

INNOVATION AND CHANGE

INTRODUCTION

Innovation and change are the most important things in relation to health care and nursing. As the world is heading towards globalisation, each and every concept of health care should be viewed in a more narrow view. Innovation is vital in health care process as the need for better patient outcomes, improved quality of life, reduced costs of the errors and cost effective outcomes for superior interventions is much required. Change can be brought into a health care setting only through innovation. And change can be implemented successfully in that setting through proper leadership. Hence, in this assignment we will be discussing the most important change theories and popular leadership styles. Among these theories we will select the best change theory with appropriate leadership style to bring about the change in our clinical setting. The change which I want to bring in our hospital is use of bar code medication administration (BCMA) to reduce the incidence of medication errors and improve the patient outcomes. For this purpose, I'll suggest a roadmap for bringing about the change and possible ways to implement it in our hospital.

INNOVATION

Change is the constant thing in this world. The success of any process depends on the changes made in it. Thus, innovation is required to identify the need to change. Innovation is generation of new ideas or implementing the existing ideas in novel situations, which results in improvement. Before cultivating the trend of innovation, there is a need to lay a strong foundation of resources and values that encourage the innovation. The creativity and teamwork are the most important things which inspire innovations i.e. they encourage the innovation to happen.

Innovation in health care and nursing is necessary as there is a ever increasing demand for the health care services, for improving the quality of healthcare provided and decrease in the workforce. Innovation in healthcare which is mainly focused on cost effectiveness, outcomes and superiority of new interventions which include diagnostic tests and medicines, depends mainly on advancement in technology rather than human creativity.

According to Hughes (2006), nurses account for 80% of total health care workforce and they are considered to be in close contact with the patients. They are mostly not given the equal position in the multidisciplinary health care team and the skills of nurses are often not utilized in a proper way. Therefore, the role of nurses needs to be improved in innovative health care in order to build the human interference in innovation.

Innovation helps in providing the opportunity to improve the health care delivery systems, patient outcomes and the efficiency and cost effectiveness of the interventions. We are presently in a phase where there is a huge demand for high quality health care at a affordable cost.

Innovation in nursing often fails due to lack of support from the organization or the other members of the multidisciplinary team. It may also fail due to lack of resources supporting it, lack of innovation strategy or the methodology, lack of proper leadership and fear of failure. (Wilson et al. 2012)

CHANGE THEORIES

Change can be accomplished in many ways. However, the success of the planned change depends on proper planning, implementation and the leadership of a change agent. According to NMC (2008), nurses must keep themselves updated of the current practice changes and must deliver the care based upon the best available current evidence.

Many researchers have studied the process and necessity of change. Among those, we will discuss the most three prominent theories of change.

1. Lewin's change management theory

Several factors affect the change implementation process such as health care costs, shortage of workforce, inhibitions among the health care professionals regarding the change, thought of failure, etc. The factors which are in the support to the change are known as 'driving forces', which are coupled with the 'restraining forces'.

According to Lewin (1951), there are 3 stages of change which should be followed by the change agents before achieving the change. They are

- Unfreezing stage- In this phase, the restraining forces for the proposed change are identified and attempts are made to reduce these forces. At the same time, the driving forces are identified and strategies are developed to strengthen them.
- Moving stage- In this stage, the actual change happens practically. This is achieved by strengthening the driving forces and neutralising the restraining forces.
- Refreezing stage- This is the phase in which the equilibrium is established. The effectiveness of the implemented change is evaluated and the stability of change is observed in this phase.

2. Rogers Diffusion Theory

Lewin's theory of change was slightly modified and elaborated by Rogers (2003). He described five elements of a planned change. They are

- Knowledge: This stage involves the developing awareness regarding all the possible factors which can affect the planned change either positively or negatively.

- Interest: This phase involves generation of interest among the health care and nursing professionals regarding the change, and its positive outcomes.
- Evaluation: All the driving forces are evaluated and strengthened in this stage.
- Trial: The change is carefully implemented in the specific setting considering all the factors that may affect it.
- Adoption: The effectiveness of the implemented change is carefully evaluated and if found appropriate, then it is adopted.

3. Lippitt's theory

Lippitt et al. (1958) identified seven phases of change. They are

- Phase 1: Diagnose the problem- The review of literature is done in this stage by the experienced researchers after identifying the problem, which requires a change. A detailed protocol is designed at this initial phase.
- Phase 2: Assessment of motivation and capacity for change- When a change is announced, the resistance to it is inevitable. Hence, at this stage the driving and restraining forces need to be understood. The outcomes or prognosis of the change needs to be clearly explained to the members who will be involved in it.
- Phase 3: Assessment of resources required for the change and the motivation of the change agents- There may be some kind of inhibitions in change agents regarding the effectiveness of the proposed change. These issues should be addressed promptly and the required resources like technological or human resources should be made available.
- Phase 4: Select the objective of change- At this stage planning must be at a final stage. All the issues regarding role of change agent, resources availability, restraining forces and effectiveness of the change should be clarified.

- Phase 5: Select the appropriate role of the change agent in the process of change- Change agents are the individuals responsible for implementing the drafted proposal in actual practice. Hence, the role of these individuals needs to be appropriate in change process.
- Phase 6: Maintain change- The main focus of the change agents at this phase is to maintain the change in such a manner that it becomes a part of the system. Communication of change agents with other individuals involved for determining the effectiveness of change and feedback acquisition needs to be done.
- Phase 7: Terminate the helping relationship- This is the last phase of change process where the change agents are withdrawn of their duties. This process requires evaluation and comparison of the present situations to the previous scenario.

Pearson et al. (2005) have applied the Lippitt's theory to nursing model. They have identified four phase of change in this model. They are

- Assessment- In this phase, nurse makes the necessary assessment of the patient and collects all the relevant details. Condition of the patient needs to be assessed.
- Planning- In this phase, nurse works in collaboration with the health care team in order to address the problems of the patient.
- Implementation- At this phase, the nurse follows the instructions or the guidelines framed by other team members and documents all the details concerned.
- Evaluation- This is the phase in which nurse relates the outcomes of the patient with the problem diagnosed. This process is a continuous process.

Table 1: Comparison of change theories

Lewin	Rogers	Lippitt
Unfreezing	Awareness	Phase 1: Diagnose the problem
		Phase 2: Assessment of motivation and capacity for change
		Phase 3: Assessment of resources required for the change and the motivation of the change agents
Moving	Interest Evaluation Trial	Phase 4: Select the objective of change
		Phase 5: Select the appropriate role of the change agent in the process of change
		Phase 6: Maintain change
Refreezing	Adoption	Phase 7: Terminate the helping relationship

Source: Roussel (2006)

Table 2: Lippitt's theory applied to Nursing process

Elements in nursing process (Pearson)	Lippitt
Assessment	Phase 1: Diagnose the problem
	Phase 2: Assessment of motivation and capacity for change
	Phase 3: Assessment of resources required for the change and the motivation of the change agents
Planning	Phase 4: Select the objective of change
	Phase 5: Select the appropriate role of the change agent in the process of change
Implementation	Phase 6: Maintain change
Evaluation	Phase 7: Terminate the helping relationship

Source: Mitchell (2013)

LEADERSHIP THEORIES

Before implementing the change, the change agent should have required leadership skills as they are the individuals who greatly affect the outcomes of the proposed change. They should

have clear understanding of their strengths and weaknesses and focus on developing the skills concerning leadership. (Mitchell 2013)

A leader plays an important role in the collaborative health care team. They not only have the authority to take the decisions but also should be ready to take the responsibilities. Based on the structure of health care setting, a team leader or health care manager should design the plan in which the team can work effectively. The skills which are required to be a team leader are listening, observing, organizing, appreciating the team efforts, chairing a meeting, giving and receiving the feedback and coordinating the efforts. (Kilpatrick et al., 2014)

There are various leadership styles. Among all those theories we will discuss three main leadership styles. They are

1. Autocratic leadership

Autocratic leadership is also known as authoritarian leadership, in which control lies with an individual. Autocratic leaders follow their own instincts rather than seeking advices from other team members. This type of leadership is beneficial in situations where the decisions should be quick and accurate without much discussion. As the autocratic leader take the decisions on his own, collaboration from his team members lacks. This leadership style lacks to identify the skills, knowledge and expertise of the team members which may be a reason for the failure of this system. (Lewin et al. 1939)

2. Democratic leadership

Democratic leadership is also known as participative leadership, in which the decision-making process lies with the members of the group rather than a single individual. There is a free flow of creative ideas as the communication flow is both upward and downward. The skills, expertise and creativity are recognised and rewarded in a democratic leadership. The

most common traits of democratic leaders are creativity, honesty, intelligence, good communication, competency, etc.

Democratic leadership has been considered the most effective leadership style due to communication and collaboration among the team members. But, in a situation where quick decisions are needed, this system fails as communication between the group may take time which can lead to unsatisfactory results. (Martindale 2011)

3. Laissez-faire leadership

Laissez faire leadership is also known as delegative leadership, in which the leaders give full freedom to the members of the group to make the decisions. This leadership is very much inefficient in terms of productivity. In this style, the resources required will be provided to the team members and given full freedom to take decisions. Leaders provide very little guidance when compared to other two leadership styles. this type of leadership is preferred when the team members are highly knowledgeable and capable of taking decisions without the guidance of the team leader. The roles of the group members are not clearly defined which may lead to confusion. The leader does not take the responsibility of the decisions made by the team, which may adversely affect the collaboration of group members. (Lewin et al. 1939)

Table 3: Comparison of leadership styles

#	Autocratic	Democratic	Laissez-faire
Degree of freedom	Low	moderate	High
Degree of control	High	moderate	No control
Decision making	By the leader	By the group	By the group or none
Activity level of leader	High	High	Minimal
Assumption of responsibility	Primarily the leader	Shared responsibility	Relinquish
Output of team	High quantity, good quality	Creative, high quality	May be of poor quality
Efficiency	Highly efficient	Less efficient	Inefficient

Communication flow	Downwards	Up and down	Upward-downward
Direction	Given by commands	Through guidance and suggestions	Little or no direction
Criticism	Punitive	Constructive	No criticism
Emphasis on status	'I'	'We'	On group

PROPOSAL OF CHANGE- BAR CODE MEDICATION ADMINISTRATION (BCMA)

I, as a registered nurse would like to implement the bar code medication administration in the hospital. For this purpose, the nurse is considered as change agent. The appropriate change theory for this setting to implement the change would be 'Lippitt's theory of change' following the 'democratic style of leadership'.

As the frequency of medication errors has been high, their prevention is of main priority to maintain patient safety. Medication errors are commonly occurring in the hospitals worldwide, leading to death in severe cases and disability, increased hospital stay, increased cost of treatment, etc in mild to moderate cases. Thus systems that use information technology such as barcode medication administration, electronic health records and computerized physician order entry help in preventing the occurrence of medication errors. (Agrawal 2009)

Several restraining forces have been identified to implement this change in clinical settings by the evidences from the literature. Some of these restraining forces were lack of support and cooperation from hospital staff, fear of using novel technology and failures associated with it, resistance from nurses in using the computers instead of hand written notes, etc. (Spetz et al. 2012) The restraining forces at our setting may be resistance from the experienced staff in using new technology.

Using Lippitt's theory as a guidance framework, we want to introduce bar code medication administration at our hospital.

Phase 1: In this scenario, the problem of concern is increased number of medication errors in our hospital setting. For this, we have searched the literature for new technology which can be implemented in the change process. Sufficient evidence was collected which indicated the use of BCMA as the strategy to reduce medication errors. (Agrawal 2009)

Phase 2: The restraining force may be the resistance from the experienced staff concerning the new technology. Training sessions and awareness programs need to be conducted at the hospital for all the staff members including physicians, nurses and pharmacists.

Phase 3: At this stage round table discussions with all the staff members need to be conducted to discuss the driving and restraining forces for the implementation of change. In this setting, the driving forces may be adequate financial resources, support from management and better time management with desired patient outcomes. The restraining forces may be resistance from experienced staff, lack of computer expertise and resistance to new technology.

Phase 4: In this phase, the change needs to be implemented at the facility. It involves support from various departments such as information technology, pharmacy, nursing, nurse educators, administration and clinical information services.

Phase 5: This phase involves assigning the roles to the nurse manager. Bozak (2003) mentioned that involving the nursing staff actively in this process will create a sense of ownership among the nurses and leads to success of this process. Hence, the identification bands should be issued to the patients in this stage and nurse managers should start implementing the BCMA method.

Phase 6: In this phase, the collaboration of nurse manager with different departments needs to be continued in order to make the change permanent. The comfort of the patients and other members should be evaluated.

Phase 7: When the implementation of BCMA becomes a part of hospital systems, then the nurse manager may be relieved of the responsibilities. The feedback after implementing BCMA needs to be recorded. The number of incidences of medication errors should be recorded and properly documented.

The change can be measured using clinical audits or surveys conducted on the nursing staff, patients and their caregivers, to know the impact of BCMA.

Democratic leadership style may be implemented by the nurse manager to implement this particular change in the facility. Democratic leadership style best suits this proposed change.

SWOT ANALYSIS

Chrispearce (2007) identified ten steps to carry out a SWOT analysis. SWOT analysis is an effective approach to identify the strengths and weaknesses in the implementation of a change. Carrying out the SWOT analysis collectively i.e. involving all the members of the team will help in achieving success. It helps in identifying the strengths and thereby provides a framework to improve those attributes and also strengthen the weaknesses. The ten steps to carry out SWOT analysis are

- Consider the uses of SWOT analysis
- Prepare the checklist
- Identify the strengths
- Identify the weaknesses
- Consider the opportunities
- Evaluate the threats
- Focus on internal factors
- Focus on external factors

- Create your own SWOT
- Exercise caution while performing the analysis

We will be using the SWOT analysis to analyse our proposed change i.e. BCMA in our hospital. Before that we will discuss the components of SWOT.

S - Strengths are the factors which have positive impact on the proposed change

W - Weaknesses are the factors which may have negative impact on the change

O - Opportunities are the external factors which may have positive impact on change

T - Threats are the external factors which may have negative impact on change

SWOT analysis for implementing BCMA in our hospital

Objective of the proposed change is to reduce the incidence of medication errors by using BCMA in our hospital.

<p style="text-align: center;">STRENGTHS</p> <ul style="list-style-type: none"> ➤ Highly skilled nurses ➤ Evidence of reduced medication errors using BCMA in clinical settings ➤ Support from the higher end i.e. necessary resources and financial support will be provided by the management 	<p style="text-align: center;">WEAKNESSES</p> <ul style="list-style-type: none"> ➤ Resistance from the experienced nurses in using new technology ➤ Fear of failure ➤ Lack of computer expertise among the staff ➤ Resistance from the patients in wearing the computer aided bands for implementing the BCMA
<p style="text-align: center;">OPPORTUNITIES</p> <ul style="list-style-type: none"> ➤ Highly motivated new nursing staff ➤ Availability of information technology in the hospital ➤ Willingness to hire the IT professionals by the hospital management ➤ National awareness programs in reducing medication errors ➤ Support from the researchers all over the country 	<p style="text-align: center;">THREATS</p> <ul style="list-style-type: none"> ➤ Danger of workarounds

After conducting the brain- storming discussions on driving and restraining forces for the implementation of BCMA in the hospital and performing the SWOT analysis, it is the responsibility of the nurse manager to inform all the members of the group about and strengths, weaknesses, opportunities and threats. Then all the front line staff should collectively work to use the strengths in making the project successful. At the same time the weaknesses should also be discussed and methods to eliminate them or converting them into strengths need to be designed. By performing this type of SWOT analysis in the hospital setting, we can identify all the factors which may affect the implementation of BCMA.

CONCLUSION

In this assignment we have discussed the importance of innovation in the health care and nursing process, the three important change theories namely Lewin's change theory, Rogers theory and Lippitt's theory and the three most famous leadership styles namely autocratic, democratic and laissez-free style. There is an increase in the frequency of medication errors worldwide. These medication errors may be severe leading to death or mild to moderate causing disability in the patient, increased hospital length of stay and increased cost of treatment. Hence, to overcome this issue it is pertinent to use the information technology in medication administration. Considering the factors at our hospital, bar code medication administration (BCMA) will be the right change to make. With a project of such magnitude, it is necessary to have a proper and complete plan to achieve success. Using Lippitt's theory for implementing BCMA at our hospital can help in acceptance of this change by the front line nurses who will be involved in all aspects of decision-making and implementation. The first step in this process is to identify the driving and restraining forces for implementation of BCMA, which can be done through extensive round table discussions of the concerned departments. This project requires the participation of various departments in the hospital like nursing, pharmacy, information technology, clinical information services, nurse educators,

administrators, etc. By using Lippitt's theory, considering nurse as a change manager using democratic leadership style, this project can achieve success by gaining the confidence of the front line nurses. The success of this change can be measured by conducting surveys on nurses, patients and care givers regarding the frequency of medication errors. Another method to measure the success is conducting clinical audits to see whether the medication errors have reduced or not after introducing BCMA.



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