600,000 LBP≈ $2,400

An overall yearly budget of all human and non-human resources is set to an approximate value of 164,360,000 LBP ≈ $109,573.

To host the CNE program in a department, a manual of practice and quality of improvement plan are recommended to govern the practice of the department and ensure effective implementation of the CNE process.

B. Recommendations

It is recommended that the program be evaluated as described in the previous chapter for its output, outcome and impact, so that an informed decision is made on whether the program can be advanced into a special department.

*Manual of practice***:**

A manual of practice is to exist that governs the practice of the CNE department and work process. The manual is to include the set of policies and procedures that approach every concept of the CNE process in alignment with the organization's specificity and available resources. The manual shall serve to provide the necessary guidelines and rules of practice for the nurse educators, nursing staff and other speakers from different departments. Administration's approval shall be obtained for this manual and it shall be diffused to all related departments such as the Human Resources department, Medical administration and Quality department.

The manual is to be developed by the Nursing administration in collaboration with the Human Resources-continuous education/training section so that the CNE process works in alignment with the other training sections. Its policies include each CNE concept discussed in the CNE model and its procedures states the required practical steps to follow. It shall also address management of available data such as soft and hard copies of presentations, posters and other training material.

In addition, the issue of Conflict of interest is specified for all speakers. A designated form can be used, so that speakers from different departments sign and declare their financial relationships with other parties. In this way, the integrity of the CNE process can be maintained to ensure that all training material are purely scientific and do not include commercial purposes.

Quality Improvement Plan:

A quality improvement plan (QIP) is to be developed annually. The quality improvement plan is a strategy that assists nurse educators in self and program assessment whereby points of strengths and areas of improvement shall be addressed in relation to bottle-necks and needed resources. The areas of improvement are to be based on the collected data of the previous year that shall include the different outputs of the implemented CNE process.

A representative summary shall include the following: the targeted objectives or areas of improvement of the CNE process for the coming year, the intended action steps that shall address each objective along with the responsible personnel for its execution and deadlines that shall be set for each action step to be executed. This maybe a part of the Nursing administration QIP or may have a designated QIP that involves the CNE department as a separate entity. It may be also imbedded in the nursing units' QIP for unit-specific objectives.

Table 5 is an example of the QIP:

Quality Improvement Plan for 2015			
Objective	Action step	Responsible personnel	Deadline
Increase nurses' low attendance rate	1. Conduct a survey to explore to nurses' reasons for not attending	Nurse Educators	December 2014
	2. Present the results of the survey to the administration to study possible solutions	Nursing Director	January 2015
	3. Include approved solutions in the CNE process through written and diffused policies and procedures	Nurse Educators	February 2015

Table 5: Continuing Nursing Education- Quality Improvement Plan

Along with the quality improvement plan, key performance indicators (KPIs) are developed to measure the effectiveness of the QIP in reaching the targeted objectives. KPIs are selected along with the objectives set in the QIP. To illustrate more, the above QIP table addresses the low attendance rate of nurses that is intended to be improved. If the attendance rate is for example thirty percent, a KPI of attendance rate shall be chosen with a sixty percent target for this year. Thus, if the target is reached this means that the action steps taken were effective. If not, CNE department has to come with other action steps or solutions to reach its goal.

KPIs may target the CNE process in any of its components: input, throughput and output. For better illustration, Table 6 suggests three KPIs:

Key Performance Indicators			
KPI name	Numerator	Denominator	Goal
1.Planning CNE	Number of planned CNE hours	Required 30 training hours by accreditation	100%
2.Training needs coverage	Number of covered training needs in the CNE plan	Total number of training needs sent to the CNE department	90%
3.Attendance rate	Number of attended participants	Number of invited staff	90%

Table 6: Continuing Nursing Education-Key Performance Indicators

The first KPI targets the planning process as part of the CNE program input whereby the CNE program should fulfill thirty training hours according to the Lebanese Hospital accreditation standards. Thus the equation is the number of planned hours over the required thirty training hours. The second KPI studies the effectiveness of the CNE program in covering the training needs. The equation is the number of covered training needs over the total number of training needs sent to the CNE department. The third KPI studies the attendance rate as part of the CNE program output. The equation is the number of attended participants over the total number of invited staff.

C. Conclusion:

Continuous Nursing Education is an integral component of the quality improvement cycle for the healthcare services. Thus, it is recommended that every healthcare organization adopts the CNE process for developing the knowledge, skills and attitudes of its nursing staff. Moreover, the development of the CNE department is also recommended to ensure the proper and systemic application of the CNE process. A complete implementation and evaluation of the process is needed since omission of any part will yield either the dissatisfaction of the nursing staff with the offered trainings or the dissatisfaction of the administration with the final output and outcomes. More importantly, it will result in poor patient outcomes. Healthcare organizations are also encouraged to consider the training hour as a paid working hour to motivate nurses to attend to the planned workshops.

Collaboration with the Lebanese Order of Nurses is crucial to ensure the delivery of quality educational offerings and to remaining updated with all accredited external trainings that help to cover the required 15 Continuing education units mandated to all practicing nurses. Also, healthcare organizations may collaborate with the Order's CNE committee to organize and conduct accredited internal trainings in its institutions.

REFERENCES

Agency, M. o. (n.d.). *Manual on Training Needs Assessment.* Retrieved from http://www.jica.go.jp/project/cambodia/0601331/pdf/english/3_TNA_01.pdf.

Brown, J. (2002). Training Needs Assessment: A Must for Developing an Effective Training Program. *Public Personnel Management* , 569-578.

Center, V. U. (2011, December 7). *Writing Objectives.* Retrieved from http://www.mc.vanderbilt.edu/root/vumc.php.

Cervero, R., & Wilson, A. (1995). Responsible Planning for Continuing Education in the Health Professions . *The Journal of Continuing Education in the Health Professions* , 196-202.

Drexel, C., Jacobson, A., Hanania, N. A., Whitfield, B., Katz, J., & Sullivan, T. (2011). Measuring the impact of a live, case-based,interactive continuing medical educational program in clinician knowledge and competency in evidence-based COPD care. *International Journal of COPD* , 297-307.

Fadi El-Jardali, H. D. (2009, March 12). *A national cross-sectional study on nurses' intent to leave and job satisfaction in Lebanon: implications for policy and practice.* Retrieved from www.biomedcentral.com.

Gallagher, L. (2007). Continuing Education in Nursing: A concept analysis. *Nurse Education Today* , 466-473.

Hawkins, V., & Sherwood, G. (1999). The Pyramid Model: An Integrated Approach For Evaluating Continuing Education Programs and Outcomes. *The Journal of Continuing Education in Nursing* , 203-212.

Laszlo, A., & Krippner, S. (1998). System's Theories: Their Origins, Foundations, and Development. In J. Jordan, *Systems Theories and A Priori Aspects of Perception* (pp. 47-74). Amsterdam: Elsevier Science.

Machira, G., Kariuki, H., & Martindale, L. (2013). Impact of an educational pain management programme on nurses' knowledge and attitudes in Kenya. *International Journal of Palliative Nursing* , 341-346.

Mary Katsikitis, Margaret McAllister, Rachael Sharman, Lisa Raith, Annette Faithfull-Byrne, Rae Priaulx. (2013). Continuing Professional Development in Australia: Current awareness, practice and future directions. *Contemporary Nurse* , 33-45.

Medicine), I. (. (2010). *Redesigining Continuing Education in the Health Professions.* Washington, DC: The National Academies Press.

Miller, J. A., & Osinski, D. M. (2002, July). *Training Needs Assessment.* Retrieved from http://www.ispi.org/pdf/suggestedReading/Miller_Osinski.pdf.

Moore, D. E., Green, J. S., & Gallis, H. A. (2009). Achieving desired results and improved outcomes: Integrating planning and assessment throughout learning activities. *Journal of continuing education in the health professions* , 1-15.

Nalle, M. A., Wyatt, T. H., & Myers, C. R. (2010). Continuing Education Needs of Nurses in a Voluntary Contiuing Nursing Education State. *The Journal of Contiuing Education in Nursing* , 107-115.

Ni, C., Hua, Y., Shao, P., Wallen, G. R., Xu, S., & Li, L. (2013). Contiuing education among Chinese nurses: A general hospital-based study. *Nurse Education Today* .

Nicholas Drey, D. G. (2009). The relationship between continuing professional education and nursing commitment. *Nurse Education Today* , 740-745.

Odette Griscti, J. J. (2006). Effectiveness of continuing education programmes in nursing: literature review. *Journal of Advanced Nursing* , 449-456.

Penz, K., D'Arcy, C., Stewart, N., Kosteniuk, J., Morgan, D., & Smith, B. (2007). Barriers to Participation in Contiuing Education Activities among rural and remote nurses. *The Journal of Contniuing Education in Nursing* , 58-66.

Smith, M. K. (2002). *Malcolm Knowles, informal adult education, self-direction and andragogy.* Retrieved from www.infedu.org/thinkers/et-knowl.html.

Spring, S. (2012, June). *The Value of Accreditation for Continuing Nursing Education: Quality Education Contributing to Quality Outcomes.* Retrieved from American Nurses Credentialing Center.

Appendix A: NEEDS ASSESSMENT

I. Biographical Data

a. Position: □ Registered Nurse □ Nurse Manager □ Nursing Supervisor

b. Age: □ 20-25y □ 26-30y □ 31-35y □ 36-40y □ > 40y

c. Gender: □ Male □ Female

d. Marital Status: □ Married □ Divorced □ Single

e. Years of experience: □< 1y □ 1-3y □ 3-5y □ 5-7y □7-10y □ >10 y

f. Location of Residency: □ Beirut □ Mount Lebanon □ South □ North □ Bekaa

g. Degree: □ TS □ BS □ Masters

h. Unit of practice: □ Medical/Surgical □ Critical care □ Maternity/Child care □ OR

i. Work Shift: □ Weekdays □ Weekends □Shifts □ Days □Nights

II. General Information

a. How many training hours have you fulfilled in the past year:

□ 0-5h □ 5-10h □11-15h □16-20h □21-25h □26-30h □ >30 h

b. Specify your preferred way to be informed about CNE activities:

□ Poster □ Mail □ Verbally □ Individual invitation

c. What is the ideal timing for CE activity:

	AM	PM
Weekday		
Weekend		

d. Specify the topic of CE activity that you consider most interesting and helpful in improving your knowledge and skills:

□ Clinical Nursing □ Nursing Administration (Leadership, Delegation, Staffing…)

□ Paramedical Health (Nutrition, Radiology, Infection control…)

e. List 5 topics for each category that you consider most needed:

Clinical Nursing	Nursing Administration	Paramedical Health

f. Will you be interested in attending a CE activity that is an update on the previous CE activity? □ Yes □ No

g. If Yes, which previous CNE activity would you like to attend an update for:

……

……

……

h. Please mention what may motivate you to attend the CNE activities:

……

……

……

……

Thank you for your contribution