Training of Critical Care Staff on the New Nurse Led Feeding Role

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Abstract

Education and training are terms closely related due to the similar objectives. As education strives to equip the learner with the primary skills and knowledge for handling wide array of tasks, training cares for the skills for particular job tasks. However, education and training do not stand on different islands. They complement each other, because, as there is a significant relationship between educational attainment and on-job-training. Education empowers and opens chances for the provision of the on-job-training (also referred to as the employer provided training) activities. In addition, there is an empirical regularity in the training that the educated individuals get as compared to the less educated counterparts.

Keywords: Education • Training • Attainment • Empowers • Job tasks

Introduction

Teaching can be defined as an integral method between educator and student where a mixture of teaching methods flowing from teacher to learner can be used. This difference can be achieved by three methods didactical and teacher combined concentrating on lectures, facilitative, aimed towards problem solving skills to support learners thinking on and express what they know of and last, a socratic strategy concentrating on questions [1].

The setting

In the clinical setting, the situation is not any different; nurses, interns and all multidisciplinary team requires training and practice to enable them develop their skills and competency by applying the knowledge that they gained from the classroom environment. The aim of this assignment is to prepare nurses in the intensive care unit for the implementation of the new nurse-led feeding protocol and algorithm (Figure 1).
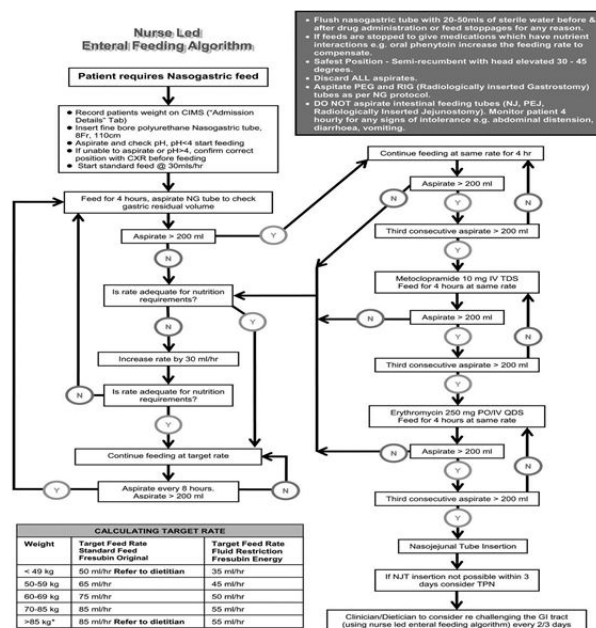

Figure 1. Nurse led feeding protocol and algorithm.

Literature Review

In a 48 adult-patient-beds in the acute tertiary referral hospital in UAE, the author will provide education to the trainers (the unit based educators) to facilitate the delivery of knowledge to the bedside

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nurses. In other words the program will be explicitly delivered by the author in collaborating with the other intensive care educators [2].

In intensive care area there is a high prevalence of malnutrition. This level of prevalence is multifactorial with one main contributing factor of delays in dietary provision which is always left for the physicians that initiates Nil Per Month Order (NPO). This has also been argued by Lee et al. These delays arise when the physicians concentrate on vital organs resuscitations and the absence of the dietitian's consult related to the non-working hours such as weekends and holidays. Following a review by the ICU multidisciplinary team, it was recommended that there is a merit in proposing a nurse led initiative that would help solve this delay. This proposal was submitted to the unit based and clinical practice council for consideration and waiting the final approval. The programme was developed to an implementation stage that begun with the first phase of protocol/algorithm refinement. This was to provide a baseline guide to the clinical staff and particularly nurses [3].

The education/training programme will go through four different stages of development that will capture the training need analysis, curriculum design, delivery methods and evaluation processes. Therefore, the assignment will be structured to reflect these four basic stages. The second and the most important component of the plan were the education and training of the nursing staff in the new policy and algorithm. This is expected to give the intensive care nurses the autonomy to feed the patients without further delays form the physicians. For this purpose, a detailed training program should take place, targeting 175 ICU nurses with different backgrounds, specialty, level of experience and coming from a different culture to insure the safe feeding delivery according to the designated evidence based algorithm [4].

Education and training needs analysis

There are an increasing number of patients who require enteral feeding support services. A proper training for the intensive care nurses would be important for developing dependable approaches for the various feeding protocols. White and Whitehead further denotes that there is a need to have common baseline for such feeding protocol and this should be acknowledged and understanding of the ICU multidisciplinary team (Figure 2) [5].
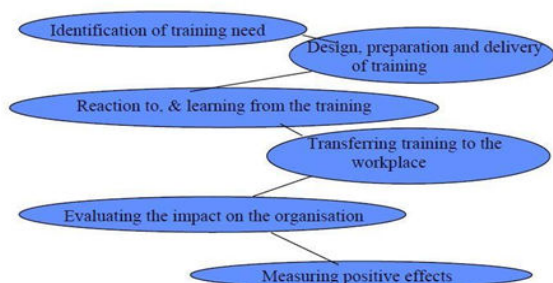

Figure 2. Analysis of the training.

For the purposes of this programme a survey of staff was considered most appropriate. This is based on the idea presented by White and Whitehead and Friesecke et al. The survey will be distributed to ICU staff using survey monkey [6].

The following will be the key multiple choice questions:

- Which enteral nutrition complication could be life-threatening?
- Which enteral tube feeding would be appropriate for patients with high residue?
- Intermittent enteral feeding is indicated for which patient population?
- What are priority nursing care actions for a patient receiving enteral nutrition.

The survey result will show the level of knowledge of the current practice, policy and procedure among intensive care nurses for subsequent usage on a daily basis. Furthermore, it will identify any gaps and works as the pretest requirement.

Barriers to nursing learning

Teaching 175 ICU bedside nurses on this new role is quite challenging, taking into consideration the many factors that build barriers to learning. Some of these factors had been presented by Elisabeth et al. as indicated on the pie chart below (Figure 3) [7].
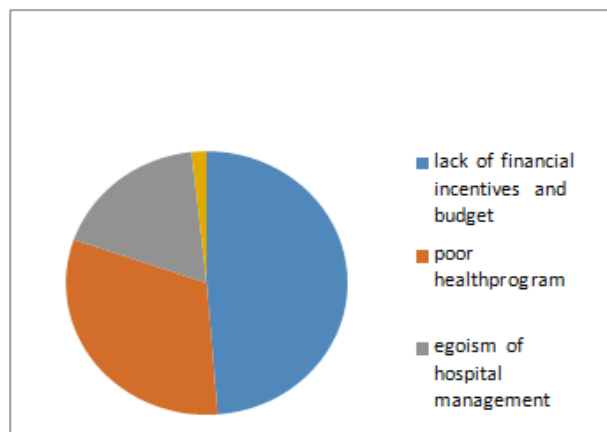

Figure 3. Barriers to nursing learning.

A number of elements have been identifies to be holding the responsibility for making nurses learning difficult. These challenges vary widely. Some of them include lack of financial incentives, poor health programs, negligence from the hospital management team and loss of opportunities for further learning due to high workload and absence of proper budget. ICU nurses are always facing the challenge of little time and with poor staffing ratio associated with high workload. These often impose impediments for nurses to attend the learning sessions. Besides, there are little resources within the hospital to care for the training sessions for the nurses on leave and those who operate under the night shift programs [8].

Train the trainer

To address this challenge and to ensure availability of education to all nursing staff, a train the trainer model for delivery was proposed by the author and supported by management. This model was considered as one of the more effective models for the critical care division. White and Whitehead support this idea by indicating that the ICU already has the unit based educators who provide the daily support services to junior nurses and patients as well as guiding

nurses on various sophisticated practices. These make a strong team that can support the delivery of the programme and in a professional manner. With the training approach and design, the author has presented an idea with a high potential to over-counter this challenge [9].

Yarber et al. largely acknowledges the use of train the trainer approach for nurse's training in all sectors, including public and community health. In the same manner, the author shall involve the use of train the trainer method, to teach 12 Unit Based Educators (UBE). This first hand training session will be delivered by the author who established the nursing curriculum and the nurse-led role. The reason for involving the educators is to capture the details of the curriculum in a more professional manner [10].

There are a number of professionals who handle various roles in the ICU. Among these are the unit based educators taking the lead in delivering curriculum based training activities. These are the clinical teachers who have a career background in nursing. Therefore, they have the skills and competency for preparing the nursing students educationally for a proper development of their skills [11]. According to train the trainer approach, the unit based educators will act as the chief preceptors for the ICU nurses in assessing and continuous monitoring nurses progress, as well as helping in evaluating their competency and the efficacy of the program itself.

Design preparation and delivery of training

Curriculum design: Curriculum is obtained from the Latin verb currere which means to run. Furthermore, a curriculum can be referred as a checklist of desired outcomes. Curriculum development methods usually aim at a definite behavioral and visible terms. Nursing as a career require a special kind of curriculum that is more flexible to the current changes in research. Jarrett et al. indicated that nursing education require a multidirectional approach that cares for both the practical work as well as the theoretical knowledge [12].

In addition to the support from the senior clinicians and the primary baseline framework of Bloom, the guidelines of Uys Gwele and Jarrett et al. will also provide some reference points for the instructors curriculum algorithms. Bloom's taxonomy, is considered one of the foremost works on the curriculum development with the specific focus on learning outcomes that targets the intellectual behaviors which are important in pedagogy. This taxonomy also establishes academic goals to promote clear communication by accurately describing and analyzing the vaguely defined phrases such as thinking and problem solving in the learning environment. Hence, this taxonomy also gives a definite classification of cognitive, affective and psychomotor domains. Therefore, the author used Bloom's taxonomy to set well-established strategic goals for the programme (Table 1).

Title and purpose	Training of intensive care staff on the newly nurse led feeding role
Date and duration	To be determined in collaboration with management team and duration is 1.5 hours
Facilitator/Educator	The author
Location	Simulation centre
Needed resources	Projector and PC with a video player
Pre-requisites	Complete assigned Lippincott online and verify the completion of the sent survey
Description	Training nurses on the new implemented feeding role and how to use the algorithm appropriately
Participants and target	Unit based educators working in the intensive care unit
Aim(s)	Learn how to work on the new feeding algorithm
	Understand the new process of starting feeding in ICU
	Reflect the training on the clinical setting safely
	Promote, teach and encourage nurses to learn and know about this feeding role
Expected programme outcomes	At the end of the program nurses will be able to:
	Consolidate knowledge gained
	Apply technical skills gained
	Demonstrate ability to follow the feeding algorithm properly
	Contribute to inter-professional discussion and plans for patient care
Proposed curriculum delivery methods	Achievement of participant learning outcomes will be supported through utilizing a blended approach of the following teaching and learning strategies
	Tutorial/classroom (A combination of small group and teacher directed content
	Immersive simulation (A team based practice opportunities through high fidelity scenarios and structured debriefing)
	Clinical practice (eg opportunity to apply and/or demonstrate knowledge/skills in the provision of patient care)

Table 1. The classification of cognitive, affective and psychomotor domains.

Key principles to keep in mind when planning the content:

- Activate prior knowledge and make connections to previous or current practice.
- Communicate content using multi-sensory methods (verbal, visual, tactile etc).
- Break down the skill into smaller tasks/abilities and then put it all together. Progress from basic/simple skills to complex skills.

Discussion

Teaching methodology

The delivery of education will be based on the principles of adult learning. Therefore, before going into the stages of programme development, it is import to reflect on the theoretical approach of adult learning which is considered the most appropriate for this programme. This is based on the idea that it is usually done for the qualified nurses with a minimum of two years of experience. The principles of adult education are well demonstrated by Knowles.

Adult learning theory

There are a number of learning theories and methods which can be brought together into five essential groups. These include instrumental learning, self-directed learning and experiential learning, perspective transformation and situated cognition. The term andragogy is obtained from a Latin work, 'andr' meaning man. It also means the leader of man. Andragogy comes as self-directed learning, which is the most recognized and established among other theories [13].

Knowles, promoted the adult learning theory by defining it as the art and science of helping adults to learn. Furthermore, He developed a mode based on several stages on how adults differ from children in terms of learning. The model involves the following six stages, represented in questions:

The need to know: Why do adults learn specific things and why are they in need of it? This program takes advantage of the idea that adults prefer to learn specific idea.

The learner's self-concept: In this manner, the proposed teaching method by the author will concentrate on capturing the adults reference to specific topic (nursing).

The role of the learner's experience: Adults learn in a different manner, compared to adults. In the training session, the examples will be built on the learners previous experience.

The readiness to learn: Adults learn according to their needs and they apply these skills in life situations. This is a factor that will motivate the nursing students to take an active part.

Orientation to learning: The adult learners tend to make a direct application of what they learnt. This is one point that this program will take advantage of, especially in the practical sessions.

Motivation: The delivery of this program to the trainers (unit-based educators) will involve a combination of methods including, visual aids, interactive approach, small group simulations as well as the use of E-based tutorials using Learning Management System (LMS) program.

Simulations are described as typical actions that resemble the real activities. They are aimed at establishing procedures; improve decision-making skills and enhancing critical thinking through practical activities or mannequins. Simulation should be specific to a point of mimicking the actual circumstances. With its abundant positive attributes, it shall be the basic principle in this programme (Figure 4) [14].
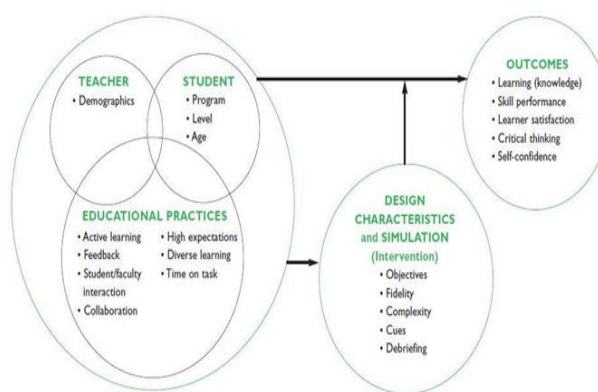

Figure 4. Simulation model.

From the baselines of simulations, interactive small groups (of nurses) will actively get involved in the learning activities and this will greatly improve learning efficacy. It is from such practical and interactive learning activities that the various principles shall get explored. Visual aids are those instructional aids which are used in in boosting learners attention by making the subject real and vivid in the given setup. Visuals aids are mostly presented in the form of images, photographs, diagrams, videos, slides, real objects among other. E-based tutorials (LMS) are web-based structures that are designed to upload any useful teaching materials such as videos and a post-test for selected nurses. This system generates emails for the nurses, allowing them to log in and watch the teaching materials online, as well as track attendance and generate grades [15].

Transferring training to work place

Workplace training is an old idea that had been utilized in various circumstances for the nursing students. For instance, Liaw et al. had already used the same idea in evaluating the effectiveness of web-based simulation in the nurses workplace setup. It is best enhanced by the hospital based instructors. The whole concept of instilling the new information for the bedside nurses will be the core responsibility of the unit based educators UBE, who will be leading and conducted using preceptorship at bedside where every nurse, on completion of the programme, will be required to fill and sign a specific checklist in the portfolio.

Furthermore nurses by then will be able to initiate the algorithm principles in practice at the workplace safely and effectively.

A study done by Elisabeth et al., showed how preceptors used various tactics and styles in a continuous process of handling, improving, implementing, assessing and evaluating the nurses. Therefore, increased preceptor's knowledge in clinical practice will help to facilitate educational plans for the preceptors, which will improve their pedagogical techniques and competences. There are two contrasting descriptions and techniques to preceptor teaching that are stated by Elisabeth et al. The first is the sink or swim approach where the students form to perform autonomously, with the preceptor silently working on the background. The second technique, known as manipulated structured process is where the preceptor offers to students some relevant and useful patient-based cases from their past experiences. The nurses under training will observe the preceptor initiating the process before working with the algorithm. They will also perform under supervision and then perform independently, if cleared by the preceptor.

Evaluation of bedside nurses

Competent bedside nurses shall be able to deliver the desirable outcome in a well- organized way under numerous conditions with confidence of the real world. An inadequately prepared nurse may not only prevent the team's performance and success, but also impose a negative influence on the quality of health care. A well-organized learning course will be given and it is recommended to apply the formative evaluation plan. According to the main goal of the formative evaluation, it is important to take a close look on the student understanding and to offer a continuous feedback that can be used to improve teaching techniques and students learning. This will help nurses to recognize their strength and weaknesses and focus on the areas that need more work. It addition, it will help educator in identifying the students weaknesses for a proper intervention plan. A posttest on the learning management system will be sent.

Programme evaluation

Apart from examining the performance of the nursing students, it would be important to examine the effectiveness of the program in achieving the main goals. The evaluation idea is strongly supported by Uys and Gwele and the best approach involves the use of evaluation forms. An example of this is presented below (Table 2).

Level 6: Valuing	Draw conclusions, defend and make decisions realizes patient is in pain, reviews medication chart and following patient assessment and dialogue, chooses appropriate medication from prescription list. Suggests change in therapy following evaluation of effectiveness
Level 5: Synthesis	Draw conclusions, find connections, derive, make comparisons
	Patient complains of dizziness, especially on getting out of bed. Reviews patient and realizes that two medications may be interacting to the patient's detriment
Level 4: Analysis	Find parts in a whole and connections, discern, criticize and make comparisons
	Reviews a patient's health status and medication regime and can explain the rationale behind the medication therapy for this particular patient
Level 3: Application	Demonstrate, explain, make use of knowledge
	Knowledge of action of steroids enables student to explain to patient the importance of glucose monitoring while on these drugs
Level 2: Understanding	Formulate knowledge in own words, explain, account for, show differences
	Able to recognize the difference between diuretics that are potassium sparing and those that are not
Level 1: Basic knowledge	Define, declare, count, recognize
	Can identify normal therapeutic range of common drugs

Table 2. Example using Blooms cognitive taxonomy applied to the theoretical comprehension of medications. strategies should be used in a continuous process of adjusting, performing and evaluating precepting.

Conclusion

Teaching in nursing environment is a complex process that should be based on a clear philosophy in order to achieve outstanding outcomes. The health sector is more intricate due to ageing population, complex disease management, and huge advances in medical technology. This complexity necessitates the provision of skilled nurses that are well prepared theoretically and clinically in order to provide safe and efficient care. These techniques and

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