

Original Article

Managing change in Inpatient Units Using Lewin's Theory

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Abstract

Change is necessary for growth where it is directed toward making something significant and different from what it was. This is because most healthcare organizations operate as open systems. They are receptive to external and internal influences originating from rapidly changing health care delivery system. **Aim of the study**: it aims to manage change of the identified problems in the inpatient units using Lewin's theory. **Tools:** Needs Assessment Unstructured Interview to identify the major problems in the inpatient units and their solutions, and A questionnaire sheet was developed by the researcher to assess the problems facing nurses in their inpatient units before and after change. **Results:** showed that Lewin's theory solved problems encountered in the present study related to applying floating pool system to overcome shortage of nurses and establishing collaborative practice committees to overcome the poor communications. Yet, problems related to absent of job description, lack of incentives, poor maintenance of the inpatient units, and the narrow space of the nursing station were not eliminated. **Key words:** Lewin's theory, Nursing change agent.

Introduction

Change in healthcare organization is necessary for growth where it is directed towards making something significant and different from what it was. This is because most healthcare organizations operate as open systems. They are receptive to external and internal influences originating from rapidly changing health care delivery system ^(1,2).

Initiation of change at any healthcare organization can take place in one of two approaches: planned change which is called a linear approach or unplanned change which is called non-linear approach ⁽³⁾. Planned change is deliberate because of conscious decision making and collaborative efforts using valid knowledge to bring about improvement in the system. This approach can be a guide directional, more incremental, low-level, and less complex change. It represents the needs for systematic recognition of the shortage of nurses or supplies, or to recommend a series of in-service offerings for nurses. High-level change, on the other hand, is more complex because of the interactions and activities of multiple influences across the health care organization. ⁽⁴⁾ While, non-linear offers helpful approaches for understanding dynamic, open-system healthcare organizations and for guiding change agents in managing accelerated, increasingly uncertain change environment. ⁽⁵⁾

Planned change, such as this of Lewin's theory of change explained the nature of change process and offer systematic problem-solving methods designed to achieve change. ⁽⁶⁾ It depicts the change through three steps namely: unfreezing, change, and refreezing. Unfreezing refers to the awareness of a need, or problem for which some action is necessary. It also requires subsequent mental readiness to approach the issue and integrate the initiated change into the value system of the organization to establish a new equilibrium. This phase may occur naturally as a progressive development, or it may result from deliberate activity as a first step in planning a change. ⁽⁷⁾

Experiencing the change or solution leads to incorporate what is new or different into work and interpersonal processes. Deciding to begin to use the change or begin thrust into the change can result in potential integration of the new way of thinking or doing. Refreezing occurs when the participants in the change situation accept and use the new attitude or behaviour. Acceptance means that the staff nurses integrate the change into their work processes. Surveys, structured or



unstructured observations, or other data collection methods can be conducted at various points after the implementation of a designated change. Analysis of these data can help in assessing the degree of implementation and identify additional alterations needed to ensure effective change outcomes.⁽²⁾

Figure (1) A model of hospital change program using Lewin's theory of change ⁽⁶⁾ Lewin's theory Hospital development

| -Status quo | dissatisfaction with present situation and identification of the problem. |
|--------------|--|
| - Unfreezing | Introduction of change agents. -Collecting data of the present status. - Choosing the interventions. - Planning the right course of action. |
| -Change | Implement the approved interventions. |
| -Refreezing | On going mechanism to support |

change.

The application of this model of change in nursing brings the notion of the "nurse as a change agent". Change agent must primarily manage the forces of the change situation to increase the driving forces for change and manage or minimize restraining forces that inhibit change to consider several desired outcomes which potentially lead to more creative results. Change agent could be internal change agent who is the one from the organization, and/or external change agent (consultant) who comes from outside the organization in order to assist the group during the change process. ^(8,9) In nursing, change agent is the nurse who maintain a system that supports nursing issues and recognizes the need for change. She/he prepares the environment that supports the needed change in the selected system by using several techniques to prevent resistance such as: participation, education, gradual introduction, incentive, coercion as well as manipulation. ⁽¹⁰⁾ In this study, gradual introduction of change, clarification of the present situation, meetings of open discussions, as well as recognition and appreciation as a reward used to manage resistance of change.

The nurse as a change agent is responsible for changing the target system and is familiar with this system and processes to assess chances of change. She/he needs support and acceptance from the hospital director, and/or nurse manager levels. The effective nurse change agent demonstrates the ability to determine the sources of problems, handle resistance, trustworthiness, realistic thinking, sufficient flexibility; skills in human relations to energizes others. ^(11,12)

The present study tried to solve financial crisis facing the hospital as mentioned by the hospital manager, which in turn affected negatively on hiring new nurses and managing the hospital. These factors jeopardized the survival of the hospital that needed change. Zerwekh (2003)⁽³⁾ mentioned that change in nursing system entails three main areas namely: structure, technical, and people. Structure change deals with the inputs of the system such as policies, procedures, budget, and organizational chart which affect the organizational processes. Technical change associated with the machines and instruments which affect the work and individual practice. While people change occurs in the knowledge, skills and attitudes of individuals such as nurses which affects their performance and conduct. Besides, organization-wide change depends on organization's stage of development, degree of flexibility, and history of response to change, as well as the maturity of its system.⁽¹³⁾

The introduction of different types of change in the nursing system is needed to promote the quality of care and services provided to the patient and maintain patient satisfaction. Also, change could be a mean to improve the participation of nurses in decision making which enhance their feeling of motivation in their job. In addition, change is helpful in increasing profitability and find many solutions for economic problems in any system.⁽¹⁴⁾

Using floating pool system in solving shortage of nursing staff is proved its effectiveness in Clay's study (2011). ⁽¹⁵⁾ This floating pool consists of permanent nurses in the hospital, but do not belong to any special unit. These nurses used to fill seriously ill patients with intensive patient care needs or absence among staff nurses in any unit. Floating pool system helps to manage the day-to-day variations in the workload. Some staff nurses like this method since it gives them a chance to work



with different types of patients, and units. While others resist this method because they cannot plan their nursing care in advance.⁽¹⁶⁾

Studies done in U.S.A handled change to solve the problems of recruitment and retention of nurses as challenges facing hospitals and nurse managers⁽¹⁷⁾, another area of using change models is to deal with the problem of shortage of nurses⁽¹⁸⁾, as well as change the role of the nurse in haematology-oncology outpatient setting⁽⁹⁾. These studies indicated that the sustainable solutions to the nursing shortage will require collective efforts by groups concerned about the nursing shortage, including nurses and nursing profession leaders, nurse educators, health care industry leaders, labour organizations, policy makers, and consumer groups.

In Egypt, no research done using Lewin's model of change in nursing, however, there is a study performed about health workforce rationalization plan for change in Egypt⁽¹⁹⁾. It indicated the need for change to redistribute nurses to improve their access in health organization and to increase productivity. So, the intention of the study is to apply Lewin's model of change in the hospital to overcome the problems rose up as a result of the financial crisis, thus it can complete its mission toward its patients.

Aims of the study:

Manage change of problems in the inpatient units using Lewin's theory of change.

Materials and Methods

Setting

The study was conducted at a private hospital at Alexandria Governorate, with 75 beds. The hospital comprised three inpatient units including mixed sex, diagnosis and age, two operating theatres, an intensive care unit, and a recovery room. The inpatient units are:

- 1st class unit comprised of 15 single bedrooms.
- 2nd class unit comprised of 16 double beds rooms.
- 3rd class unit comprised of 7 triple beds rooms.

Subjects

All nursing personnel working in the three inpatient units at the time of the study were included in the study (n=44). The nursing personnel divided as follows:

- Director of nursing service department.
- Head nurses as internal change agent nurses (n= 3), with the following skills (as mentioned by the director of the nursing service department): ability to handle resistance, trustworthiness, as well as skills in human relations and negotiation.

- Staff nurses (n= 40).

Tool of the study

The tool in this study consists of two parts:

First part: Needs Assessment Unstructured Interview: performed by the researcher to identify the major problems in the inpatient units and their solutions. It includes two open-ended questions asked; what are the problems in the hospital? And, in your opinion, how to solve each problem?

Second part: A questionnaire sheet was developed by the researchers based on related literatures ^(4,5,6) to identify the problems facing nurses in their inpatient units before and after change. It includes five main parts that handle the major problems encountered in these units: policies, rules and regulations (4 items), relationships (3 items), nursing personnel (4 items), equipment and supplies (4 items), and working environment (2 items).

Content validity of the developed questionnaire was done by 3 professors in the nursing administration department, Faculty of Nursing and 3 nurse managers. Internal consistency reliability was assessed by using coefficient alpha and it was 0.87. The study followed Lewin's theory of change (shown in figure 1) as a framework for this study.

Besides, demographic characteristics of nursing personnel: age, educational qualification, and years of experience.



Methods of the study

Unfreezing phase

- 1. A needs assessment screen interview was carried out for two weeks through. interviewing all nursing personnel using the unstructured interview to identify major problems in the nursing units and their solutions.
- 2. Frequent meetings between internal change agent nurses and staff nurses -headed by the researcher as external change agent- performed to discuss the need for change, and to develop objectives and activities for the planned change. Participation in discussions in these meetings helped to reduce the anxiety and resistance common in the change process.
- 3. The first problem that needs urgent and quick solution was shortage of nurses. A floating pool system was suggested to solve it through the following activities: A strict supervision of the performance of each staff nurse was an urgent need by the head nurses to get the best nursing care of each. Head nurses planned to use a frequent guidance and direction of the staff nurses using a clear list of duties and responsibilities of each nurse to overcome overlap of nursing activities.
- 4. The second identified problem needed immediate solving is poor communication between:
- Nurses themselves.
- Nurses and physicians.
- Nurses and auxiliary personnel.

The plan to solve this problem was through formulating committees with regular meetings scheduled between staff nurses and physicians as well as auxiliary personnel. This was followed by clarification of duties and responsibilities of each nurse to know her duties and responsibilities to overcome overlap.

5. As for the rest of the problems, the director of nursing service department and the internal change agents in the hospital have many attempts to find. short term and long-term solutions.

This unfreezing phase took place for 3 months starting March till May 2004.

Change phase.

Moving to a new level of behavior to cause change occurs when the problem is clarified, and plans developed to move in the new direction. So, the internal change agent nurses started to educate and allow all staff nurses to participate in the implementation of the planned change which was vital to manage the resistance to change the process and solve the identified problems. Implementation of the developed plan of actions decided was carried out for six months starting June 2004. The emphasis of the plan was to introduce changes needed regarding:

- 1. Introduction of the floating pool system to be employed in the inpatient units. Three nurses were chosen by the director of nursing service department to start floating pool system. They are new graduate nurses and accepted the idea of being floating pool nurses.
- 2. Close supervision for assigned nurses to improve their performance.
- 3. Different types of meeting were conducted to clarify different points of views for better communication among nurses, and between nurses and physicians as well as between nurses and auxiliary personnel.
- 4. Internal change agent nurses clarified and discussed the duties and responsibilities of each staff nurse to prevent negligence or overlapping.

Refreezing phase

Evaluation of using floating pool system to overcome shortage of nurses and establishing collaborative practice committees on different levels to overcome the poor communications took place for two months starting November 2004. Evaluation by the internal change agent nurses performed to decide plan of action followed as a part of the new improved patient care system.



Ethical Considerations:

- A research approval will be obtained from Ethics Committee, Faculty of Nursing, prior to the start of the study.
- An informed consent will be obtained from the study subject after explanation of the aim of the study.
- Anonymity, Privacy, confidentiality of the collected data will be Maintained and will be assured in this study.
- The right to withdraw of participants in the research will be assured.

Statistical analysis

The data were tabulated and statistically analysed using SPSS program. Frequencies, percentages of items were obtained where qui-square and t-test techniques were used to compare occurrence of the problems in the inpatient units before and after the change.

Results

Table I: shows the demographic characteristic of the nursing personnel. Majority of them (81.82%) were technical nursing with diploma degree in nursing. It was found that 61.36% of the nursing personnel were between 25-35 years old. Besides, 75% have from 5 to 10 years of experience in nursing.

Table I: Demographic characteristic of the nursing personnel (n= 44).

| Demographic characteristics | No. | % |
|----------------------------------|-----|-------|
| - Educational qualification | 0 | 10.10 |
| - Bachelor degree in nursing. | 8 | 18.18 |
| - Diploma degree in nursing. | 36 | 81.82 |
| | | |
| - Age in years | | |
| < 25 | 16 | 36.36 |
| 25-35 | 27 | 61.36 |
| > 35 | 1 | 2.28 |
| - Years of experience in nursing | | |
| < 1 | 8 | 18.18 |
| 5-10 | 33 | 75.00 |
| >10 | 3 | 6.82 |



Table II: revealed a summary of the problems, and suggested actions mentioned by the nursing personnel. It was found that shortage of nurses was the most critical and important problem that is needed the use of floating pool system and better supervision for maximizing nurses' performance. The second problem is poor communication and 97.72% of the nursing personnel suggested clarification of duties and responsibilities of each nurse to prevent overlap as well as encourage free discussions in frequent meeting to solve this problem. The last most serious one was the limited participation of nurses in planning for activities and decisions taken within their working units, while the suggested solutions were developing a committee that permit for planning for decision making of the nurses that affect their work.

| Major problems | Suggested actions | No. | % |
|--------------------------------|--|-----|-------|
| 1- Shortage of nurses | - Hire new nurses | 38 | 86.36 |
| | -Follow the floating pool system of assignment. | 12 | 27.27 |
| | -Better supervision to maximize nurse | | |
| | performance | 20 | 45.45 |
| 2- Poor communication between: | - Clarify job duties and responsibilities of each | 43 | 97.72 |
| a- Nurses themselves | nurse to prevent overlap of duties. | | |
| b- Nurses and physicians. | - Hospital administration gives respect to the | | |
| c- Nurses and auxiliary | nurse's needs. | 38 | 86.36 |
| personnel. | - The nursing director acts as an advocate at the | | |
| | highest level. | 34 | 77.27 |
| | - Establish collaborative practice committees. | | |
| | - Arrange regular meetings to confront issues. | 28 | 63.64 |
| | - Set work related policies to clarify job duties | | |
| | and responsibilities of each group of health team. | 31 | 70.45 |
| | - Encourage free discussions during frequent | | |
| | meetings with nursing staff. | 8 | 18.18 |
| | | | |
| | | | |
| | | 35 | 79.55 |
| 3- Limited participation in | - Formulate committee include equal number of | 8 | 18.18 |
| decision making. | nursing staff and members of hospital | | |
| | administration. | | |
| | - Set policy for participating in decision making. | 12 | 27.27 |

Table II: Summary of problems mentioned by the nursing personnel and suggested actions (n= 44).

Table III. Major problems as mentioned by nursing personnel before and after change. The highest percentages of nursing personnel (37%) revealed that nursing personnel problems related to inadequate nursing staff, over workload, limited participation in decision making and lack of incentives were the first major problem before introducing the change process, which was reduced to 15% after change. 18% of nursing personnel mentioned that communication was a problem, in form of poor communication among nurses, between nurses and physicians and between nurses and auxiliaries before change process, while after changing this problem reduced to 6.66%.

On the contrary, there was no significant difference of nurses' perception of problems related to equipment and supplies as well as working environment before and after change.

All nurse in the study mentioned-before and after change- that absent of the job description was one of their problems. While 95.45% of the nurses considered lack of incentives was a problem, but, after change process this problem decreased to 79.55%.



Table III: Major problems as mentioned by nursing personnel before and after change (n= 44)

| Problems | | Before change | | er change | X ² | |
|---|-------------------|------------------|---------------------|----------------|-----------------------|----------|
| | No. | % | No. | % | Chi- square | Р |
| I. Policies, rules and regulations for nurse | | | | | | |
| Absent of job description. | 44 | 100.00 | 44 | 100.00 | 0.00 | 1 |
| • Poor staff assignment. | 12 | 27.27 | 4 | 9.09 | 4.89 | 0.02* |
| • Instability of nurse in specific units. | 28 | 63.64 | 5 | 11.36 | 25.6 | < 0.01* |
| • Absent of hospital routine in relation to | 26 | 59.09 | 3 | 6.82 | 27.1 | < 0.01* |
| admission and discharge | | | | | | 27.1 |
| Mean % <u>+</u> SD & T-test | 27.50 | 0 <u>+</u> 12.50 | 14.00 <u>+</u> 13.1 | | 4.94 | < <0.001 |
| II. Communication | | | | | | <u> </u> |
| Poor communication among | 24 | 54.55 | 12 | 27.27 | 6.77 | 0.009* |
| nurses. | | | | | | |
| • Poor communication between nurses and | 8 | 18.18 | 5 | 11.36 | 0.81 | 0.39 |
| physicians. | 22 | 50.00 | - | 10.64 | 10.4 | 0.001 |
| Poor communication between | 22 | 50.00 | 6 | 13.64 | 13.4 | < 0.001* |
| nurses and auxiliaries | | | | | | |
| Mean% <u>+</u> SD & T- test | 18.00 | 0 <u>+</u> 11.78 | 6.66 | <u>+</u> 3.03 | 4.92 | < 0.001 |
| III. Nursing personnel | | | | | | |
| • Inadequate nursing staff. | 40 | 90.91 | 20 | 45.45 | 20.95 | < 0.001* |
| Over workload in term of | 38 | 86.36 | 12 | 27.27 | 31.31 | < 0.001* |
| assigned duties. | 20 | (2, c) | 12 | 77 77 | 25.6 | 0.02* |
| Limited participation in decision making. | 28 42 | 63.64 95.45 | 12 35 | 27.27 79.55 | 25.6 5.09 | 0.02* |
| Lack of incentives. | 42 | 95.45 | - 55 | 19.55 | 5.09 | 0.52 |
| Mean % \pm SD & T- test | 37 37.00 <u>+</u> | | 15.00 <u>+</u> 9.06 | | 6.77 | < 0.001* |
| _ | 8.39 | | | | | |
| IV. Equipment and supplies | | | | | | |
| • Unavailability of sufficient equipment and | 12 | 27.27 | 6 | 13.64 | 2.51 | 0.11 |
| supplies. | | | | 0.00 | 0.00 | |
| • Absence of a system of equipment check-up and | 4 | 9.09 | 4 | 9.09 | 0.00 | 1 |
| maintenance. | 20 | 15 15 | - | 15.01 | 0.00 | 0.000** |
| • Delay of repair of equipment needed repair. | 20 | 45.45 | 7 | 15.91 | 9.09 | 0.002** |
| • Absence of replacement of broken or missed | 15 | 34.09 | 12 | 27.27 | 0.48 | 0.48 |
| equipment. | | | | | | |
| Mean % <u>+</u> SD & T- test | 12.7 | 75 <u>+</u> 9.83 | 7.25 | <u>+</u> 6.57 | 3.25 | 0.001 |
| V. Working environment | 20 | 15 15 | 10 | 22.72 | 5.05 | 0.11 |
| • Unsafe work environment. | 20 | 45.45 | 10 | 22.73 | 5.05 | 0.11 |
| Narrow nursing station. | 3 | 6.82 | 3 | 6.82 | 0.00 | 1 |
| Mean % <u>+</u> SD & T- test | 11. | 50 <u>+</u> 8.67 | 6.50 <u>+</u> 8.07 | | 3.46 | 0.001 |
| Overall Mean % <u>+</u> SD & T- test | 2 | 1.25 <u>+</u> | 9.88 | + | 3.165 | < 0.05* |

Average reduction of problem after change = 24.38%

* Significant (t= 3.165, p< 0.05).



Discussion

Hhealthcare organizations operate as an open system; they are receptive to many external and internal changes. Organization-wide changes depend on the organization's stage of development, degree of flexibility, and history of response to change, as well as the maturity of its systems.⁽²⁾

The application of floating pool system in managing the problem of acute shortage of nurses within a financial crisis is considered as an effective way to maintain the quality of patient care. The floating pool system got economical value so as a cost-effective strategy. ⁽²⁰⁾ This is proved in this study, the internal change agent nurses have a vital role to explain the present situation and problems facing the hospital, as well as the different solutions suggested to overcome such problems to all staff nurses. Frequent meetings with free discussions and sharing of ideas and suggestions gained support and assured the participation of staff nurses in the planned change. This strategy helped to decrease resistance of staff nurses to change and made them ready to accept the activities related to the change process. In this respect, Petro-Nutasto⁽²¹⁾ mentioned that pooling system is directed to make few nurses provide extra quality to the nursing system. Where some nurses do not belong to any specific unit, move from one unit to another based on the nursing care requirements.

In addition, Sullivan and Ducker (2004)⁽²²⁾ mentioned that one solution to staff shortages is the creation of a pooling system or what he called a"floating pool," where staff nurses work in multiple units or at multiple sites. This finding could be explained in the light of private hospitals which look towards the financial profits and good reputation in providing quality of patient care.

Effective floating pool system should be implemented with caution because a major anticipated drawbacks of this system was the feeling of frustration and dissatisfaction accompanied by the feeling of instability ⁽²³⁾. As, Princeton⁽²⁴⁾ mentioned that such floating pools can be difficult to be maintained, because staff nurses generally prefer to have permanent work units. If such pools were to be created, it will not be the usual first jobs of new graduates, who want to feel required and deserved in a more stable learning environment. In contrary to the result of this study where the three new graduated nurses accepted the idea of being floating pool nurses. This may be due to that the internal change agent nurses, conducted different meetings with the staff to explain such draw backs, and prepare them for the new system. This occurred to prevent resistance of change, and at the same time get their approval for cooperation. Besides, it is a small hospital, so it is easy to be oriented about the three units and due to high bed turn over which did not make any difference to stay in one unit or float to different ones.

The problem of communication between nurses and the other health service personnel such as physicians, auxiliary personnel and even nurses themselves is one of the findings of this study. Ambiguous and undefined role of nurses and low nurses' image and the unwillingness of medical staff to give credit to the nurse could provide an explanation of this finding. In this respect, Morreale et.al (2001) ⁽²⁵⁾ explained that poor communication leads to relationship breakdowns, misunderstandings, high level of aggressive emotions and judgement. Actually, the conduction of regular meetings between nurses and physicians helped to overcome this misunderstanding. Although lack of time, patience to arrange and conduct these meetings were an obstacle, yet, with participation from the hospital director of the hospital in the present study contributed in controlling of this problem effectively. This was done through free honest discussion of all related matters to the new therapeutic orders, and arrangement of medical requests increased their professional cooperation. Accordingly, some changes occurred in writing medical orders and ways of transferring messages between staff nurses and physicians.

Another set of actions implemented to enhance better professional communication was starting of joint monthly inservice education activities. This strategy is an effective way as recommended by Tschudin (2001)⁽²⁶⁾ in bringing staff nurses and physicians together in a formal educational settings as health care team. The majority of the staff nurses suggested and approved this professional communication activities to increase nurses' confidence in discussing scientific issues with physicians.⁽²⁴⁾ These findings were consistent with Druskat and Wolff (2001)⁽²⁷⁾ who stated that regardless of which area is problematic, appropriate assessment of the team work is essential. It is illuminating to the health service personnel to speak supportively to themselves as a team and to encourage understanding the other person's message through conduction of frequent meetings either in formal or informal ways.

Generally, the present study revealed a significant difference regarding policies, rules and regulations before and after applying Lewin's theory of change. These changes were reflected in the form of improving of the methods of assignment as well as developing hospital routines in relation to admissions and discharges. Such improvements could be explained in the light of participation of staff nurses in modifying and applying a set of rules, and procedures that cover especially these areas



by hospital administration. In the same line, Buiser $(2000)^{(2)}$ mentioned that all successful planned change efforts such as introducing certain modifications in the policies, rules and regulations of any health organization ultimately lead to organizational members changing the way they behave on the job. These changes either generally such as admissions and discharges policies for all units or for a particular unit such as modifications done in tasks nurses carry, the methods of their assignment.

On the other hand, some of problems faced nurses- in this study- did not solved after applying the planned change. Such problems related to absent of job description, lack of incentives, poor maintenance of the hospital, and the narrow space of the nursing station. Suggestions were discussed, but actions postponed till the more urgent problems to be solved first.

In the refreezing phase, the commitment of the studied nurses towards their work in the hospital established to maintain the agreed upon policies and rules to be employed in the hospital within the new system were highly needed. This attitude and actions are essential if such control strategy is to continue effectively.

Conclusion and Recommendations

Using of Lewin's theory of change solved some problems encountered in the present study as in using floating pool system to overcome shortage of nurses and in establishing collaborative practice committees at different levels to overcome the poor communications. Yet, there are some problems were not eliminated. These problems were related to the absence of job description, lack of incentives, poor maintenance of the inpatient units, and the narrow space of the nursing station. Based on these findings it is recommended that:

- 1. Inservice training program for nursing personnel to be effective change agent nurses because they are in a key position to effect needed changes in the rapidly changing patient care settings.
- 2. Writing a job description of nursing personnel is basic and essential step of the change process. It should reflect the expanded roles that help nursing personnel to work efficiently and effectively.
- 3. Plan an incentive system for nurses based on effective performance appraisal and provide methods of recognition such as certificate of merit or nomination for nurse of the month.
- 4. Plan a routine system for maintenance of furniture, machines, and equipment to keep them working and available to be used when needed. And, provide inpatient units with sufficient equipment and supplies to provide quality of patient care.

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