



An evaluation of personnel knowledge and understanding of basic orthopedic nursing care  
by Myrna Jean Mink

A thesis submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree of  
MASTER OF (SCIENCE in) Nursing  
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**Abstract:**

The purpose of this study was to indicate both to nursing administrative personnel and to nursing educators, problem areas which deal with orthopedic nursing care.

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The results of this survey indicate that four areas of orthopedic nursing care are basic in the care of orthopedic patients: care of the patient in traction, care of the patient in a cast, and turning a patient. The results of the test showed that personnel who had had training in orthopedic nursing care as in inservice classes, workshops, or formal education scored significantly higher than personnel who had not received special training. Personnel scored fewer in the areas involving traction and cast care although test results showed the need for further education in all four areas. The purpose of traction, the purpose and principles of countertraction, care of the patient confined to a cast - observation and cast care; care of the patient after prosthetic surgery are all subject content to be included in an inservice education program.

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*May 9, 1973*

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by

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A thesis submitted to the Graduate Faculty in partial  
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in)

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## ABSTRACT

The purpose of this study was to indicate both to nursing administrative personnel and to nursing educators, problem areas which deal with orthopedic nursing care. It was, therefore, necessary to: (1) evaluate orthopedic nursing care; (2) to determine if the nursing personnel on an orthopedic unit know and understand basic orthopedic nursing care; (3) to identify areas in orthopedic nursing which are found to demonstrate a need for further reinforcement for better nursing care; and (4) to determine from these areas content to be included in inservice education programs.

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## Chapter 1

### INTRODUCTION

Orthopedic units are being established in general hospitals throughout the country. The nurses responsible for the care of orthopedic patients are introduced to problems in caring for patients in traction, in heavy body casts, and those who have special problems because of the nature of their injury or surgery. The importance of keeping these patients in good body alignment as well as being conscious of their own body mechanics, important for all nursing care but especially when caring for orthopedic patients, has been stressed to prevent fatigue for both patient and nurse. The orthopedic unit then if it is to be considered a specialized unit is staffed by personnel who have been trained and understand the techniques and procedures which are applied in the care of orthopedic patients.

What do the nursing personnel on an orthopedic ward know about the care of orthopedic patients whether they be medical or surgical? Are many complications due to poor nursing care? Is poor nursing care due to the fact that the personnel on the unit have not had adequate instruction in the basic nursing care of the orthopedic

patient? If instruction has been received do the personnel apply nursing care with an understanding of why they are doing what they are doing? Can the nurse assume responsibility for the patient if she does not understand specific instructions which must be carried out in his nursing care?

Before inservice education programs can be constructed for teaching personnel new techniques, procedures, and equipment that are being introduced, there is a need first to investigate whether personnel know the very basic care which is specific in the care of the orthopedic patient.

According to Helen Mussallem,

Our nursing ancestors had to deal with scarcity, primitive conditions, physical hardships and danger. We have to deal with problems created by great technological riches and radically altered attitudes.<sup>1</sup>

What we suffer from is fragmentation--fragmentation that could lead to depersonalization of nursing care. Where do inservice education programs focus their attention? Nursing personnel are introduced to the new developments in orthopedic nursing without having adequate orientation to the unit and to the care of the patient which is specific

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<sup>1</sup>Helen K. Mussallem, "The Expanding Role: Where Do We Go From Here?" The Canadian Nurse, Vol. 67, No. 9, (September, 1971), pg. 31.

to orthopedic patients and which separates these patients from patients on either a medical or surgical unit.

Is there a guide which can be followed by nursing service directors for orienting new personnel to the orthopedic unit? If the director is aware of the weaknesses present in personnel knowledge and understanding of orthopedic nursing care she is in a position to develop programs to orient new personnel and to reinforce nursing care.

If the personnel are aware of weaknesses in their nursing care they might take a personal interest in programs planned for their enrichment. Each nurse has the responsibility to be informed and to be involved in upgrading her nursing performance.

According to Eleanor Muhs, "Adequate medical care is rapidly becoming recognized as an inalienable right, and it is imperative that we reassess the functions of various groups of nursing personnel."<sup>2</sup>

The number of people requiring orthopedic attention is increasing rapidly. This is shown by the increase in the number of accidents on our nation's highways and

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<sup>2</sup>Eleanor Muhs, "Inservice Education: An Investment in Nursing," Nursing Research, Vol. 17, No. 2, (February, 1969), pg. 50.

accidents occurring in sporting activities, and in the fact that people are living longer and so suffer degenerative changes which demand medical attention, so it becomes a nursing responsibility to meet their needs.

#### Statement of the Problem

If nursing personnel are to provide orthopedic patients with the competent care patients expect to receive, an evaluation of nursing care should be the first step toward improved service. Areas of poor nursing care need be identified so that correction may be instituted through inservice education programs.

#### Purpose of the Study

The purpose of this study was (1) to evaluate orthopedic nursing care in five general hospitals; (2) to determine if the nursing personnel on an orthopedic unit know and understand the nursing care they are rendering to their patients; (3) to identify areas in orthopedic nursing which are found to demonstrate a need for further reinforcement for provision of better nursing care; and (4) to determine from these findings content to be included in inservice education programs.

### Assumptions

1. Inservice education is important in improving nursing care on an orthopedic unit.

2. The orthopedic unit because of its type of patients and the specialized nursing care which is required can be considered a special care unit.

3. The basic nursing care of orthopedic patients, even though in itself is specialized care, should be known and understood by all personnel on orthopedic units whether these are professional, licensed or auxillary.

4. If areas in orthopedic nursing which need strengthening can be identified, inservice education programs can be established to present specific content for study to maximize the nursing care potential on orthopedic units.

5. The nursing personnel on orthopedic units should be given the opportunity to express recognition of their weaknesses in nursing care rendered and inservice education programs should include these areas.

### Limitations

1. This study does not set up an inservice education program but was done to establish those areas

which need to be dealt with through inservice education.

2. This study was limited to orthopedic nurses from five major hospitals in Montana.

3. The questionnaires and tests were given to the nursing personnel by the director of nursing service. The investigator worked only through the director at each hospital. The director gave the questionnaires and tests to the selected personnel on the unit. Her interpretation of the importance of the study and her explanation to the personnel may have influenced the completion of the forms.

4. The investigator had no control over the environment as the director chose the time and place the personnel were to fill out the forms.

5. In selecting the sample, there was no control set for the length of time a staff member had worked on the unit. Whether one week or ten years she was asked to complete the two forms. No personnel that float irregularly to the unit were participants in the study.

6. The questionnaires and tests were given to nursing personnel with a wide range of levels in educational background and experience in orthopedic nursing.

7. There was no control set for a predetermined number of nurses from each position. Nurses were selected

at random from the Registered Nurses, Licensed Practical Nurses, Nursing Assistants, and Orderlies employed on the orthopedic ward.

8. The study was limited to hospitals which had a defined orthopedic unit which they used specifically for orthopedic patients.

### Research Design

The study was based on a descriptive survey using nursing personnel from five hospitals in Montana. The Director of Nursing selected twenty nursing personnel from the orthopedic unit of each participating hospital. Questionnaires and tests were brought to the participating hospitals to be distributed to the selected personnel by the director of nursing. From the questionnaires, data were analyzed to determine general information about each of the participants, educational background, present position held, orthopedic nursing experience, past orthopedic training and each participants definition of orthopedic nursing care. The test consisted of questions concerning four areas of orthopedic nursing basic to the care of all orthopedic patients:

- (1) body mechanics of both the patient and nurse

- (2) care of the patient confined to a cast
- (3) care of the patient in traction
- (4) turning a patient following surgery.

Results from the tests were analyzed to determine frequency distribution of errors made in specified areas, distinction between position scores on the tests and, according to weight percentages, those areas which are in need of further instruction or clarification.

#### Definitions

Nursing--long recognized as an art; a body of practical knowledge which tells how to work to produce certain results which is the discipline of nursing; a body of knowledge based on a large number of carefully collected facts which have been arranged and classified in such a way as to establish certain laws and principles; the why of things by finding out and describing forces that work to produce the facts which have been observed.

Orthopedics--that branch of medicine that deals with the prevention, diagnosis, and treatment of injuries to and diseases of the musculoskeletal system.

Musculoskeletal system--a dynamic group of tissues providing structural support, allowing for voluntary motion,

and giving protection to vital organs of the body.

Nursing procedures--specific method of action which the nurse must carry out in the care of the patient; manual and behavioral skills for specific task assignment.

Procedure--method or manner of proceeding in a process or course of action order or system of performing operating, conducting.

Posture--the relationship of the various parts of the body, when standing, sitting, lying or moving; determines the distribution of body weight and the pull of the joints and muscles.

Traction--a pulling force applied to an extremity or a part of the body.

Countertraction--a pull exerted in the opposite direction of the pull produced by the traction apparatus.

Scientific principles--comprehensive and fundamental laws, doctrines, truths, or sets of facts that form the basis for established rules of action.

Registered Nurse--a graduate nurse who has been registered and legally licensed to practice by state authority;

expected to function as an independent practitioner in those activities which need no physician's legal order; as a dependent practitioner in carrying out physician orders for treatment; and cooperatively with other members of the hospital personnel.

Licensed Practical Nurse--his/her role is in giving nursing care to the patient in a relatively stable condition with a minimum amount of supervision by the Registered Nurse;

in assisting the Registered Nurse or the physician in caring for the patient in more complex nursing situations.

Nurse's Assistant--auxiliary nursing personnel delegated under the direct supervision of the Registered Nurse to carry out those tasks for which she is competent.

Orderly--male attendant in a hospital responsible for care or preparation of male patients and those duties delegated and under the direct supervision of the Registered Nurse.

J.C.A.H.--Joint Commission on the Accreditation of Hospitals.

Inservice education--planned educational experience provided in the job setting and closely identified with service;

a system or method employed by an institution or organization for imparting the information or knowledge needed by employees in order that patients might receive safe, efficient and therapeutic nursing care.

In order to qualify the statements in which competent, knowledge and understanding are used, in this study the investigator defines these terms as follows:

1. Competent--having necessary or essential ability or qualities, legally qualified or capable;
2. Knowledge--the remembering of previously learned material, bringing to mind appropriate information, acquaintance with a science, art, or technique;
3. Understand--to interpret, to apply, to see relationships, and to make judgments;  
ability to recognize cause and effect relationships to have a thorough or technical acquaintance with or expertness in the practice of.

#### Overview of the Remainder of the Study

The second chapter of the study presents a review of the related literature. The third chapter contains the study methodology, the objectives, and the analysis of the

data received from the returned questionnaires and tests. The fourth chapter presents a summary of the study, conclusions, and recommendations for further study.

## Chapter 2

### REVIEW OF RELATED LITERATURE

The literature that is presented in this study tries to establish the specific nursing care of orthopedic patients and the importance of inservice education in improving nursing care.

For centuries, nursing was broadly interpreted to mean the care of the sick, the disabled, the aged, and the dying. The nurse was recognized as privileged to give personal care to individuals having needs arising from illness situations. Until recently the nurse was concerned primarily with the relief of suffering. Today the nurse is no longer merely an attendant in the sickroom but is one who is prepared to administer skilled, personalized, dynamic care to the ill. The present emphasis is being placed upon preventive and educational aspects of health care which has contributed to nursing by becoming an essential part of all health and medical services. Nursing is practiced wherever illness is to be treated. In the transitional process not only have the scope of nursing practice and the knowledge and skills increased, but also the nurse has developed broader concern with the

total health needs of the patient. Today, nursing cannot be considered in isolation from other aspects of health care.<sup>1</sup>

The chief purpose of nursing today is to help the individual to attain or maintain health. Much depends upon the nurse's skill in giving nursing care to the patient. The acquisition of skills takes long and careful practice. Skills which the nurse may be expected to master include skills in observing, dealing with and influencing people, certain skill in manual dexterity needed in certain techniques, and skill in operating types of machines used in giving nursing care.<sup>2</sup>

The word "orthopedics" is a Greek word meaning "straightening of children." The first medical concern of orthopedics was in correcting deformities in small children. According to Larson and Gould's Orthopedic Nursing, orthopedic nursing was first defined as the application of the

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<sup>1</sup>Shirley Gragg and Olive Rees, Scientific Principles in Nursing, 6th edition, (Saint Louis: The C. V. Mosby Company, 1970), pg. 3.

<sup>2</sup>Esther M. McClain and Shirley Hawke Gragg, Scientific Principles in Nursing, 5th edition, (Saint Louis: The C. V. Mosby Company, 1966), pg. 5.

principles of body mechanics to all nursing. The principles of proper body mechanics and body alignment were referred to as the orthopedic aspects of nursing care.<sup>3</sup>

The principles of proper body mechanics and body alignment are fundamental to the care of every patient; as such they are principles of good nursing care. There are three principles that can guide the nurse in giving care to any person. These principles are stated as follows:

Man as a Person--Each person is an individual member of society who has rights, privileges and immunities which should be respected, regardless of race, creed, social or economic status, and has personal fears and needs which usually are exaggerated when there is a threat to his well being.

Man as a Organism--The human body requires that certain physiologic activities be maintained if the body is to function effectively.

Man and his Environment--Appropriate precautionary measures will help to reduce or eliminate physical, chemical or biologic factors in the environment which cause illness or injury to man.<sup>4</sup>

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<sup>3</sup>Caroll B. Larson and Marjorie Gould, Orthopedic Nursing, 7th edition, (Saint Louis: The C. V. Mosby Company, 1970), pg. 2.

<sup>4</sup>Elinor V. Fuerst and LuVerne Wolff, Fundamentals of Nursing, 4th edition, (Philadelphia: The S. B. Lippincott Company, 1969), pg. 32.

Sources have identified the functions of the musculoskeletal system and nursing care of the patient with a disturbance in the musculoskeletal system.

Today, orthopedics involves the musculoskeletal system of people of all ages. Bones, muscles, cartilage, ligaments and fascia compose the musculoskeletal system and provides the body with its structural framework, its protective casing, its power, its defense system, its static stability and its means of locomotion. In orthopedic nursing, nursing care concerns the patient with involvement of the musculoskeletal system. Therefore, the equipment or apparatus used in the care of the orthopedic patient is selected for the purpose of maintaining or restoring function of the musculoskeletal system of the patient.<sup>5</sup>

There is no single approach to nursing action. Each patient is a person having characteristics that make his situation unlike that of other persons. Therefore, there is variation in nursing care as applied to several individuals or even to one individual at different times.<sup>6</sup>

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<sup>5</sup>Lillian Sholtus Brunner et. al., Textbook of Medical Surgical Nursing, 2nd edition, (Philadelphia: The S. B. Lippincott Company, 1970), pg. 834.

<sup>6</sup>Fuerst & Wolff, op. cit., pg. 5.

The patient with a musculoskeletal condition faces not only physical problems but also psychological and social problems. Because orthopedic patients are of all ages; economic problems are usually present. Long periods of disability are especially threatening to the wage earner. The patient facing a long period of disability may be in need of emotional and spiritual support as well as physical attention. Nursing care must help meet these needs and solve the problems of patients who are not able to function in normal activities.<sup>7</sup>

"Each patient is an individual, and, when he enters the hospital, he brings with him a lifetime of behavior patterns, hopes, ambitions, frustrations, and problems," according to Dorothy Johnston.<sup>8</sup>

An objective of his nursing care is to assist him to full recovery in the shortest time possible with the least discomfort that his condition permits. Maintaining normal range of joint motion and providing for active or passive exercise, functional positions, and correct body

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<sup>7</sup>Brunner, op. cit., pg. 835.

<sup>8</sup>Dorothy F. Johnston, Total Patient Care: Foundations and Practice, 2nd edition, (Saint Louis: The C. V. Mosby Company, 1968), pg. 14.

alignment are some of the essential aspects of patient care.<sup>9</sup>

Many orthopedic patients are required to remain in plaster casts, traction, or other forms of immobilization over long periods of time. Nursing care must emphasize positioning to prevent contractures and the development of deformities. Attention must be given to the normal extremity as well as the involved limbs if complications are to be prevented.<sup>10</sup>

Emphasis has been placed on the importance of turning patients to prevent pulmonary complications. Larson research has confirmed the fact that turning the patient as little as 12 degrees is sufficient to prevent pulmonary complications, to stimulate circulation, and to prevent decubitus ulcers.<sup>11</sup>

At no time should an orthopedic patient be asked to perform any exercise which is painful to him, but he

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<sup>9</sup>Ibid., pg. 61.

<sup>10</sup>Larson and Gould, op. cit., pg. 417

<sup>11</sup>Ibid., pg. 61.

should be encouraged to move his limbs through the limits of painless motion.<sup>12</sup>

A cast limits the patient's freedom of movement and interferes with his independence. It threatens his economic security by jeopardizing his job. The emotional problems make the patient's adjustment to his situation extremely difficult. It is very important to take care of the cast in order that the purpose for which it is intended may be fully realized. Care of the cast, however, is secondary to the care of the patient within its enclosure.<sup>13</sup>

The quality of nursing care given orthopedic patients by nursing personnel may in part be judged by the expertness of her observation. All members of the nursing team should remember that serious complications may result if the doctor is not notified immediately regarding symptoms of impaired circulation so that he can relieve the pressure.<sup>14</sup>

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<sup>12</sup>William H. Thomas, "Postoperative Program for Patient Having Cup Arthroplasty," The Surgical Clinics of North America, W. B. Saunders Company, Vol. 49, No. 4, (August, 1969), pg. 786.

<sup>13</sup>Johnston, op. cit., pg. 418

<sup>14</sup>Mildred A. Mason, Basic Medical-Surgical Nursing, 2nd edition, (New York: The Macmillan Company, 1967), pg. 262.

Many patients require reassurance or emotional support as part of their care. In providing support the nurse herself is the functional agent. Support can be provided in five areas of experience: physical care; opportunities to express individuality; opportunities to progress at the patient's own rate; opportunities to identify, explore and solve problems and, too, the feeling of being cared for and understood.<sup>15</sup>

Understanding is a higher intellectual skill than knowing. To understand we must know, but we can know without understanding. . . The nurse must accurately observe behavior, correctly interpret its meaning, and be able to predict with some success how what she does will affect the patient's behavior<sup>16</sup>

Nursing personnel must have the necessary knowledge, judgment, and skills essential to render safe, efficient, and therapeutic care. In order to meet the needs of both patient and personnel, inservice education programs have been developed to meet the objectives of health care agencies and to improve patient care offered. Ideally the

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<sup>15</sup>Barbara B. Kozier and Beverly W. Dugas, Fundamentals of Patient Care, (Philadelphia: W. B. Saunders Company, 1967), pg. 23-24.

<sup>16</sup>Ruth V. Matheney et. al., Fundamentals of Patient-Centered Nursing, (Saint Louis: The C. V. Mosby Company, 1964), pg. 51.

inservice educations program of any health agency is continuous and evolves as the needs of the patients and personnel change.<sup>17</sup>

Studies have been done which establish the importance of inservice education. Daniel Howland and Wanda McDowell reported in Nursing Research their study of measurement of patient care. The authors hypothesized that good patient care would be characterized by the ability of the hospital system to respond promptly and accurately to changes in a patient's condition relative to any of these variables while poor nursing care would be the reverse. They predicted that a high information environment would lead to better care.<sup>18</sup>

Why must there be a change in nursing and nursing care? There are four reasons Michael Annelo pointed out that have important implications for nursing:

1. demography--the vital and social statistics in application to health which are printed in magazines and newsprint across the nation

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<sup>17</sup>Elda S. Popiel, "The Many Facets of Continuing Education in Nursing," The Journal of Nursing Education, Vol. 8, No. 1, (January, 1969), pg. 9.

<sup>18</sup>Daniel Howland and Wanda E. McDowell, "The Measurement of Patient Care: A Conceptual Framework," Nursing Research, Vol. 13, No. 1, (Winter, 1964), pg. 4-7.

2. the sophisticated technological economy
3. the shift in the labor force from unskilled labor in factories and on the farm to a population with a professional job
4. we live in a research oriented society--the use of federal funds to support research enterprises in order to discover or develop and bring in use new knowledge.<sup>19</sup>

Abdellah has stated, "a major deterrent to the measurement of quality in nursing is the lack of instrumentation to gauge it directly."<sup>20</sup>

In recent literature Margaret Dunn developed a program for measuring nursing performance. Her goal was to assist in the development of the individual nurse based on an objective measure of her performance (not an evaluation flavored with the perceptions of the observer, and not an evaluation of general traits and broad area characteristics). Mrs. Dunn considered the needs of the nurse as individual and that her work performance was

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<sup>19</sup>Michael Anello, "Responsibility for Change and Innovation in Professional Nursing," International Nursing Review, Vol. 16, No. 3, (1969), pg. 210.

<sup>20</sup>Faye G. Abdellah "Quality Nursing Care," In Development of Personnel Toward Quality Nursing Care. Report on the (7th) annual Western Conference in Nursing Education, March 19-20, 1964. Boulder, Colorado. Western Interstate Commission for Higher Education, (1964), pg. 4.

directly related to meeting the needs of that individual. The purpose of the study was to develop and test an objective instrument that would make possible more efficient and effective analysis of the performance of the nurse practitioner in the clinical setting. The development of the instrument required an analysis of nursing behavior and of the relationship of these behaviors to the application of knowledge of nursing principles. The instrument was developed by task analysis of nursing performance of five nursing procedures. The five procedures were selected because they represented commonly performed procedures and were based on nursing principles which applied to many other procedures. A panel of experts in medical-surgical nursing helped by reviewing the instrument and in establishing the weights assigned to each behavior evaluated in each procedure. The weights provided the scoring method. Thirty-five professional nurse practitioners who had previously been scored on a Nursing Principles Test were observed by two supervisors performing the five selected procedures in the clinical care of patients. No relationship was found between the nurse practitioner's score on the test of knowledge and

theory of nursing and the observed use of nursing principles in the performance of nursing practice.<sup>21</sup>

According to Margaret Dunn,

The professional nurse practitioner needs both knowledge and skill to be successful. Where deficiencies in nursing skill and/or knowledge are identified, the supervisor is charged with modifying nursing behavior in accord with nursing principles which support effective practice.<sup>22</sup>

Smith stated that standards for the nurse practitioner must be firmly established, "what is done, and why it is done."<sup>23</sup>

The role of inservice education is to select learning opportunities for staff that help them develop their abilities to exercise self-control and self-direction and to seek assistance in unfamiliar circumstances.

According to Virginia Rockwell,

The mobility of nurses, their different backgrounds and experiences, the variations in types of educational preparations and the rapidly expanding

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<sup>21</sup>Margaret A. Dunn, "Development of an Instrument to Measure Nursing Performance," Nursing Research, Vol. 19, No. 6, (November-December, 1970), pg. 502-510.

<sup>22</sup>Ibid., pg. 504.

<sup>23</sup>Dorothy M. Smith, Dean of the School of Nursing, University of Florida, Gainesville, Florida. A speech given at Providence Hospital in Labore Hall, Washington, D. C., Sigma Theta Tau, March 22, 1968.

realm of knowledge needed to practice at all--these facts underlie the need for strong inservice programs.<sup>24</sup>

Whether for preparation of nursing auxiliary workers or for up-dating the knowledge of professional nurses, the main objective must be the ultimate improvement of patient care.

A survey sponsored by the National Academy for Health In-Service Education was conducted by Dorothy Kerr, a graduate nurse with experience in public health and training programs who is organizing the academy's effort to provide a forum for the exchange of information among health in-service people.

The National Academy for Health In-Service Education's first objective is in giving the learner a vitally important feeling of participation that goes to the heart of motivation. The academy has established several propositions for its existence in the following:

The purpose of the department is to improve patient care and increase employee satisfaction through preparation to assume increased job responsibilities.

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<sup>24</sup>Virginia T. Rockwell, "Better Patient Care Through Inservice Education," AORN Journal, Vol. 13, No. 2, (February, 1971), pg. 101.

To provide quality nursing service, the personnel who perform the service must be prepared to function with knowledge and skill in a climate which provides them with security and personal satisfaction. A well planned program of staff development contributes to the attainment of these goals.

Need to involve the staff in the learning process. We have to first find out what they want to know, not just what we want them to know. We believe that effective education must be developed from the needs of the participants, and that they should share their knowledge and think together.<sup>25</sup>

Hospital in-service education has developed around four areas of personnel need according to Kerr:

1. orientation or introduction of the employee to his or her position and responsibilities and the environment in which he or she will function
2. training in manual and behavioral skills for specific task assignments
3. continuing education or helping the employee keep up to date with new concepts, increase knowledge and develop ability to analyze problems and work with others
4. staff development--meeting the employee's need for growth and preparing those who are qualified for leadership roles<sup>26</sup>

Walter Hoefflin stated in an article in Hospital Management that "He who stops being better, stops being

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<sup>25</sup>"The Most Promising Manpower Resource in the Manpower That's Already There," Modern Hospital, Vol. 115, No. 4, (October, 1970), p. 91.

<sup>26</sup>Ibid., pg. 93.

good. Strong, continuous inservice education helps people continue to grow at their jobs--helps them to be better."<sup>27</sup>

The director of service is confronted by the dilemma of providing patients with nursing care characterized by continuity when the services of the nursing staff to provide that care are discontinuous. According to Myrtle Aydelotte, if one believes that nursing care is based on a sound clinical nursing base that is specific to the particular service, or groups of patients, one is forced to acknowledge that those who are charged with the responsibility for the quality of the care are also the ones who have knowledge that should be transmitted to others. The nursing department within an agency has acute educational problems. So much information must be given to nursing staffs to prepare them to function within a department. Even formal education cannot prepare a nurse for every eventuality. To quote Dr. Aydelotte in the following:

Both nursing career patterns (episodic and distributive) should be so organized that recognition, reward, and increased responsibility for

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<sup>27</sup>Walter R. Hoefflin, "To Have Better Personnel, Emphasize Training Programs," Hospital Management, Vol. 110, No. 8, (August, 1970), pg. 44.

practice are based on increasing depth of knowledge and demonstrated competence to perform in complex clinical situations.<sup>28</sup>

Dr. Aydelotte further stated that the inability to define a unique body of knowledge and skill underlying nursing care persists. Nursing attempts to define its knowledge base in terms of processes, procedures, and techniques rather than to identify the content essential to nursing practice.<sup>29</sup>

All staff development programs must ultimately lead to improvement of patient care through more effective use of employee potential. Her outlook will be broadened, her opportunity for exposure to other people, and the new knowledge obtained all help her contribute ultimately to the improvement of patient care according to Virginia Rockwell. As each individual becomes better able to function at the peak of her potential, contributions to the improvement of patient care increase. Because of individual variations, the time needed for developing one employee will vary from that of another.<sup>30</sup>

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<sup>28</sup>Myrtle K. Aydelotte, "Gaps Between Service and Education," AORN Journal, Vol. 15, No. 6, (June, 1972), pg. 121-122.

<sup>29</sup>Ibid., pg. 122.

<sup>30</sup>Rockwell, op. cit., pg. 105.

According to Marilyn Neuman in-service education exists to ensure the provision of competent nursing care. She has listed three positive aspects of inservice education in the following:

1. Employees live up to, or down to, the expectations of performance that they believe their supervisors hold. Employee performance evidences the same degree of competency as that of the nursing care practiced in the clinical area. Inservice Education develops awareness of process of projecting standards through behavior.

2. By selecting learning content and method that reinforces the adult nature of personnel, inservice education assists employees to accept full responsibility for their actions. Employees who are consistently treated like adults, capable of independent judgment, are able to participate actively in their own continuing development by identifying their performance strengths and weaknesses and by selecting their own appropriate learning experiences.

3. By helping employees to learn work within the components of their job classification, to establish work priorities and time allotments for the priorities, and to plan to achieve these, inservice education helps personnel to be self-controlled and self-directed.<sup>31</sup>

Continued education fulfills the needs of the individual to help him or her to function efficiently in whatever capacity he or she is employed. The aim, according

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<sup>31</sup>Marilyn M. Neuman, "Employee Competency: The Goal of Inservice Education," Nursing Clinics of North America, W. B. Saunders Company, Philadelphia, Vol. 5, No. 2, (June, 1970), pg. 342.

to Edith Maher, is to contribute to safe, therapeutic and effective care of all patients. Every employee's potential is developed so that he or she has a sense of participation. Individuals have a responsibility to seek and take advantage of the opportunities offered to them to help improve their knowledge, growth and development.<sup>32</sup>

Inservice education exists for one reason only-- to insure patients receiving a high quality of nursing care, through the education of the staff.<sup>33</sup>

Marilyn Neuman further stated that if continued learning is blocked the result is a loss of self-renewal, and eventually job performance becomes the more repetition of functions that deprive the employee of the satisfaction of accomplishment.<sup>34</sup>

As one can see there are two purposes served by inservice education. The one thought states that inservice education is for the betterment of nursing care--the patient being the only concern. The other sees the

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<sup>32</sup>Edith Maher, "Stature Not Status," Nursing Mirror, Vol. 133, No. 27, (December 31, 1971), pg. 7.

<sup>33</sup>Mildred Tapper, "The Steps to Program Planning," AORN Journal, Vol. 9, No. 8, (August 1968), pg. 55.

<sup>34</sup>Neuman, op. cit., pg. 345.

importance of personal growth and development of nursing personnel which directs the focus of self-actualization and self-esteem which ultimately reflects in nursing care.

The new accreditation standard of the Joint Commission on Accreditation of Hospitals, in the section on nursing, call for continuing training programs and educational opportunities for the development of nursing personnel. Perhaps the reason for the stress on the need for continuing education for nursing personnel is that the patient is under the constant care of these persons, from admission to discharge, and there is recognition that they must continuously review, renew, and update their knowledge and skill if quality care is to be provided to all patients.

If each department develops its own program then they can be scheduled according to its individual needs. What ever the system, whoever the planner, inservice education for every employee in every department in the hospital is vital to patient care. The growing demand of the public for an improved quality of patient care makes the hospital administrator realize that he must accept the responsibility of developing and maintaining a supply of highly motivated people within the institution by placing more emphasis on inter- and intra-departmental inservice education.

The American Hospital Association, in its Statement on the Role and Responsibility of the Hospital for Inservice Education states:

The hospital in discharging its responsibility for the quality of care rendered to patients, has the obligation to assure patients that those who provide service are competent to do so.<sup>35</sup>

The new standards of the Joint Commission on Accreditation of Hospitals are very specific on the type of inservice training which a hospital must provide. The nursing standard states, "There shall be continuing training programs and educational opportunities for the development of nursing personnel."<sup>36</sup>

The stipulation is that,

These programs should contribute toward staff development and toward the preparation of staff members for greater responsibility in nursing. . . . Educational resources from both inside and outside the hospital should be utilized. The total program should be under the supervision and direction of a qualified person. . . . The program should be evaluated periodically.<sup>37</sup>

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<sup>35</sup>Sister Mary George Boklage, "Inservice Education Program Needed in All Departments," Hospital Topics, (March, 1971), pg. 35.

<sup>36</sup>Modern Hospital (October, 1970) op. cit., pg. 94.

<sup>37</sup>Ibid., pg. 94.

According to Alice Robinson,

Finding enough qualified nurses to staff a unit is usually impossible, so inservice education for newcomers is a must. It is also necessary for maintaining staff competence at a high level as machines and procedures change.<sup>38</sup>

To the purpose specifically of a continuing inservice program according to J.C.A.H. states that the program should be designed to keep the nursing staff up-to-date on new and expanding nursing care programs and new techniques, equipment, facilities, and concepts of care. The program for continuing education should make use of opportunities out of the hospital.<sup>39</sup>

The standards of the J.C.A.H. are also specific on continuing education for nursing personnel assigned to special care units:

A continuing education program developed specifically for the personnel of the unit must be provided in order to enable them to maintain and improve their skills, as well as to learn new techniques.<sup>40</sup>

In 1960, Christena White, a master student of then Montana State College, surveyed the programs for inservice

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<sup>38</sup> Alice M. Robinson, "Ongoing Inservice Programs Are a Must," RN Magazine, Vol. 35, No. 7, (July, 1972), pg. 51.

<sup>39</sup> Modern Hospital, (October, 1970), op.cit., pg. 94.

<sup>40</sup> Ibid., pg. 94.

education in selected hospitals in Montana. One of her purposes was to determine the extent and nature of inservice educational programs in Montana hospitals. She felt that she had found that there were inservice educational programs being carried out in Montana or at least a start had been made to initiate programs in hospitals throughout the state. She did not investigate the effect of the programs on nursing care concerning the patient or the nursing personnel.<sup>41</sup>

Determining the needs of interests of nursing personnel can be determined through interviews, group meetings, questionnaires, reports and records, and job analysis. First find out what the employee already knows. Observe her doing a particular task or procedure she says she knows. Find out what the employee is expected to do on the job and the condition under which she does it. Content of an inservice program is based on the objectives which are based on the needs.<sup>42</sup>

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<sup>41</sup>Christena S. White, "A Survey of Programs for Inservice Education in Selected Hospitals in Montana," Masters Thesis, (April, 1960).

<sup>42</sup>Tapper, op. cit., pg. 55.

## Chapter 3

### METHODOLOGY, OBJECTIVES AND ANALYSIS OF DATA

#### Methodology

A descriptive study, using a prepared questionnaire and test, was conducted involving nursing personnel from five selected hospitals in Montana. In order that inservice education programs can be improved and utilized to their greatest potential in patient care and personnel satisfaction this study was conducted to determine present time nursing care on orthopedic units. If both the learning needs of the patient and nursing personnel are to be met by the health institution the quality of nursing care must first be identified. If nursing personnel are to be recognized as being capable, responsible staff members their potential can be established through cooperative programs.

Elda S. Popiel wrote an article on the interest in continuing education in nursing. On the facet of inservice education Ms. Popiel stressed the individuality of an inservice program and that it is not handed out like medicine or given in the same dosage and frequency to everyone. An inservice education program is not planned

for large group distribution but rather as Popiel stated in the following:

. . . it is prescribed according to indicants revealed by inventories that consider the varying educational levels of the workers, their roles, and their responsibilities in the agency. The capabilities and potentials of the personnel and the needs problems of the patients must be considered fully . . . what the nurse should know to meet the needs of patients is given the greatest priority.<sup>1</sup>

Following through with the priority established, the questionnaire was designed to determine general background information about the participating personnel. The first four questions sought information about age, sex, position, and educational background. The next questions dealt with work experience; length of time having worked on an orthopedic ward, experience in orthopedic nursing in a setting where there was no defined orthopedic ward; and length of time having worked on the present orthopedic unit. The investigator was also interested in any special training in orthopedic nursing, from whom had they gained knowledge of orthopedic nursing, benefits from inservice education classes in the past, and areas in which participant wanted covered in inservice classes. The last

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<sup>1</sup>Elda S. Popiel, "The Many Facets of Continuing Education in Nursing," The Journal of Nursing Education, Vol. 8, No. 1, (January, 1969), pg. 7.

questions were personal identification and definition questions: confidence in the care of the orthopedic patient, whether the participant believed the orthopedic ward to be a specialized nursing care unit and finally, the participant's definition of orthopedic nursing care.

The test was devised following a study of orthopedic nursing care. Areas were defined to establish basic nursing care which involved the care of orthopedic patients. Questions asked were multiple choice questions, true-false questions, completion, matching, and diagram questions. Each question in the multiple choice section was given the number of answers wanted in order to benefit personnel who had not taken tests for a period of time.

The investigator consulted Nancy A. Brunner's Orthopedic Nursing--A Programmed Approach; Carrol B. Larson and Marjorie Gould's Orthopedic Nursing; Samuel L. Turek's Orthopaedics Principles and Their Application; and Peter Viek and Carole A. Mancuso's Guide to Hospital Orthopaedic Practice as subject specialists in determining orthopedic nursing care. Two orthopedic specialists, Thomas C. Power, M. D. and Paul Melvin, M. D., were consulted in personal interviews for their knowledge of essential orthopedic nursing care.

The following is a discussion of orthopedic nursing from Larson and Gould's Orthopedic Nursing which establishes a basis for the essential nursing care questions asked in the test.

Good posture exists when the body alignment is such that the musculoskeletal system of the body can function with efficiency and with a minimum of energy. Good posture provides for correct functioning of the weight-bearing joints. It lessens the possibility of strain to joints and ligaments by preventing uneven distribution of body weight. When posture is good, muscular work to maintain balance is kept at a minimum resulting in less muscular fatigue and strain. Good posture requires that the body weight be in balance in relation to the spine and the center of gravity which is the point around which all parts of the body exactly balance each other. In moving a patient the nurse is able to increase the force applied to the movement by using her own weight to assist in accomplishing the sliding movement of the patient. By sliding the patient the nurse utilizes the pull of gravity rather than working against it. She does this by separating her feet, to provide a wider area of support for stability, with the forward foot pointing in

the direction of desired movement. In this way the nurse uses the strength of all the large leg and thigh muscles in performing the motion, thus avoiding strain on arm, shoulder, and back muscles. The work is further shifted to the long, strong muscles of the thighs by flexing at the knees and hips while keeping the back in straight alignment.

To preserve the efficiency of a cast and, at the same time, to maintain the patient in cleanliness and comfort takes ingenuity on the part of the nurse. No one way of caring for these patients can be specifically defined in the procedure book. Safeguarding the efficiency of the cast (that is, its ability to maintain the position for which it has been applied, over the period of time necessary for the accomplishment of the doctor's purpose) is the nurse's responsibility. One thing she must understand is that a patient's complaint even though it might seem trifling must receive her prompt attention.

Nurses are warned repeatedly about the dangers of impaired circulation in an extremity upon which a new cast has been applied. Inspecting fingers or toes when a cast has recently encased the extremity is as important as taking a pulse after an operation. Circulatory impairment is as important to watch for as are signs of hemorrhage.

The physician must be immediately notified if the pulse in an encased limb is not present. Symptoms of coldness, pallor, cyanosis, edema, loss of motion, numbness, pain, and a slow return of blood to the part on blanching are cardinal. The extremity must be watched for many succeeding days for a patient in apparently good condition after the application of the cast does not warrant security that all is normal.

Care of the cast is also important in considering the patient's recovery. Pillows should be ready to support the wet cast. They need to be pliable and easily adjusted to the contour of the patient's body. Under no circumstances is the damp cast to be lifted directly onto the hard bed when the patient is returned to his room. One of the chief causes of pressure sores in orthopedic patients is allowing an incompletely set cast to lie unsupported on a hard surface. The cast will become flattened over the bony prominence, particularly the back of the heel and sacrum, and damage to the underlying soft tissues will be unavoidable.

The patient in a new cast is turned usually by the evening of the day the cast is applied unless contraindicated by the physician's orders. This is done

primarily for the comfort of the patient and also so that the cast may dry on its posterior surface. Turning should always be done on the side not enclosed in plaster or toward the side that has not been operated upon.

Careful observation is necessary in caring for the patient in a cast. All visible skin must be inspected daily for signs of abrasions or irritation. All areas that come in contact with cast edges must be particularly watched for cast sores are very frequently encountered at these places. Fingers moistened with a small amount of alcohol should explore under the cast as far as it is possible to reach. If beginning abrasions or skin blemishes are noted, they should be inspected frequently during the day. Nurses should learn to inspect casts with the sense of smell as well as with the senses of sight and touch. She must get her nose down to the plaster and learn to smell discerningly. It takes experience to learn to detect abnormal odors, but to locate the exact position of a musty odor may be the only evidence of a sloughing area beneath a cast. It is sometimes possible to detect an underlying pressure sore by the temperature of the cast, for the cast tends to become











































































































































