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Research Article

LACK OF STAFF EXPERTISE RELATED TO MEDICAL MACHINERY

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Abstract:

Nursing professional specialists have knowledge and skill in nursing career development, program development, management and leadership. These experienced educators help nurses engaged in life-long learning to develop and maintain their competencies, advance their professional nursing practice, and facilitate their achievement of academic and practice career goals. They work in a variety of practice settings and environments of care. There are a lot of problems happened in ward and management process in daily life. But it is necessary to take action quickly to solve this problem to prevent further mismanagement which effects patient health. First identify problem immediately by Head of department and then forward to Medical superintendent for solution. We should make priority patient's health and prevent from human error

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INTRODUCTION:

Nursing professional specialists have knowledge and skill in nursing career development, program development, management and leadership. These experienced educators help nurses engaged in life-long learning to develop and maintain their competencies, advance their professional nursing practice, and facilitate their achievement of academic and practice career goals. They work in a variety of practice settings and environments of care. It is important for organizations to prioritize professional development across nurse's different career stages, from new graduates to previous graduates.

Nursing professional development is a part of the cumulative learning and growth that takes place during a nurse's career after passing the National Council Licensure Examination (NCLEX) and securing a nursing license. . Their development plans may be more along the lines of "checking the boxes." nurses need to plan ahead and communicate their plans to their supervisors. They may need to present the benefits of attending an activity (eg, training to become a unit champion, sharing best practices) and request hospital business time. . Nurses can track their activities electronically or by hard copy or use a combination of both methods.(Bindon 2017)

Medical machinery are used when patients are in critical condition and used to monitor the vital sign and oxygen supply. Ventilators are also used in the ICU and in the surgical suite during anesthesia. All ventilators are now designed to detect critical events and are equipped with alarms. However, these alarms are only audible peeps that often are difficult to hear outside of the patient's room. Moreover, the large number of false-positive alarms generated by bedside

monitoring devices however ventilator alarms can be heard outside the patient's room and intensive care unit (ICU). Ventilators help to save the life of human by giving artificial oxygen supply to the body. Nursing practice is very necessary to operate the ventilators and other machinery. It is very important that nurses must be practice full to handle these electronic devices.(Jansson, Syrjälä et al. 2018)

Scenario:

A patient was admitted in surgical emergency ICU with multiple injuries due to road traffic accident. He was in very serious condition and cannot maintain oxygen saturation. It was compulsory to put on ventilator for mechanical breathing. Staff Nurse that was present on duty did not know how to operate vent and how can set their modes, vent oxygen supply and about cardiac monitor and pulse ox meter to record vitals and ECG machine. She calls doctor to operate ventilator and cardiac monitor. But Doctor also has little knowledge about ventilator handling and other equipment. He said called to biomedical staff to maintain and set the machinery. Due to this lack of expertise patient was suffered he was already in critical condition and on embo bag ventilation and in gasping condition. It is important for staff nurse should have training in medical machinery handling especially ventilator and have enough knowledge about everything that use in ICU.

Management process applied:

Management as a process to emphasize that all managers are responsible to have knowledge and skill, must engage in some inter-related functions in order to achieve their desired goal. Management process involves 4 basic activities.



Application of management Process

Whole management process will apply in this situation:

Planning means setting an organization's goal and deciding how best to achieve them. Planning is decision making, regarding the goals and setting the future course of action from a set of alternatives to reach them. In this event medical staff has lack of expertise regarding ventilator handling. They need training regarding ventilator operation and other machinery handling. Medical superintendent of hospital will notify this deficiency and decide for staff capacity building.

Organizing is established plans to reach the goal. It involves determining how activities and resources are to be assembled and coordinated. Medical superintendent will send request to higher authorities for arranging training for doctors nurses in order to they perform their duty well.

Leading is influencing or prompting the member of the organization to work together with the interest of the organization. Leading involve a number of deferment processes and activates direction, motivation, communication, and coordination are considered a part of leading process or system. In leading role medical superintendent will communicate higher authority as well as their lower staff about their trainings approval. After approval arrange trainings and send their ICU team for capacity building.

Controlling is measuring, comparing, finding deviation and correcting the organizational activities which are performed for achieving the goals or objectives. Controlling consist of activities, like; measuring the performance, comparing with the existing standard and finding the deviations, and correcting the deviations. In controlling role performance will measure of medical professionals after training and assign their duties according to their job specification.

Problem statement:

According to (Bindon 2017) nurses are considered the centre of care for patients in any health care facility. Therefore, the challenges are more difficult when there is high turnover of staff nurses. However, to analyze the problem first of all I identify the issue, such as what is the actual problem exists. Identify lacking expertise in doctors and staff nurse and what are adverse effects due to this lacking. Identify from staff members which type of the problem face e.g. Staff shortage, lacking machinery, lacking

instrument, untrained staff etc. second reason is lack of information of staff nurses about machinery.

Objective:

To identify the lack of staff expertise related to medical machinery in hospital.

Literature Review:

It is important that all qualified nurses working in critical care environments understand the indications for the use of mechanical ventilation, the modes of ventilation delivery, and the most common associated complications. Mechanical ventilators assist the movement of gases (air) into and out of a patient's lungs, while minimizing the effort of breathing (Scholz et al, 2011). Indicators for the use of mechanical ventilation include the maintenance of oxygenation, the management of type I reparatory failure, the removal of carbon dioxide, the management of type II respiratory failure, cardio respiratory arrest and central nervous system depression (Higginson 2011).

A research was conducted in medical-surgical intensive care unit (ICU) in Finland on to evaluate critical care nurses' knowledge of, adherence to, and barriers toward institution-specific ventilator bundle. The level of knowledge was higher among respondents who had received in-service education about ventilator bundle compared with respondents who had not received in-service education (Jansson, Syrjälä et al. 2018).

Another study was conducted in Pakistan to assess knowledge and practices of critical care health professionals related to ventilator associated pneumonia. Result showed most participants had adequate knowledge and even better practices, particularly among respiratory therapists as compared to doctors and nurses (Usman, Atif et al. 2017).

One study shows result that Patient suffered or died in hospitals due to mechanical errors and human errors. Mechanical errors could be due to ventilator, monitor or some other equipment failure and human errors are lack of expertise how to respond in emergency situation and machinery handling. In an ICU, a patient remains continuously on life support for a prolonged period of time. During this period, equipment may sometimes malfunction due to various reasons. If this is not detected well in time, it may affect the patient outcome critically. In the present study, 29.62% events were due to mechanical errors and 70.37% due to human errors (Kaur, Pawar et al. 2008).

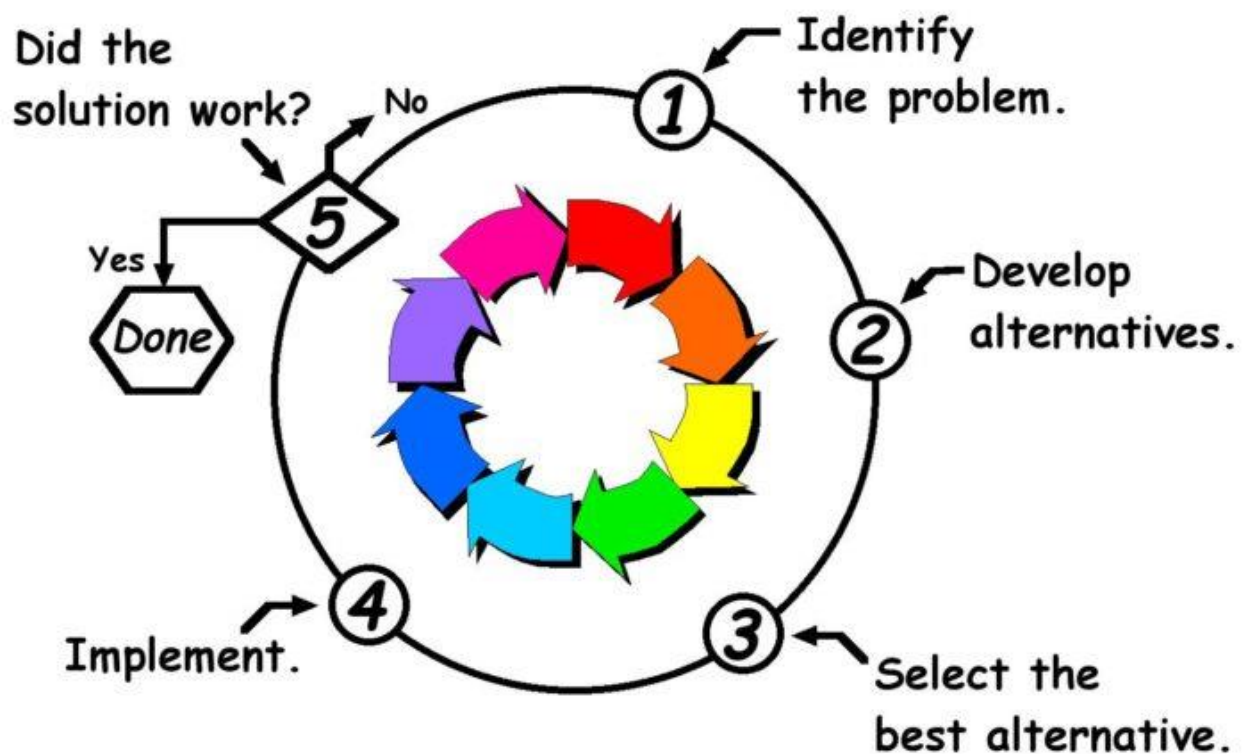
It is duty of parent department to build capacity of their employees in order to perform their duties well. Department should arrange training for new and old staff, it is essential part of Programmed implementation. In addition to basic training for all staff, specialized staff should receive targeted training to meet their key responsibilities (Abruzzese, 2014).

How I was solve Problem in That Situation:

I was handle this situation through problem solving technique

1. Identify the issues.
2. Understand everyone's interests.
3. List the possible solutions (options)
4. Evaluate the options.
5. Select an option or options.
6. Document the agreement(s).
7. Agree on contingencies, monitoring, and evaluation.

Steps to solve a problem...



Identify the issues:

First of all I was identify issue, what is actual problem exist. Identify lacking expertise in doctors and staff nurse and what are adverse effects due to this lacking. Identify from staff members which type of the problem face e.g. Staff shortage, lacking machinery, lacking instrument, untrained staff etc.

Understand everyone's interests:

Then I knew the interest of ward staff members e.g. doctors, Nurses. What they want? Which type of they need machinery and other instrument? Which type of they need improvement in ward or ICU.

List the possible solutions (options):

Then I will form possible solution of that problem e.g. their trainings, annual fresher of trainings, request for machinery and instruments, availability of biomedical staff to maintain ward machinery.

Evaluate the options:

Critical analysis of these possible options

Select an option or options

Select options for implantation.

Document the agreement(s)

Document the request and forward it to higher authority for approval.

Agree on contingencies, monitoring, and evaluation

Agree on all contingencies, monitoring and

evaluation related to this problem solving.

CONCLUSION:

There are a lot of problems happened in ward and management process in daily life. But it is necessary to take action quickly to solve this problem to prevent further mismanagement which effects patient health. First identify problem immediately by Head of department and then forward to Medical superintendent for solution. We should make priority patient's health and prevent from human error.

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