Caring, Curing, and Coordinating in Hospital Nursing: Three Decades of Technical Change

Karole Schafer heyrman

Loyola University Chicago

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CARING, CURING, AND COORDINATING IN
HOSPITAL NURSING:
THREE DECADES OF TECHNICAL CHANGE

by

Karole Schafer Heyrman

A Dissertation Submitted to the Faculty of the
Graduate School of Loyola University of Chicago in
Partial Fulfillment of the Requirements for the
Degree of Doctor of Philosophy
October 1987
ACKNOWLEDGEMENTS

This author wishes to acknowledge the direction and support provided her by her dissertation committee during the completion of this study. Committee members included Dr. Ross Scherer, Director, Dr. Kirsten Gronbjerg, and Dr. Philip Nyden. She also wishes to acknowledge the contributions made by Dr. Robert McNamara before his untimely death in 1985. In addition, the author wishes to thank the nurses at the University of Illinois Hospital, Chicago, Illinois, without whose willingness to openly examine every aspect of their work this study could never have been done.

On a personal level, the author acknowledges the never-ending support and patience provided by her husband, Mark, over the long period it took to complete this research. And, finally, she wishes to thank her son, Matthew, who, perched in his high chair, listened attentively to early chapter drafts and responded positively with smiles and applause.
VITA

The author, Karole Schafer Heyrman, is the daughter of James and Margaret (Roche) Schafer. She was born March 26, 1950, in Hammond, Indiana.

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CHAPTER I

CARING, CURING, AND COORDINATING -
A STUDY OF NURSES' WORK

Overview

Most sociological literature on professions in the late industrial era has focused on difficulties faced by professional workers in adapting to bureaucratized work settings (Kornhauser, 1962; Montagna, 1968; Vollmer and Mills, 1966). Literature on professions which developed within the organizational work setting is sparse. In fact, many sociologists view a profession's location in a formal organization as an impediment to the process of professionalization (Etzioni, 1969). This is a study of one such organizationally-bound profession -- nursing.

Volumes of literature both in sociology and nursing debate the professional status of nursing. The present research enters the debate from a slightly different approach. It seeks to study nurses' work activity performed while in the role of hospital professional staff nurse, and it focuses on the work itself, not on the occupational role.

In the 1950s nurses' work was focused primarily on caring for hospitalized patients (e.g., bathing, feeding, etc.).
The family physician's work was to "cure" the patient. Thirty years later nurses still handle the caring activities but have also assumed responsibility for many curing functions (e.g., complex medication administration, treatments and procedures, etc.). And, with the changes in the health delivery organization which have led to increased specialization and differentiation among health professional and technicians, nurses have added another category of work activities -- coordinating health services at the patient's bedside.

In the early 1950s elaborate studies of hospital staff nurses' work using a similar methodology were completed across the United States under the direction and funding of the American Nurses' Association (A.N.A.). The goal of this work was to establish valid and reliable baseline information concerning nurses' work activity and necessary education. Again, in the early 1980s study of nurses' work became reactivated. The methodology used in 1980 was similar enough to offer the opportunity for a quasi-replication. Thus, the goal of the present research is to compare types and complexities of nursing tasks in the 1950s with the 1980s. The critical argument of this study is that if comparison of work activities over the three decades reveals a pattern of increased task complexity, this should
be interpreted as movement toward further professionalization of nursing.

This study's model of organizational professionalization rests on the hypothesis that a society's development of knowledge and expanding use of technology are reflected in occupational task-complexity (Litwak, 1978; 138-143). A greater degree of task-complexity produces a greater need for delegating of decision-making (Ackoff, 1960: 339); and, a greater need for such delegation produces a greater need for organizational professionalization (Goode, 1969: 902). This hypothesis is supported by Bell's (1973) work and all those influenced by him. It is also part of the rationalization process Weber (1947) discussed many years before the terms "post-industrial" and "neo-industrial" were coined.

Although much of the early literature sees increased rationalization only manifested in terms of increased bureaucratization (due to Parsons' misinterpretation of Weber's thought), it is also quite possible, according to Weber, that increased rationalization also produces increased professionalization. Complex work which cannot be subdivided into routine tasks but which needs supervision and control demands a more complex form of decision making. When this occurs, professionalization (either internal or
external to the formal organization) is often the only rational way of organizing work (Blau, 1974: 625-626; Blau and Schoenherr, 1971; 345-358; and, Stinchcombe, 1959).

This causal model of organizational professionalization implies that an increase in technology, producing in turn an increase in task-complexity, causes a greater demand for delegating decision making, which in turn creates a larger societal demand for organizational professionalization of the work force.

Nursing technology (i.e. work) is the independent variable in this study, and nursing tasks in a hospital inpatient setting are analyzed in two historical eras. The first, the 1950s, was an era of low specialization in medicine along with little differentiation of hospital work and is to be compared with the second era, the 1980s, where medicine is highly specialized and a high degree of differentiation in hospital work has become the norm.

The organizational structure of nursing conducted on a hospital inpatient unit level is the dependent variable. Structure is meant to include the way in which nurses assign and complete their work.

Since nursing as a profession is practiced in an environment which includes other professions and occupations, special attention will be given to the role of
the organization as a work setting. This research seeks to integrate occupational and organizational literature into a new explanatory model of professionalization for nursing -- an organizationally-bound profession.

**Chapter Contents**

The hospital, the work setting for many nurses, has historically responded to technological change in its environment (Coe, 1970; Knowles, 1973; and, Rosen, 1963). Chapter Two will present American nursing's occupational history. Within this brief review special attention will be paid to the work milieux of the 1950s and 1980s, the time periods under study. Chapter Two historically traces the process of professionalization in nursing from its religious origins to present-day status.

Chapter Three outlines the study methodology, including the operational definition of nurses' work in a hospital setting, description of the study sites and data bases, along with a discussion of work sampling as a technique to measure the professional's work.

Analysis of actual results of the work sampling for each historical era, as well as comparison of the two study sites, make up Chapter Four.
A model of organizational professionalization, incorporating sociological ideas from occupational and organizational literature, is presented in Chapter Five using the results of this comparison. Chapter Six concludes the study.
CHAPTER II

DEVELOPMENT OF AMERICAN NURSING

Introduction

In their study of nursing, occupational sociologists have placed much emphasis on the relationship between the nurse's role and the traditional feminine role in society. This is indeed reasonable, since women still comprise approximately ninety-eight percent of nursing graduates. Gender thus remains a constant variable in any sociological study of nursing. But another dominant feature of nursing, namely, its placement in an organizational work setting, presents a key variable in understanding occupational changes.

Nursing's response as an occupation to changes in the workplace affords sociologists the opportunity to understand more fully the relationship between the workplace as organization and as a group.

The purpose of this chapter is briefly to review the development of American nursing from its origin as a religious vocation to its present-day professional status. Special attention will be given to issues in and around nursing in both the 1950s and the 1980s since these are the two time periods under study.
Nursing's Origin in the Religious Vocation

The organization of nursing activities outside the context of the family originated as part of a religious practice. The primary purpose of early nursing was for its workers to carry out charitable acts in order to achieve their own spiritual salvation (Freidson, 1970). Nursing functions were first performed by sisters and brothers of religious orders. Priests did not engage in nursing activities but handled the religious institution's primary functions of administering the sacraments and general administration. The Parsonian prototype role of the religious "professional" (1968) reflected the priestly role, not a religious brother's or sister's.

Nursing practice during this time was determined by the dictates of a religious vocation. Many sociologists have argued that the social role of nurses has been most directly affected by its identification with a traditional feminine role (David, 1966; Friedson, 1970; Mauksch, 1972; Olesen and Whitaker, 1968; and Strauss, 1966 and 1971). However, it seems that the religious origin of organized nursing practice has been overlooked as an explanatory factor in the occupation's development. Present-day nursing still maintains some residues (Pareto, 1935) from this first institutional affiliation. Examples are the nurse's cap and choice of white as part of traditional attire for nurses.
The hospital too had a religious origin (Coe, 1979 and Rosen, 1963). Usually located in close proximity to a church, the hospital served as a center to minister to the physical needs of travelers, as well as the parish's poor.

Organization of both personnel and work in the hospital mirrored that of the religious order staffing it. Institutional legitimization of power and practice was provided by and supported by the religious structure. Etzioni's (1961) typology of "normative organization" sociologically best describes the medieval hospital.

Expansion of hospitals, and religious orders staffing them, followed the routing of Christians to the Holy Land during the Crusades (1096-1291). By the beginning of the fifteenth century, an elaborate network of hospitals had developed in Western Europe (Rosen, 1963). But by the mid-sixteenth century, suppression of the monastery system as a result of the Reformation movement caused the medieval hospital system to collapse as a result of decreasing resources and a lack of personnel (Cockerham, 1978: 169).

From Religious Vocation to Secular Occupation (1550-1900)

Municipal governments assumed responsibility for maintaining hospitals after the collapse of church-affiliated systems. Physicians, although present on a voluntary basis in the hospital since the fourteenth
century, gained a monopoly over seventeenth-century municipal hospital administration. The physicians acquired this monopoly as a result of their increased collective ability to predict the course of outcome of disease processes.

Physicians recognized that hospitals filled with lower-class patients provided a laboratory for study and practice -- activities that would not have been tolerated in the medieval hospital. This phase of hospital development has been labelled by medical sociologists as the "deathhouse stage" (Coe, 1970). As the term indicates, the cure rate was quite low. The major difficulty producing this was the combination of high concentration of infectious disease cases with an increase in experimental surgery and a lack of aseptic technique.

Despite the shift in hospital sponsorship from religious to secular, religious orders continued to provide, or at least supervise, most of the nursing care received by patients.

Nursing personnel did not engage in experimental activities. Their role in the hospital was still governed by religious goals and values. Their activities were directed towards the caring functions of nursing (i.e., bathing, feeding, etc.). As a consequence of this mismatch
between secular and religious practices, physicians gained power over the newly developed medical institution.

With the development of a body of medical knowledge, by the nineteenth century physicians were in a position in society to influence the initiation, direction, and rate of future change within the newly developed health-care system (McKinlay, 1973).

Much of nursing's occupational history in the twentieth century will be directly affected by this "cultural lag" (Ogburn, 1964) between medical and nursing practice.

In 1837, a British middle-class Protestant woman named Florence Nightingale claimed to have had a "vision" in which God called her to enter nursing. Being Anglican, she was unable to join a Roman Catholic religious order in order to obtain some type of nurses' training. Nightingale was able to receive some training under the supervision of a Lutheran minister in Germany. She then returned to England in 1853 to establish a training program for nurses, carrying out recruitment among middle-class English women. Initial recruitment efforts were unsuccessful, as conflicts existed between standards of behavior for middle-class women and demands of the nurse's role (Freidson 1970). But, as is often the case in nursing's history, war would present an opportunity for change. The Crimean War presented an
opportunity for Nightingale to rally support among British women for her new training program. In 1859, Nightingale arrived on the battle front with a group of newly trained nurses, but they were refused opportunity to practice nursing by military leaders. In response, Nightingale instituted the practice of nurses working only upon the physician's request and under his leadership -- terms acceptable to military leadership. This newly established doctor-nurse relationship would be transferred to the hospital setting in England (Strauss, 1966).

After the War ended, Nightingale used her newly gained popularity from the nurses' successful "war effort" to establish a training program for nurses at St. Thomas Hospital in London.

The "Nightingale system" was an educational model designed to improve patient care by application of scientific principles to nursing practice (Nightingale, 1969).

This type of educational program was consistent with developments in medical practice and education and supports the curing function of nursing. Additionally, the Nightingale system addressed the needs and demands of an expanding health-care institution. With improved medical practice, an increasing number of middle-class patients were
admitted to the hospital. With this shift in clientele, came an increased demand for improved nursing care, with the Nightingale model offering a potential solution.

Florence Nightingale represented a transitional figure in nursing. Like her Catholic counterparts, she saw her nursing activities in spiritual terms. But unlike them, Nightingale pursued her "calling" by following a pattern of behavior similar to the ideal type outlined by Weber in The Protestant Ethic and the Spirit of Capitalism (1947).

Thus, centuries after physicians had coopted hospitals as a laboratory for medical experimentation, Nightingale had initiated a "rational" approach to nursing education and practice in England. The outcome of her effort was to provide a link between nursing's religious origin and its present secular workplace. Through the rationalization of work, Nightingale's efforts transformed nursing ideologically from a religious vocation to a secular occupation more compatible with its medical environment.

An excellent example of Nightingale's inductive approach appears in her discussion of the relationship between the practice of cleanliness by nurses and the reduction of fever states in post-surgical cases. Initially published in 1860, Nightingale outlined aseptic technique as part of expected nursing practice. Antiseptic practice in surgery was not practiced by physicians until 1865.
Historical Professionalization

Vollmer and Mills suggest that the term "profession" should be defined by means of an ideal type which means that the occupation may not even exist as such in concrete terms (1966: vii). This tactic avoids the question of whether any one occupation is or is not a "profession". Vollmer and Mills, following Hughes' (1958) lead, suggest that it is more productive to focus study on the "professionalization" process, which they define as "the dynamic process whereby many occupations can be observed to change certain crucial characteristics in the direction of a 'profession'..." (1966: viii).

This section focuses on the process of professionalization using an historical perspective. Additionally, this chapter will attempt to identify the working out of the process outlined above for twentieth-century American nursing. In order to do that, it is useful to review the elements of professionalization as identified by the two major sociological theorists associated with the study of the temporal sequence in professionalization: Caplow and Wilensky.

Caplow (1964) identifies four separate stages of professionalization. They are establishment of a
professional association concerned with defining criteria of membership; change in name used to identify group; development of a code of ethics; and agitation for and enactment of legal restrictions on who may or may not perform the service (1964: 139-140).

To begin a study of nursing using this model, one starts with the establishment of a professional association concerned with defining criteria of membership. The first local professional association in nursing developed in 1885 (Wilensky, 1964: 143). Relative to other marginal professions, this is not an unusually late date, but there is a gap of exactly one hundred and fifty years between the date of the first local professional association in medicine and that of nursing. This is, as Ashley (1976) points out, a significant factor influencing the development of nursing as a profession. The difficulty with Caplow's model is that it cannot be used directly to analyze the problems of power and occupational stratification within an institution such as medicine.

A change in name, Caplow's second stage, came about in nursing in 1965, when the distinction was made between a "professional" nurse and a "technical" nurse (A.N.A. 1965), on the basis of degree of educational preparation. A professional nurse has a baccalaureate or higher degree with
nursing as a major. A technical nurse is one with either a two-year associate degree or three-year diploma. Again this model does not facilitate an easy integration of this stage into the entire process of professionalization in nursing.

The same criticism applies to Caplow's third and fourth stages--code of ethics and licensure. A code of ethics was published by nurses in 1950 and the first state licensure act was in 1903 (Wilensky, 1964: 143).

This conceptual model does provide a good outline of critical requirements that should be accounted for in professionalization, as was the intention of the author. As a causal model of professionalization, however, it is inadequate since it does little more than to suggest a chronological ordering of the "essential elements" outlined by occupational sociologists in the functional camp (Parsons, 1939; Greenwood, 1957; Gross, 1958; Barber, 1963; and Goode, 1969).

Wilensky's model (1964), although similar to Caplow's, is more useful in doing a causal analysis of professionalization (or its lack) in professions with a high proportion of women because the five stages cited by Wilensky include, in addition to a chronological sequence, the factor of commitment (full-time employment--stage one) and the development of a training school.
Full-time commitment to the profession is a major issue at present in any occupation where a large number of women are located, such as in nursing.

Development of a training school, especially if university-centered, is an essential aspect of modern-day professionalization (Parsons, 1968; 539-541). This issue of a university-centered education is of central importance in the present struggle towards professionalization in nursing.

The other three stages in Wilensky's model are similar to Caplow's (except for chronological sequence) and are: formation of a professional association; political agitation by the professional association to win support of law for the protection of the group; and a development of code of ethics (Wilensky, 1964: 137-158).

As Figure 1 indicates, the Caplow and Wilensky models share three common elements: professional association, name/protected membership, and code of ethics. Wilensky's model goes on to examine full-time employment and development of an educational system as elements in the process of professionalization. Although both models are inadequate to explain professionalization of nursing, Wilensky's element of education is important and will be discussed below as it applies to nursing.
Figure 1. Elements of Caplow and Wilensky Professionalization Models

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<td>- Established professional association</td>
<td>- Formed professional association</td>
</tr>
<tr>
<td>- Change in name</td>
<td>- Protected membership</td>
</tr>
<tr>
<td>- Code of ethics established</td>
<td>- Developed Code of Ethics</td>
</tr>
<tr>
<td>- Licensure</td>
<td>- Full-time employment</td>
</tr>
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<td>- Developed Training Schools</td>
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Transition From Training to Education

The late nineteenth and early twentieth-century American hospital environment produced new occupational demands on nurses. But the Nightingale system of nursing education which would both have supported organizational professionalization and was compatible with the larger process of social change was not adopted. Instead, hospital schools of nursing were established in America to train nurses in the performance of tasks (Grace, 1981).

Accordingly, these early nursing schools affiliated with hospitals provided financial support in exchange for student labor in the patient wards. An advanced student or single graduate nurse would assume the dual roles of ward administrator and nurse educator.

Strauss (1966) suggests the reason hospital schools of nursing did not adopt the Nightingale system of emphasizing "education" over "training" was that hospital administrators and physicians were "unaware" of it. Ashley (1976) however,
presents a more plausible hypothesis that hospital administrators and physicians actively suppressed nursing education in the United States in favor of nurses' "training." As evidence, she offers the example of the experience which members of the American Nurses' Association had in attempts to develop a professional organization to represent nurses' occupational demands.

Since its inception, the primary goal of the American Nurses' Association has been the upgrading of training programs (American Nurses Association, 1965: 107). Its major battles to achieve this goal, since its beginning in 1896, have been with the American Medical Association (A.M.A.) and the American Hospital Association (A.H.A.) over the separation of nurses' hospital service from their education. The A.H.A.'s chief concerns were that, once nursing education was outside the organization of the hospital, the nurses' cheap labor (A.H.A. concern) and the body of knowledge (A.M.A. concern) would no longer be under their control.

The first hospital-based training school for nurses in the United States did not structure its educational model on the Nightingale system. The number of nursing schools reached thirty-five in 1890 and had a total enrollment of 1,551 students (Rowland, 1978: 11).
Three nursing schools, however, did open based on the Nightingale system. In 1873, Bellevue Training School for Nurses in New York, the Connecticut Training School for Nurses in New Haven, and the Boston Training School for Nurses at Massachusetts General Hospital opened their doors. Interestingly, none of these schools was either founded or funded by a hospital—but by nurses.

A classic example of the contributions made by nurses educated in the Nightingale system was that of the first hospital record system. It was invented by Linda Richards, a head nurse at Bellevue Training School for nurses in 1874, in response to an identified nursing need to improve delivery of care to patients.

Additional professional activities occurring during this time included the establishment of the first national organization in nursing -- the American Society of Superintendents of Training Schools for Nurses in 1893, later to become the National League for Nursing Education (1912). The American Nurses' Association had its origin in the Nurses' Association Alumnae established three years later in 1896.

Despite gains made in nursing through both professional associations and several schools employing the Nightingale system, most students received their training in the
hospital-based school. Hospital administrators preferred student employees for several reasons. First, students were trained to follow a hospital's specific routine. Without a point of comparison or underlying scientific knowledge to call upon, students would never deviate from one specific routine. This method assured administrators that tasks were performed to their specifications.

Second, nurses' education lasted approximately three years, providing the hospital with a relatively stable work force. Additionally, since they were also students, managers were able to produce military-like obedience over their activities (Dock, 1893: 20; and Bullough, 1964: 144).

Up until the 1920s most graduate nurses worked in private homes. But as hospitals improved and began to attract more middle-class clients, private-duty nurses gradually accompanied their patients into the hospital ward. Hospitals became increasingly financially dependent on this new paying patient, but the presence of the graduate private nurse on the patient ward presented numerous problems for hospital administrators (Hornsby and Schmidt, 1913).

The conflicts between ward administrators and private duty graduate nurses were based on allegiances. The graduate nurse was the patient's not the hospital's employee. Often the graduate nurse was critical of hospital
nursing practices and would inform her client -- a paying patient -- of hospital inadequacies.

Because a graduate nurse was dependent on her expert nursing skills and reputation with previous clients for future referrals, many graduate nurses had improved their nursing techniques through reading and physician supervision. As a result, many graduate nurses had altered nursing procedures learned as a student; and as they entered the hospital ward, they brought these new techniques with them. Variations in practice presented a threat to the authority of the chief staff nurse supervising students. The hospital was helpless to do anything in response since graduate nurses were independent of the hospital hierarchy.

As the health care delivery system became more dependent on the paying patient, the demand for graduate-nurse-level practice increased while the tolerance for student-level practice proportionately decreased.

University-based education started with a program in "Hospital Economics" for nurses at New York Teachers College in 1899. The first nurse in the world to become a university professor was Mary Adelaide Nutting, who by 1905 headed the newly founded Department of Household and Institutional Administration at Columbia Teachers College. She later published a volume on Educational Status of
Nursing in 1912 calling for the moving of nurses education out from under hospital control. With increased university exposure and participation, other nursing educators demanded that nursing education be relocated to a university setting.

Support for moving nurses' education came with the publication of the Goldmark Report (Committee for the Study of Nursing Education, 1923), funded by a grant from the Rockefeller Foundation and was named after one its principal investigators, Josephine Goldmark. One of the committee's major recommendations was to place nursing education in a university program (Committee for the Study of Nursing Education, 1923: 28). This report, although not well received by either hospital administrators or physicians, was a great support to the National League for Nursing Education (in 1952 renamed the National League of Nurses), which advocated university-based education.

By the time the Goldmark Report was published, the National League for Nursing Education had already begun to experiment with different models of education. Some of the first time and motion studies ever done were conducted by this organization in order to find new methods of organizing nurses' education and work (Greener, 1921; Owens, 1927; and Pfefferkorn and Torrman, 1932).
Through these studies, the League was able to document that the cost of sponsoring hospital-based student nurses' training programs was in fact more costly than hiring graduate nurses to do patient care (Pferfferkorn and Torrman, 1932).

Additional reports and studies supported the transition of nurses' education from hospital to university. Economic factors ultimately produced the coopting of graduate nurses into formal hospital employment as staff nurses.

The number of hospital-based educational programs for nurses peaked in 1926, when two thousand and one hundred student nurses were engaged in training programs (Rowland, 1978: 12). But in 1929 the Depression hit nursing. The oversupply of nurses combined with the consumer cutback on use of their services put many graduate nurses out of work. The national nursing groups drafted an appeal letter to the trustees of American hospitals asking them to employ graduate nurses. The nurses' groups communicated to the hospitals that they saw the present situation of graduate nurses as not only a result of the Depression but also "a weakness of a system of accepting students primarily as workers in the hospital..." (1932: 108). As more small hospitals closed and the number of nursing schools decreased, more nursing superintendents representing
hospitals' concerns considered employing graduate nurses to provide inpatient care.

Up until the 1940s, training and education for nurses remained a unified function in the hospital setting, but changes within and outside the occupation and health-care delivery system were reducing the usefulness of this unified function. The changing demand for nursing services along with the rising costs of training programs made the current system dysfunctional.

American Nursing in the Late 1940s

Changes occurring in the late 1930s and 1940s affected both the occupation and its workplace (the hospital). The foundations for medical specialization, research, and education contributed to the centralization of health care services in the hospital. Thus, hospitals began providing comprehensive care for all classes of patients. Hospital administration became a specialty in itself as evidenced in the introduction of graduate education in the field by the University of Chicago in 1934.

Graduate nurses were rapidly replacing student nurses as hospital employees due to the rising costs of training programs and the increased demands for technical competence. What this meant for nursing as an occupation was that
students no longer were a necessary part of the hospital work force. In addition, this fact reduced external opposition to the transfer of nursing education into university settings and was supported by the Brown Report (1948). Again it was war, this time World War II (WW II), that would provide the catalyst for change.

Nurses played an active role in the armed forces, and their contribution was recognized by the country. In 1941 the United States Congress approved 1.2 million dollars for nursing education (Dolan, 1987: 306), partly providing refresher courses for inactive graduate nurses and partly being applied to increase the size of existing nursing schools and to develop more graduate educational programs in nursing (Dolan, 1987). Nurses serving in the armed forces were made commissioned officers.

On the home front, inactive nurse were recruited to staff civilian hospitals thus bringing many married women into the workforce. Volunteers were trained to assist nurses because of the nursing shortage created by the war (Kelly, 1985: 62).

The late 1940s saw an end to WWII, but armed forces nurses did not return to the civilian hospitals thus creating a major nurse shortage at a time of rapid hospital expansion arising from the Hill-Burton Act.

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The new medical technology, especially in the areas of drug development (treatment) and diagnostic procedures\textsuperscript{1} initiated in response to wartime needs, demanded more and better educated nurses at the bedside. Along with the advances in medical technology was the rapid expansion in hospital programs mainly due to the 1946 Hospital Survey and Construction Act. This act (commonly referred to as the Hill-Burton Act) provided for one-third of the cost of all new hospital beds to be paid for by the federal government. But as medical technology and hospital bed capacity expanded, the supply of graduate nurses kept dwindling.

Armed forces nurses did not return to civilian nursing jobs; and married nurses, recruited back to active status during wartime, left the workforce also. Results of a 1950 survey of registered nurses suggests several contributing reasons for this behavior. Only 12\% of nurses responding to the 1950 survey planned a career in nursing and 75\% in the survey viewed working as a means towards obtaining "pin money" (Kelly, 1985: 63). Two major reasons, cited by

\textsuperscript{1} The first cancer detection test, the pap smear, was developed in 1948.
nurses surveyed for leaving nursing were poor working conditions and low pay (Kelly, 1985).

The two-step response to this nurse shortage was to hire more auxiliary help and to restructure the division of labor on the patient care unit.

**Occupation's Clinical Response: Team Nursing**

During WWII two groups of non-professionals, volunteers and practical nurses, emerged to complete some basic nursing tasks under the supervision of graduate nurses.

The Red Cross and the Office of Defense trained over 20,000 volunteer nurse's aides in the 1940s (Kelly, 1985: 63). Many of these volunteers became members of the paid hospital workforce in the 1950s in the role of nurse's aides. Licensed practical nurses (LPN), a non-professional who had completed a twelve-month training program, were also entering the hospital labor force. In 1947, only 36 L.P.N. educational programs existed (Kelly, 1985: 64); but within just seven years (1954), the number of L.P.N. programs had grown to 260 (Kelly, 1985).

The decreased supply of graduate nurses along with increased supply of trained non-professional staff prompted a change in the structure of how hospital nursing's work was completed.
Up until 1950 a hospitalized patient was assigned to a graduate nurse who assumed responsibility for planning and completing all nursing care tasks. This model became dysfunctional and was replaced by a new approach called "Team Nursing."

Team nursing was considered an organizational innovation in the early 1950s. One to two R.N.s, one L.P.N., and perhaps one nurse's aide were assigned to a group of twenty to twenty-five hospitalized patients. The goal of team nursing was to maximize use of nursing staff skills thereby providing efficient nursing care (Lambertsen, 1953). The role of team leader was assumed by a graduate nurse, and assignments and completion of nursing tasks were organized around the nursing team. The team leader provided directly the professional components of care (medications, treatments, and procedures) to all patients on the unit; directed non-professional staff in the completion of other tasks; and worked with the patient's physician. A 1950 physician survey indicated most were satisfied with this change in service delivery and felt auxiliary nursing staff would provide sufficient care (Lambertsen, 1953:64).
Professional Association's Response

The nursing profession felt it was necessary to study the effect which team nursing, as a model for delivery of care, had on nurse's work. To this end, initiation of work sampling studies was supported by the professional association in 1950. Also in 1950 the Bureau of State Boards of Nursing Examination was formed under the aegis of the American Nurses' Association (A.N.A.). By 1952 the six major nursing organizations in existence had consolidated into two: the A.N.A., which would deal with the practice issues, and the National League of Nursing, which would focus on nursing education and accreditation (Solan, 1978: 317-319). It was the profession's hope that this consolidation would provide a better working structure to respond to the rapidly changing health care scene.

1950s Nursing Education

The time to educate nurses decreased from 36 to 30 months in response to the nurse shortage, opening up discussion of the nursing curriculum. Many nursing

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2 Work sampling is a method to measure work through systematic random sampling of individuals. A more detailed discussion of actions leading to the 1950's work sampling studies sponsored by the American Nurses Association is in Appendix A.
educators supported the plan laid out in the Brown Report to relocate nursing education to the University (National Nursing Council, 1948). Another effect on nursing curriculum changes in the 1950s was the expansion of nursing functions recommended by the Committee on Functions in 1948.

To the two existing nursing functions, carrying out prescribed treatment and assisting the physician, a third, assisting the patient, was added (Committee on Functions of Nursing, 1948: ix). This expanded the nurse's responsibilities to include a direct relationship with the client and supported the movement toward more independent nursing practice.

One hundred and ninety-five college programs had been established in nursing by 1950, which represented only 20% of all nursing educational programs. The biggest push for university programs came from male ex-G.I.s (medics in WWII) and married women who were not admissible to the more traditional diploma programs in nursing. There was slow growth in university programs primarily due to the uncertain direction regarding curriculum.

In 1952 Nurse Technician Programs were initiated in community colleges as a result of the Ginzberg Report which suggested two levels of nursing: professional - baccalaureate degree and technical - associate degree (Dolan, 1978: 314).
This move provided the first real diversification in entry level to the profession. Much of nursing's history for the next 35 years would be taken up with attempts to reduce that diversification.

Graduate education in nursing caught on slowly. In 1953 only 36% of nursing faculty had graduate degrees, usually obtained in education or in hospital administration (Kelly, 1985: 66). A 1956 Health Amendment Act, supported by the professional associations, provided money for graduate education of nurse administrators, increasing the numbers of master level nurses.

Nursing research followed the same course as university nursing educational programs. Before the 1950s, most participation by nurses on research was as assistants to a hospital administrators or physicians. The journal, Nursing Research, first published in 1952, was initiated by nurses to support and promote research on and by nurses. In 1956 the federal government first began funding research by nurse researchers.

The Health-Care Environment From the Late 1950s to 1980

In the late 1950s the concept of health was promoted by the World Health Organization, defining health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (Dunn, 1959).
Technological advances in health care, this time supported by space research, produced a boom in the field of diagnostics and treatment (Dolan, 1978: 254). Surgical procedures, such as open-heart surgery and artificial tissue transplants, were supported by this new technology. The use of electronic monitoring and ultrasound, aided by computer, also refocused health care in the direction of diagnostic activities. Health care was seen as able to prevent and remedy disabling conditions through diagnostic and surgical interventions.

Financial support for these clinical activities came when the federal government passed the Medicare Act on July 1, 1966. The allowance of sophisticated medical care for the indigent contributed to the development of larger high-tech medical centers, which in turn promoted research and education and the development and use of even more complex technologies.

Much of nursing's activity in the 1960s was focused on education. In 1964 the Nurse Training Act provided federal funds for programs in nursing education accredited by the National League of Nursing. In 1965, the A.N.A. presented an historic position paper which declared all nursing

3 For a more detailed discussion on federal policy and spending in the area of health care refer to Appendix C.
education should take place in an institution of higher learning and set the minimum educational preparation for a professional nurse at the baccalaureate level. A new level of registered nurse — technical nurse — was created as a category for the associate degree nursing graduate. A third policy change concerned auxiliary nursing staff (aides) who were hereafter to be educated before entering the hospital.

A fourth point dealt with the essential components of professional nursing enunciated by the A.N.A. as encompassing caring, curing, and coordination.

A study focused on nursing supply and demand roles, functions, and educational and career needs was jointly funded by the American Nurses’ Foundation and the Kellogg Foundation in 1966. The outcome of this was a list of priorities for nursing. The first four priorities in order of importance were increase in research on nursing education; improvement in the educational system, clarification of roles and practice, and increase in financial support to attract and retain nurses (Lysaught, 1970). This plan of action was quite similar to that suggested in the Brown Report twenty years earlier.

1960s nursing ended with an A.N.A. statement on the purpose of graduate studies in nursing. This statement emphasized that the purpose of graduate nursing education
was to "improve nursing through implementation of nursing theory and science" (A.N.A., 1969: 2).

Nursing in the 1970s focused its attention on issues of practice. In 1972 New York Nurses' Association amended the definition of nursing practice to include the independent function of nursing (Dolan, 1978: 333-34).

Terms like diagnosing and treating are used in the 1972 New York Amended Nurse Practice Act to describe independent nursing activities. In order to monitor professional practice within this expanding definition of nursing, the A.N.A. developed a set of nursing standards for each nursing specialty along with a specific plan for peer review and auditing (A.N.A., 1973).

As 1950s nursing was known for its caring function, 1970s nursing wished to emphasize the curing function of nursing. By the mid 1970s, a new model for delivery of nursing services labelled "primary nursing" was gaining support in hospitals across the nation. The primary nurse, a graduate registered nurse, assumed responsibility for providing all the patient's nursing services, along with coordinating the patient's activities for the duration of hospitalization. Thus, the coordination function, the third

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4 A copy of the amended act which deals with the area discussed is in Appendix B of this study.
"C", was being developed. (A further discussion of primary nursing detailing its structure appears in Chapter Five.)

Health-Care Environment of the 1980s

In the thirty years between 1950 and 1980 a technological explosion within health care had produced a dramatic change in hospital organization.

The number and types of services provided within a hospital increased dramatically as evidenced by the statistic that the number of personnel per 100 beds had increased from 73 in 1946 to over 300 in 1975 (American Hospital Association, 1976; 1977). Intensive Care Units (ICUS), an experimental concept in the 1950s had become established units in 72% of all U.S. hospitals by 1976 (American Hospital Association, 1977). Medical specialization had replaced the 1950s general hospital practice.⁵

Alterations in the hospital's division of labor led to increased specialization and differentiation and in turn affected the process of decision-making.

⁵ A more detailed discussion of increased specialization and differentiation within the hospital's division of labor is presented in Chapter Five.
Several sociological studies documented the progressive pattern of increased interdependence between physician and hospital administration (Georgopoulos, 1972; Pellegrino, 1972; Scott, 1972; and, Wilson, 1959). As the physician clinically delegated diagnostic and treatment tasks to nursing and other hospital professionals and technicians, the physician became increasingly more dependent upon others' skills. This resulted in a "functional indispensability" (Ehrenreich and Ehrenreich, 1973). It has been suggested that the physician experiences a "routinization of charisma" (Wilson, 1959) which results in hospital administrators and managers developing a stronger decision-making role (Perrow, 1965) in clinical matters. And the hospital's bureaucratic structure became insufficient to achieve this type of coordination (Georgopoulos and Mann, 1962; Georgopoulos, 1966; 1972). In order to decrease the conflict and increase effective task coordination, sociologists suggested professional socialization and new norms as an alternative strategy for developing cooperation for the client's benefit.

A second approach to managing the increasingly complex hospital organization was "Scientific Management." The first hospital administrator to call for a Scientific Management approach to running hospitals was Frank Gillbreth
in 1914 (Reverby, 1975: 1). But, it wasn't until thirty years later (post WWII) that hospital administrators employed its management principles to personnel matters. And even when the focus was on work analysis, hospital administrator never dealt with direct "hands on" patient-care issues but rather only the work associated with housekeeping, dietary, and laundry (Barnes, 1963; Bennett, 1964; and, Smally and Freeman, 1966). In the 1960s Scientific Management principles began to be applied to nursing's non-patient care tasks with the goal of reducing a nurse's time in menial-type tasks (Connor, 1961; Jelinek, 1963; Nellis, McBeth and Carpenter, 1966; and, Wolf and Young, 1965).

The actual structure of clinical management of a professionalized work force with a highly specialized and differentiated division of labor is central to this study of hospital nurses' work in the 1980s and the tasks of coordinating (the third "c" in nursing functions) will be taken up later on in this study.

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6 From the early 1920s until the mid 1940s scientific management principles were applied only to issues such as the hospital's physical layout (Reverby, 1975).
Nursing In The Early 1980s

In the twenty years since the A.N.A. took the position that nursing education should move into an institution of higher learning, the number of traditional hospital diploma programs has steadily decreased (refer to Table 1 below) while the number of A.D. and B.S. programs increased. There are now three established points of professional entry into nursing -- diploma, A.D. and B.S. -- an unresolved problem for the profession.

Table 1  Number and Types of Educational Programs in Nursing: 1964 and 1983

<table>
<thead>
<tr>
<th>Year</th>
<th>B.S.</th>
<th>A.D.</th>
<th>Hospital Diploma</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>187</td>
<td>130</td>
<td>833</td>
</tr>
<tr>
<td>1983</td>
<td>421</td>
<td>764</td>
<td>281</td>
</tr>
</tbody>
</table>

Source: Kelly, 1985: 240.

Graduate education has improved with the removal of most of basic nursing education into colleges and universities. Only 1,449 nurses had graduate degrees in 1952 (A.N.A. Statistics, 1952), whereas twenty years later over 25,000 nurses out of a total of 778,470 graduate nurses had a master's degree (A.N.A. Statistics, 1972).

University-based nursing education produced a demand for nursing research. Nursing research was formally defined
as "research that arises from practice of nursing for purpose of solving patient care problems (Larson, 1981: 75). Education and research activities were promoted and supported by the National League of Nursing. At the same time, the A.N.A. focused on promotion of the economic worth of nurses and standard setting in clinical practice (A.N.A., 1984: 5-16).

Four trends affecting hospital nursing in the early 1980s were rising patient acuity, increased medical specialization, increased demand for nurses and development of the primary nurse's role.

Overall patient acuity, or degree of illness, has risen on hospital inpatient units. Medical advances and technological improvements in areas of diagnostic and treatment activities has led to a much more seriously ill patient population. Hospitals are predicted to be huge intensive care units by 1990 (Levine, 1980: 18). Coupled with this is the reduced length of hospitalization of individual patients due to changes in federal policy on health care funding.7

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7 Refer to Appendix C for a detailed discussion on changes in federal regulations on funding for health care.
The second trend affecting hospital nursing in the 1980s is medical specialization, to be discussed in more detail in Chapter Five.

An increased demand for hospital nurses is the third trend. Despite a 11% decrease in the number of hospital beds during the 1970s, there was a 40% increase in the number of registered nurses and a 15% increase in the number of LPNs hired during that same period of time (American Hospital Association Statistics, 1974; 1978; and 1980). Seventy percent of all licensed registered nurses were in practice in 1980 (Mosses and Roth, 1979: 1745-1746), a larger percent than in any other female-dominated profession (Fralic, 1980: 65). But at the same time as the hospital's need for nurses has risen, so has the need for nurses in out-of-institution settings such as in home-health agencies (Mosses and Roth, 1979: 1756). Hospitals must compete with other practice settings for nurses. So, in the 1980s nurses are not electing to leave the workforce but are staying in the workforce where they have more choices as to the type of clinical setting in which they wish to practice. And hospitals must compete as an employer with others for nurses. At the same time that the demand for nurses has increased, admissions to nursing education programs has declined (Johnson, 1980: 73-74).
Primary nursing had become well established as a model for nursing service delivery in most acute care settings (hospitals) by the early 1980s.

The combination of these four trends created an impetus to again study nurses' work. Up until the early 1980s few published articles (mainly research-based) on work sampling appeared in the Index to Nursing and Allied Health Literature. But a resurgence in interest on "workload" began around 1982. Some research was focused on hospital downsizing (Borg and Jensen, 1985: 31-37), while a second popular focus was work productivity (Nelson, 1985).

Nurses for the second time in its history (the first being in the early 1950s), took on the task of studying their work. One site, University Hospital, did an extensive study of hospital nursing. The results of that study provided information used in this study about nurses' work in the 1980s.

Both the reasons for and the methodology used to study nurses' work in the 1950s and again in the 1980s is similar. The point of this study is to examine how the actual work of nurses in 1950 compares to the work of nurses in 1980.

Chapter Three will present this study's methodology.
CHAPTER III

DESIGN FOR STUDY OF CHANGES
IN HOSPITAL STAFF NURSING

Overview

Most sociological studies done on professionals in complex organizations have either focused on the adaptation of the bureaucratic structure to the professional (Korhauser, 1962, Etzioni, 1964; 75-94; Volmer, 1966; 275-282; Montagna, 1968; and, Morrissey and Gillespie, 1975); or, they have explored the post-industrial phenomenon (Bell, 1973) of professionals being forced into formal organizations in order to work. An example of the latter is Scott's (1982) work.

Scott identifies five major changes in the past thirty years in the institution of health services delivery which have directly affected physicians' work within the hospital. The five trends are: increase in medical specialization, increase in overall dependence upon hospitals, increased use and dependence upon technical and paraprofessional personnel, an expanding definition of "health", and the rising cost of care and related pressures for cost containment (1982: 223-224).
As a result of the above trends, Scott notes that the profession of medicine, viewed historically as autonomous (Weber, 1947), has been forced into a more heteronomous type of professional organization (Scott, 1982: 224). Scott’s definition of heteronomous, like Weber’s, emphasizes a subordinate role of professional participants in the organization’s administration along with only circumscribed autonomy (1965: 65). This would place medicine as a profession into a category with traditional heteronomous professions such as social work, teaching, and nursing. At the same time that heteronomy has been increasing in medicine, the nursing literature is getting filled with strategies to move the nursing profession in the direction of a more autonomous organization (Christmas, 1976; Cleland, 1982). Autonomous here is defined as a professional organization which can independently establish its order with little or no interference from outside organizations or other professions.

A valuable addition to the research already done on other occupations located between occupational and organizational structures is the study of nursing, an occupation continuously housed within a heteronomous organization for the last thirty years. In the early 1950s the occupation’s professional association, the American
Nurses' Association, funded multiple studies of hospital nurses' work across the United States. And now more than thirty years later, renewed interest in nurses' work offers opportunity for quasi-replication using a large urban teaching hospital.

But first, what is occupational technology and how does it operate as an independent variable?

Occupational Technology

An organization is created to complete some type of work. Thus, a hospital exists primarily to provide health care services to its clients. Technology is defined as the actual work, the instrumental process by which service is administered within an organization (e.g., cancer radiation treatment). Some sociological research has examined the relationship between technology and organizational structure from the level of the organization as a whole (Thompson and Bates, 1957; Woodward, 1958; Litwak, 1961; and Perrow, 1967; 1970). This level of analysis rests on the assumption that an organization's technology is identical across occupational groups. This is not true, however, in the case of hospitals where multiple technologies are necessary to

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8 Refer to Appendix A for specific details of actions leading to these studies.
complete the organization's function. Medicine, nursing, pharmacy, and hospital administration are but a very few of the necessary occupations. Medical diagnosis, nursing care, pharmaceutical preparations, and hospital finance represent four separate technologies. In fact, even within one occupation, multiple technologies may exist (e.g., nurse clinicians, administrators, educators). One assumption of this study, as outlined in Chapter One, is that changes in technology create changes in organizational structure. Therefore, to understand changes in an organization such as a hospital, one must first examine and identify changes within the contributing technologies—nursing being one of them.

Note on Goals

In the relationship between technology and organizations, goals were at one time a key concept in organizational research. In nursing in the 1950s three goals were generally accepted: "caring", responsibility to the physician, and responsibility to the patient (National Nursing Council, 1948). A fourth goal, "curing", was added in the late 1960s (Brown, 1966). Since then, however, observers have asserted that formal goals may actually have little effect on organizational members (Selznick, 1943 and
In the case of health related occupations, goals may not really be directive but only reflective of the occupation's current technology. Therefore, in the present study, little attention will hereafter be paid to the concept of organizational or occupational goals as a key instrument of change.

Collective Task Conception

The focus of analysis of this study is core technology (Thompson, 1967), specifically that associated with hospital nursing. Since technology, however, can even differ within the occupation of nursing, the focus will be on the work of hospital staff nurses (whose primary work role is that of clinician, the most traditional and fundamental role in nursing -- at the patient's bedside). In order to measure hospital nursing's core technology, specific tasks associated with the role of hospital staff nurses were selected as the units of analysis. (A task is an activity or set of activities carried out by an occupational member in a specific occupational role--hospital "staff nurse"). This activity is goal-directed. "Task conception" consists of the consensually agreed upon procedures or actions (Dornbusch and Scott, 1979: 79). Such task conceptions vary as a function of the current state of technical knoweldge.
In this study, I wish to take the Dornbusch-Scott concept one step further and talk about an historical "collective task conception". A collective task conception is a specific listing of characteristics of tasks performed for which there exists, in the particular historical period, a consensus on the list of tasks as characteristic of the given occupational technology. In the current study, comparison will be made between the staff nursing's collective task conceptions in the historical periods of the early 1950s and the early 1980s. The goal will be to compare the two periodic lists of tasks as a way of determining changes in occupational technology over three decades--both for organizations and occupations in general and for hospitals and nursing in specific.

Parameters of Nursing Technology

Staff Nurse Role

The occupational segment selected for study is hospital staff nurses. This represents by far the largest segment of nurses employed over the last thirty years (American Nurses' Association, 1952; 1982). Staff nurses are licensed registered nurses who assume responsibility for actual nursing care received by hospitalized patients.
Nurses' work includes four sequential phrases: (1) assessment, (2) planning, (3) intervention, and (4) evaluation. In addition to patient-focused activities, nurses are delegated additional organizational responsibilities (tasks) such as sitting on committees and maintaining hospital personnel records. Although additional department of nursing paraprofessionals (e.g., licensed practical nurses, operating room technicians, nurse's aides) may be assigned to any particular patient or hospital area, it is the staff nurse who ultimately assumes responsibility for the completion of all four phases of nursing technology.9

**Task Categories**

Two major categories of nursing tasks were developed as part of the methodology in the 1950s study of nurses' work (Abdellah and Levine, 1954) which are still accurate, with some modifications, for describing and measuring nurses' work. The two general categories of nurses' work are direct care and indirect care.

9 See Appendix D for an example of a staff nurse job description from the 1980s study site.
Direct Care

Direct nursing care is patient-focused work completed by the nurse in the presence of a patient and/or family member. This type of work is generally viewed as the "hands on" component of nurses' work. Within this category today there exist two subcategories -- independent and interdependent direct nursing care (Curtin, 1984).

Independent direct care is nursing care initiated by the nurse and based upon nursing curriculum knowledge but not necessarily in collaboration with other health professionals. Examples of typical independent direct care are mobilization of a post-surgical patient, diabetic education for a newly diagnosed patient, and completing a family assessment on a child admitted to the emergency room.

Interdependent direct care is that nursing care completed in collaboration with other health professionals, chiefly physicians. This is the type of work traditionally associated with nursing, but in reality it represents only a small part of a typical staff nurse's work day. One example is medication administration. The physician prescribes a medication based on the patient's medical history and presenting symptoms, which thus is an act of medical technology. Medication administration (nursing technology) includes but is not limited to the tasks of drug preparing,
administering, site preparing, and instrument calibrating, patient assessing, educating and post observing, and hospital documenting. These actions represent examples of differences in physician's vs. nurse's work in an acute health care organization (hospital).

The 1950s studies of nurses' work separated out treatments, medication administration, and therapeutic procedures from all other types of direct nursing care. The rationale for this decision rested with the professional association's controlling purpose in studying nurses' work at that time -- to differentiate the work of a professional from that of a practical nurse's work. (In team nursing the assignment of treatments, medications, and procedures was what separated much of professional from practical nurses' work). For the purposes of this study only a general category of "direct nursing care" was used (omitting such subcategories as treatments, medications and procedures or independent and interdependent) in the initial analysis.

Indirect Care

Indirect care is work completed by the nurse in support of direct care tasks. This work is generally completed away from the patient's bedside. Within this category exist two subcategories -- variable and invariable indirect nursing care.
Variable Indirect Nursing Care refers to those nursing work tasks completed away from the patient's bedside but done in preparation for, or in completion of, direct patient care. This type of indirect nursing care is labeled "variable" because the actual frequency and amount of time spent in these activities vary proportionately with the amount of direct care a patient or group of patients require. Variable indirect nursing work activities can include tasks such as patient chart documentation and preparation time for a sterile dressing change.

Invariable Indirect Care (sometimes referred to as "fixed") is nursing work that is organizationally delegated. Such tasks may include new employee orientation and maintaining personnel records -- tasks designed to keep the hospital running efficiently as an organization.

Measurement of Nurses' Work

Work Sampling Technique

In hospitals, which are labor-intensive organizations, the department of nursing is usually a hospital's largest budget line item. So interest in numbers and types of nursing personnel necessary to meet patient care requirements peaked shortly after nursing's formal entrance
into the hospital's organization. In response to general hospital administrators' initial inquiries in the mid-1940s, the American Nurses' Association initiated its own plan to measure nurses' work in order better to plan for future educational programs as well as to protect their position in the workplace from perceived encroachment from the expanding paraprofessional occupation of licensed practical nursing, a much cheaper work force (American Nurses' Association, 1950).

The American Nurses' Association's plan was to develop a standardized method for measuring nurses' work and then provide financial support to state nurses' associations so that they would complete similar work studies using the national association's recommended format.

Work sampling was selected as the principal method to obtain data on nurses' activities. As an established technique for work measurement, it was cost effective as well as familiar and acceptable to hospital administrators as a valid measure of employees' work. Work sampling was developed by L.H.C. Tippett (1935) in the British textile industry and was originally introduced in the United States under the name of "ratio delay" (Barnes, 1963: 511). It has been used to investigate the type and percent of total time devoted to various work tasks that make up particular jobs.

53
Work sampling can be implemented more cheaply than time
and motion studies and has frequently been used to establish
a standard of productivity. The history of work sampling as
a technique corresponds in the United States with the
introduction of Taylor's (1911) concept of Scientific
Management. (A discussion of the sociological implications
of this type of study will follow in a later chapter.)

As a technique, work sampling is based upon the laws of
probability. A sample of work activities taken at random
intervals will have the same distribution of types of work
activities and proportions of time spent as exist in the
entire universe population involved. To establish the
percent of a work day spent on various tasks one takes the
percent of observations recorded of persons completing the
job under study. This number, then, is a reliable measure
of the percent of time spent in various work tasks if the
number of observations taken is adequate. The formula for
calculating the accuracy of work sampling results also
determines the number of observations required. Number of
observations also affects the time and cost for completing a
study. The purpose will determine the degree of accuracy of
the results needed.

One major consideration in designing a work sampling
study is the degree of variability in the personnel and work
to be studied. In the case of hospital staff nursing, a high degree of variability exists in work due to both the individual variances among patients and the pace of different work shifts. Because of these considerations an accuracy of plus or minus 5% was considered necessary.10

Tailoring to Nurses' Work

Preliminary work on a methodology for measuring nurses' work using the work sampling technique was developed

10 Assuming that the binomial distribution is used as the basis for determining the error, the formula for determining the number of observations required is:

\[ S_p = \frac{p(1-p)}{N} \]

Where

- \( S \) = desired relative accuracy
- \( p \) = percentage occurrence of a or category of tasks, expressed as a percentage of the total number of observations
- \( N \) = total number of random observations (sample size)

Although the two unknowns of "p" and "N" exist, the formula was still used by estimating these values prior to initiation of study (Barnes, 1963).

How this technique was actually implemented along with site-specific calculations will be presented below in a separate discussion of each study site.
by Abdellah and Levine (1954). This became the standard for the American Nurses' Association studies in the early 1950s. These studies represented the first major research on nurses' work and are used here as the historical base line for nursing practice in the 1950s.

**Hospital Staff Nursing in the 1950s:**

**Collective Task Conception**

**Overview**

The historical milieu of 1950s hospital nursing can be summarized as one in which hospitals, faced with a shortage of professional registered nurses, began hiring larger numbers of paraprofessionals (i.e., licensed practical nurses, aides, etc). This personnel policy altered the professional registered nurse-to-patient ratio and caused a significant change in the intraorganizational structure of nursing. Traditionally the same nurse was assigned daily to the same patient and provided all required nursing services. This work structure was known as the *case study method*. With the decreasing number of registered nurses per patient, a new work structure evolved -- *team nursing*. In team nursing a registered nurse assumed responsibility for a group of patients and had additional non-professional staff to aid her in the completion of nursing tasks.
As the work role of hospital staff nurses changed and the number of non-professionals completing nursing tasks increased, questions concerning professional nursing's knowledge-base were raised. Hospital administrators suggested that a greater part of staff nurses' work could be reassigned to paraprofessionals -- a cheaper labor force. Nurses themselves in turn expressed a need to reassess the educational process.

At this time nursing research was gaining legitimation as a method to analyze problems and offer "scientific solutions". The American Nurses' Association was in a financial position to fund nursing research in this area in 1950. In May of that year the American Nurses' Association House of Delegates adopted a plan to study nursing functions (tasks) in order to achieve an operational definition of professional nursing and improve nursing care (A.N.A., 1950). The plan included some standardization of terminology and methodology, and state nurses' associations were funded to actually complete the studies. Two well documented studies were used as a composite of collective task conceptions for 1950s hospital staff nursing. The two participating state association studies completed were those by the California State Nurses' Association (1953) and the New York State Nurses' Association (1952).
Two other studies completed at this time had to be dropped. The Kansas State Nurses' Association study in 1953 selected only small hospitals with less than fifty beds, making its results incompatible with the New York and California studies. The Kansas study results could not be generalized because nurses in such small hospitals frequently did additional patient tasks (e.g. take x-rays) not considered as part of nursing (Kansas State Nurses' Association, 1953: 7-8). The Washington State Nurses' Association study also was deleted from this study because it used a slightly different methodology -- self-reporting (Washington State Nurses' Association, 1953: 5-6).

Unit of Analysis - Nursing Functions

A nursing function, the unit of analysis, is defined as assigned duties of work (tasks) within the scope of professional practice. The 1950s studies shared one controlling purpose: to compare the work of professional versus practical nurses. The present researcher is only interested in the scope of work of professional nurses so data results for only this occupation group are included.

A "professional nurse" is defined as a graduate from a hospital or a collegiate school of nursing licensed by the state to practice as a registered professional nurse, or a
student nurse who functions in lieu of a professional nurse. In the 1980s study this definition is modified only to include graduate nurses; although it is impossible to separate out student nurse's work in the 1950s findings. This represents one limitation in comparing the two periodic occupational segments.

The scope of 1950s professional nursing activity included "activity which requires a synthesis of technical, scientific and social knowledge in defining and applying principles to the care of the patient wherein the judgment exercised may have significant implications for the patient, and/or the family and/or the community" (New York University, 1952: 2).

A technical panel consisting of eight members (all professional nurses) was formed as part of each state association's preliminary stage of research (California State Nurses' Association, 1953: 12-14 and New York University, 1952: 22). This panel was charged with the responsibility of listing all major nursing functions. In addition a comprehensive list of specific nursing tasks assigned to each function was generated. There had to be an agreement between a minimum of five panelists before any task was listed.
The California study listed eleven functions. The first, direct care, was defined as all activities which occurred in the presence of the patient, except for medications and treatments which was listed as a separate function (1953: 6-8). Indirect patient care was defined as all activities carried out for the benefit of a specific patient that do not occur in the presence of the patient. Along with the general category of indirect care, additional types of specific indirect care function were specifically listed, such as administration, staff teaching, care of the environment, clerical, equipment and supplies, and errands. Two additional functions independent of patient care listed were professional growth and personal time.

The New York study reduced professional nursing functions into eight similar categories (1952: 109). Direct care functions were identical to California's (general direct care and medications, treatments and procedures). Indirect care included equipment and supplies, clerical and administrative, housekeeping, messenger and special services. The final two functions were personal in nature and included time off and stand-by time.

In the area of direct care the two studies listed identical functions and definitions. Indirect care functions considered collectively were also identical. The
only difference was California's decision to collapse some functions (i.e. clerical and administrative). Personal nursing functions which either dealt with professional growth or some type of personal time made up the last two functions on the list.

A total composite of 439 specific tasks were listed the general functions of professional nursing. (A list of specific tasks are in Appendix E for review). Fifty-four percent of the 439 tasks represent direct care activities: 44% are indirect care activities; and 2% represent personal downtime or time not otherwise directed to patient care.

This comprehensive list represents the collective task conception of hospital staff nursing in the 1950s. The next section of the paper will briefly outline how the list of nursing activities was validated using work sampling.

New York State Application

In the 1950s the New York Nurses' Association commissioned faculty at New York University's Department of Nursing Education to complete the study of hospital staff nurses using the American Nurses' Association guidelines. The preliminary work of defining professional nursing has already been discussed. (Specific sampling and data collection techniques are included in Appendix F.)
The California State Nurses' Association hired a private consultant, Kroeger and Associates, to complete a study of California hospital nurses in 1953. The American Nurses' Association funded this study as well, and in turn their methodological guidelines were used.

This study was much larger than the New York Study, as the sample included twenty percent of all California hospitals altogether (40 out of 231). Criteria for selection included bed size, type of ownership, and geographic location. Sampling ratios were as follows: fifteen percent of hospitals under 300 beds were included; fifty percent of hospitals with 300 to 600 beds; and all hospitals with over 600 beds (1953: 17).

In the California study (unlike New York), all types of patient units were sampled -- general medical-surgical units along with intensive care units, pediatric units, obstetrical and nurseries, and operating rooms. This affected the overall direct and indirect care percentages and was taken into consideration in this study's analysis.

Nursing units and work shifts were grouped so as to obtain the largest possible sample of groups within the hospital. This determination was made by the Technical Committee based upon individual hospitals' organizations.
Limitation of Data Collected

Both studies from the 1950s included an over-representation of urban hospitals. As was noted earlier, there are some differences in nurses' work in smaller rural hospitals (Kansas State Nurses' Association, 1953). But since the 1980s site is also an urban hospital, the use of these data as a basis for comparing the 1950s and 1980 is legitimate.

Collective Task Conception of 1980s
Hospital Nursing: A Case Study

Changes in Hospital Setting Since 1950s

Compared to the 1950s the milieu of early 1980s hospital nursing has been altered by three interconnected changes in health care. The first is a rise in patient acuity. The national trend of reducing overall number of inpatient days per admission along with increasing the number of outpatient services (financial dimension) coupled with advances in health technology which allows more seriously ill patients to survive and thus require hospitalization (technical knowledge dimension), has led to the prediction that "hospitals will have huge intensive care units by 1990" (Levine, 1980: 19).
This rise in acuity has had a direct effect on the numbers of hospital personnel needed to deliver care. Nursing represents the occupation with the greatest increase in numbers (Cohen and Backofer, 1980: 65), 97% of the growth occurring in intensive care areas (Cohen and Backofer, 1980: 66). As noted hospital units were evolving into intensive care institutions. This has been aided by the trend toward specialization in nursing. This technological impact has occurred in all hospitals regardless of bed capacity (Fagerhaugh, 1980: 668).

The trend to higher acuity and specialization has altered nursing staff composition -- a second major trend. The percent of registered hospital nurses continues to rise, while the percentages of licensed practical nurses and other sub-professionals (i.e., nurses' aides, orderlies, etc.) have dropped significantly (Illinois Hospital Association, 1985: 3). Along with the increase in percent of professional nurses in hospitals is a shift from team nursing to primary nursing as a means of structuring work -- the third major change in hospital care. Primary nursing as a means to provide individualized nursing care to patients and their families gained momentum in the mid 1970s (Marram, 1974). Primary nurses (staff nurses) were accountable for providing total, comprehensive, continuous patient-centered
care for the duration of the patient's hospitalization. Structurally, this is similar to the early 1950s case-study method of nursing service delivery.

These changes in hospital nursing have led many nursing administrators to reexamine their current staffing patterns. One particular department of nursing, located in a large urban teaching hospital, initiated a study of nurses' work in order to develop a valid and reliable method for allocating nursing resources to meet changing patient needs. One principal outcome of this study was an in-depth analysis of 1980s hospital nurses' work using similar methodology to the 1950s studies. Results of this 1983 case study were used as representative of nursing technology in the 1980s.

**Researching Nursing Functions in the 1980s**

Nursing leadership in the 1980s defines nursing functions in terms of six patient needs for which the hospital nurse is responsible (McClure and Nelson, 1982: 59). Hospitalized patients' needs included: (1) dependency needs (bathing, grooming, toileting, feeding, safety); (2) comfort (physical and psychological); (3) monitoring (vigilance to signs and symptoms, including appropriate response based on the data obtained); (4) therapeutic
(medications, treatments, dressings); (5) educational (including the fostering of copying mechanisms); and (6) research (McClure and Nelson, 1982).

The definition and scope of professional nursing practice has not changed significantly from the 1950s. The major difference is the integration of educational and research activities into the hospital staff nurses' work. An example of a hospital nurse's job description taken from the 1980s research site is appended to this study. Preliminary work on developing a method of studying nurses' activities at the study site was initiated in early 1983. (A report on these activities is in Appendix G.)

Similar to the technical panel convened for each of the 1950s study, in 1983 a committee of six registered nurses (including three experienced staff nurses, a head nurse, a clinical nurse specialist, and a research project nurse consultant) was formed. This committee was charged with the responsibility for developing a comprehensive list of nursing tasks. The tasks were divided into two major categories of direct and indirect care.

Direct care was defined (as in the 1950s studies) as patient-focused work completed by the nurse in the presence of a patient and/or family member. The committee came up with two separate lists of direct care tasks. One list was
for adult medical-surgical/critical care units, and the second was for the psychiatric patient care unit. This study will focus only on the adult medical-surgical/critical care units list because the highly specialized nature of psychiatric nursing would not serve as representative of general staff nurse's work. (For a copy of the medical-surgical/critical care list refer to Appendix G).

As a result of the committee's work, twenty-five general categories of nursing care were defined along with one hundred and thirty-four additional treatments and procedures. The actual number of line items listed was greater than one hundred and fifty-nine because many activities had to be completed more than once per shift, as a goal of this listing was to use it for the purposes of patient documentation and billing. Also, different types of injections, for example, intramuscular, subcutaneous and Z-technique, were not listed separately as in the 1950s studies to compare the two data bases, such adjustments had to be made.

Indirect care was defined, again as in the the 1950s study, as that work completed away from the patient's bedside in concert with direct care (variable indirect) and which also included organizationally-delegated tasks (fixed indirect). The committee listed nineteen variable and twenty-six fixed indirect tasks. (See Appendix G).
Two additional non-patient activities -- lunch and breaks were coded as "downtime". The concept of downtime is identical to the term "personal" used in the 1950 studies.

**University Hospital Case Study Site**

University Hospital is a five hundred and fifty bed institution which provides both inpatient and outpatient care for an indigent patient population. This hospital also functions as the clinical laboratory for university teaching and research activities. University Hospital is located close to the downtown area of a major midwestern metropolis and next to three other large medical centers. Sixty-six percent of all budgeted hospital nursing positions in this state are within the metropolitan area of this city (Illinois Hospital Association, 1985: 16). The hospital is part of a large state university system and is governed by a board of trustees. In 1980, three years prior to this study, the patient care was moved into a new ultra-modern hospital structure one block south of the old hospital.

University Hospital, unlike smaller community hospitals and due to its state university mission, has a state-wide rather than a community focus.

In 1983, the year of this study, University Hospital had 19,765 inpatient admissions with the average length of
stay per patient being 7.7 days (University of Illinois Annual Report, 1983).

University Hospital one of thirty-one teaching hospitals in the state which make-up 15% of the state's hospitals (Illinois Hospital Association, 1985: 3; 25).

In 1982, 40% of hospital staff nurses were employed in hospitals with bed capacities greater than 400 (American Nurses' Association, 1982: 38) As noted earlier, two thirds of all budgeted staff nurse positions were located in the same metropolitan area as University Hospital. Although University Hospital is not the typical prototype hospital in its state, it does represent a particular type of urban hospital which demands the most up-to-date nursing technology due to a high-acuity patient population and high medical specialization connected to its teaching function. Therefore, it does represent a reasonable site for the study of 1980s nursing technology.

Nursing at University Hospital

The management of University Hospital's Department of Nursing is highly decentralized (refer to Appendix D) as are also most other departments of nursing in the 1980s (Clifford, 1982: 103). The Department's 1983 annual budget
was $26,000,000. Nursing services comprised approximately 1,071 full-time equivalent positions, out of which, 83% (890) were professional registered nurse positions, slightly higher than the state average for teaching hospitals (about 77% -- Illinois Hospital Association, 1985: 25). Both figures are higher than for non-teaching hospitals, whose professional staffs average 67% (Illinois Hospital Association 1985:25).

The skill mix of nursing personnel providing actual patient care averages (across the Department) at sixty percent professional nurses and forty percent paraprofessionals (mainly, licensed practical nurses). This figure is more in line with the state's average and demonstrates the Department's extremely top heavy administrative layer.

Staff nurse turnover, a figure frequently used as an indication of stability, was approximately 20% for fiscal 1983. The metropolitan figure (16%) is slightly lower (Illinois Hospital Association, 1985: 8).

Primary nursing was introduced as a nursing service delivery model in 1973, a bit earlier than in most hospitals.

Generally speaking, University Hospital's Department of Nursing with its slightly higher percentage of registered
nurses introduced policies such as primary nursing somewhat earlier than elsewhere. University Hospital is similar to most other urban facilities and does reflect major trends in hospital nursing in the 1980s.

The University library archives revealed some information about the University Hospital's Department of Nursing in 1954. A statement of the Department's philosophy and standards, staff schedule and list of team leader responsibilities for each of the three workshifts were unearthed. (This information will be used as part of the analysis in the next chapter.)

**Study Sample**

Three patient-care units used in the preliminary study were again used because they were viewed as representative of nurses' work at University Hospital. The three units included were Unit I, Seven East, and Seven West Transplant.

Unit I is a small, twenty-nine bed surgical unit specializing in the care of patients with ear, nose, and throat disorders. This unit has a typical weekday shift staffing of four professional nurses and two licensed practical nurses. According to the current census acuity measurement, for every twenty-four hours each patient is in the hospital, that patient will require approximately seven hours of direct and indirect nursing care services.
The second unit selected was Seven East, a large sixty-two bed, adult, general medical unit with three separate medical services. An additional six beds were reserved for patients with dermatological disorders. A typical casemix of patients included those with cardiac, respiratory, gastrointestinal, and endocrine system disorders. A typical weekday shift staff pattern included ten professional nurses and six to eight other personnel (i.e., licensed practical nurses, nurses' aides, orderlies). A typical patient on this unit received a total of six hours of direct and indirect nursing services over a twenty-four hour day.

The third unit was selected to represent the specialized critical care patient unit -- Seven West Organ Transplant. This unit had fifteen beds and a typical weekday day shift staffing included five to six professional staff and one unit-assigned nurses' aide. A typical patient in this unit received nine hours of direct plus indirect nursing services in a twenty-four hour period.

Data Collection

The head nurse on each of the three units worked with departmental nursing consultants in order to ready each site. Staff were informed of the reasons for the study and of the data collection methods that would be used. In addition, two outside consultants -- industrial engineers
from a national consulting firm -- were present to provide additional technical assistance and external validation.

Initial attempts at self-reporting by unit-based nursing staff met with shortcomings (as was also outlined for the 1953 Washington State Study—Washington State Nurses' Association, 1953:5–6). It was obvious that busy staff were underrepresenting their activities. Therefore, the present researcher dropped the self-reporting data and used only information acquired as a result of work sampling.

The work sampling was done twenty-four hours per day (for all three work shifts) for seven consecutive days on all three units. Work samplers were given a structured educational presentation. Most work samplers were professional nurses or nursing students near the end of their educations.

The total number of observed work shifts included in this sample were two hundred and fifty-two (on Unit I: 49; on Seven East: 126; and, on Seven West Transplant: 77).11

The next chapter will detail study results.

11 The number of observations needed for a +/− 5% standard of error at a 95% Confidence level, as outlined earlier, for a direct care at fifty-five percent (approximated) was 1310 observations. This study exceeded that number thus assuring the validity of data collected.
CHAPTER IV

HISTORICAL COLLECTIVE TASK CONCEPTION ANALYSIS

Formation of Historical Task Conceptions

Changes in the occupational technology of hospital nursing have been measured over a thirty-year period using the historical collective task conceptions of nursing in the 1950s and then again in the 1980s. In this chapter I present the pattern of changes in these nursing tasks over the last three decades. In Chapter Five I will present the relationship between demonstrated changes in occupational technology (independent variable), as evidenced in task conceptions, and changes in corresponding organizational structure (dependent variable) -- operationally defined as the occupation's work arrangement (Dornbusch and Scott, 1975: 78).

The 1950s historical collective task conception of nursing is based primarily on a study conducted in twelve urban New York Hospitals using general medical-surgical units (New York University, 1952). A total of fifty registered nurses' work shifts were sampled. Several additional 1950s studies of nurses' work have also been used to support development of the 1950s collective task
conception, and they too will be discussed as they pertain to this study.

Two hundred and twenty-six registered nurses' work shifts were sampled at University Hospital in 1983. Sample results will be used as the 1980s collective task conception of nursing. A breakdown of work shifts sampled by type of patient unit for the 1983 data collection is in Table 2.

Table 2. Number and Percent of Workshifts Sampled by Unit at University Hospital, 1983

<table>
<thead>
<tr>
<th>Unit</th>
<th>Number of Work Shifts</th>
<th>Percent of Total Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small specialized surgical unit (UI)</td>
<td>46</td>
<td>20%</td>
</tr>
<tr>
<td>Small critical care unit (7W)</td>
<td>61</td>
<td>27%</td>
</tr>
<tr>
<td>Large general medical unit (7E)</td>
<td>119</td>
<td>54%</td>
</tr>
</tbody>
</table>

A similar study of hospital staff nurses' work was completed the same year in a similar type of setting (Minyard et. al., 1986). This study's findings will be used to corroborate University Hospital sample results as typical of the 1980s collective task conception of nursing.

Both the 1950s and the 1980s hospitals sampled represented larger urban settings. The introduction of a
specialized surgical and critical care unit in the 1980s sample (47% of the total sample) represented the typical composition of adult hospital beds in the 1980s as did the sample of general adult medical-surgical beds in the 1950s studies for the 1950s hospitals. Thus the 1950s and 1980s studies, although using different types of patient-care units, are similar in that they represented typical urban hospitals for their respective historical era.

The next three sections of this chapter include specific information on the historical work studies. First, I will present an overall comparison of time spent in the major categories of work (direct and indirect patient care) for each time period. I will then compare similarities and differences in the types of tasks listed in the category of direct care for 1950s and 1980s and present a similar comparison of indirect care tasks. Finally, I will summarize changes in nursing tasks over a thirty-year period.

**Time Spent in Major Work Categories**

**1950s Nurses' Work**

As defined, direct care is patient-focused work completed by a staff nurse at the patient's bedside or with the patient's family. These "hands on" tasks are traditionally what is associated with the work role of
nursing. Results of two major 1950s studies (California and New York) differed as to the amount of time staff nurses spent at the bedside.

Table 3. Percent of Time Spent by Nurses in Major Categories of Work in 1950s

<table>
<thead>
<tr>
<th>Study Site</th>
<th>% Time in Direct Care</th>
<th>% Time in Indirect and Personal Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>New York</td>
<td>39</td>
<td>61</td>
</tr>
<tr>
<td>Kansas</td>
<td>56</td>
<td>44</td>
</tr>
<tr>
<td>Washington</td>
<td>42</td>
<td>58</td>
</tr>
</tbody>
</table>


As Table 3 indicates, there were some sharp differences in results which need to be explored further. The California Study included all types of hospital patient units (medical, surgical, obstetrical, pediatric, operating room, etc.) in all types of hospital settings (rural and urban). In addition, psychiatric and tuberculosis sanitaria staff nurses were included in the sample. In contrast, the New York Study sampled only adult medical-surgical beds in urban general hospitals.
I also examined two other 1950s studies of hospital nursing. The Kansas Study (1953) used the same A.N.A. study format. As noted in Chapter Three, I eliminated this study for direct comparison with the 1983 Study because it sampled only small (less than fifty beds), rural, hospitals in towns with populations of less than two thousand.

The Washington State Study used three general hospitals -- two urban and one rural setting. One observation made in this study as a result of contrasting urban and rural settings was that the rural hospital reported a higher percent of direct care work time than did the urban hospitals (Washington State Nurses' Association, 1953:87). This observation coupled with the Kansas Study results suggests that nurses in small rural hospitals tend to spend a greater percent of their work day in direct care tasks than do those in larger, urban hospitals.

Since documentation of the California Study did not differentiate rural vs. urban nor general vs. specialized types of hospitals, the results were not used to create the historical collective task conception of 1950s nursing in this study. I decided it would be better to compare like hospitals (urban general) and like patient populations (adult medical-surgical) over three decades since preliminary findings indicated differences among different
types of hospital settings and patient populations within one historical era. Therefore, results of the New York Study, which included the same type of hospital setting and patient population as used in the 1983 sample, were used.

The New York Study -- the 1950s collective task conception of nursing -- concluded overall that staff nurses spent 39% of their work day in direct care activities, 48% in indirect care tasks, and 13% in personal time (New York University, 1952:30).

1980s Nurses' Work

Nurses at University Hospital spent 32% of their work day at the patients' bedside in direct care tasks. A slightly higher percent of time in direct care was reported for the specialized surgical (36%) and critical care units (34%) than the general medical unit (30%).

The overall indirect care at University Hospital made up 54% of nurses' work. As Table 4 indicates, the general medical unit reported the highest percent of indirect care (58%), followed by the critical care unit (53%) and lowest was the specialized surgical unit (46%).
University Hospital's overall ratio of direct (32%) to indirect (54%) care was similar to results of another 1983 study. A work sampling of staff nurses at a large urban teaching hospital located in the Southern United States indicated nurses spent 33% of their day at the patient's bedside and 47% of their time in indirect care tasks (Minyard et. al., 1986:31). The proportions of direct to indirect care are similar in both 1983 studies and support the statement that University Hospital is typical of the 1980 urban hospitals which make up 58% of all U.S. hospitals in 1983 (American Hospital Association Statistics, 1983).
Major Divisions of Work Tasks in Historical Perspective

The differences in proportionate of time spent by urban hospital staff nurses between 1952 and 1983 are negligible (Table 5). This is somewhat surprising since a frequent complaint of 1980s nurses is they are not able to be at the bedside as much as nurses "used to be". However, hospital patients today tend to be sicker, and the load of paperwork heavier than a generation ago.

Table 5. Percent of Time Staff Nurses Spent in Major Work Categories: 1952 and 1983

<table>
<thead>
<tr>
<th>Time Period and Location</th>
<th>Direct</th>
<th>Types of Work</th>
<th>Indirect</th>
<th>Personal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1952 - New York</td>
<td>39%</td>
<td></td>
<td>48%</td>
<td>13%</td>
</tr>
<tr>
<td>1983 - University Hospital</td>
<td>32</td>
<td></td>
<td>54</td>
<td>13</td>
</tr>
</tbody>
</table>

The next section will now explore and compare in depth the actual task composition of direct care for each of the two historical eras.

Direct Care Task Analysis

Direct Care: 1950s

The 1950s collective task conception of direct care activities included 113 different items (see complete
listing in Appendix E). Items for the present study were selected from sections labeled "Nursing Care" and "Medication, Treatments, and Procedures". "Special Services", which included direct care nursing tasks for specialties such as obstetrics and the operating room, was deleted since the 1983 listing was designed only for an adult medical-surgical and critical-care patient population.

In the 1950s list of 113 nursing care tasks, 54 were "Nursing Care" activities while 69 of the direct care tasks were "Medications, Treatments, and Procedures" activities.

Part of the 1950s A.N.A. study format was to separate direct care activities into the two categories of (1) Nursing Care and (2) Medications, Treatments, and Procedures. The A.N.A. reasoned that the latter category was work which could only be completed by professional registered nurses and so wished to demonstrate what part of direct care was spent completing these activities (A.N.A., 1950).

As indicated previously, in the New York Study direct care made up 39% of an average work day. Basic "Nursing Care" activities took up 23% of a work day, while "Medications, Treatments, and Procedures" occupied 16% (New York University, 1952:30). So Nursing Care tasks were 60% of direct care work and Medications, Treatments, and Procedures 40%.
Direct Care: 1980s

The 1980s direct care activities list was developed from the Adult Medical-Surgical/Critical Care Patient Classification Tool (Appendix G). This tool was designed to include all possible direct care tasks associated with any adult patients on the medical, surgical, and critical care units. It was tested for validity by outside consultants at the same time personnel at University Hospital were work sampled. The external consultants agreed that the listing covers 98% of all direct care services at University Hospital in 1983 (Peat, Marwick and Mitchell, 1984). Activities in that two percent of non-covered direct care activities included tasks such as running personal errands for a patient.

The Patient Classification Format was not too unlike the 1950s listing. Page one of the tool listed basic nursing care tasks such as hygiene, nutrition, and vital signs. Included in the twenty-five item listing on the first page were six dealing with medications and intravenous therapy. Each of the twenty-five line items had subheadings which ranged from independent to complex. For each of the line listings a discrete, elemental, and mutually exclusive definition of the task was developed. (See
Appendix G for definitions of the line listings on page one of the tool).

On pages two and three of the tool was a comprehensive list of treatments and procedures along with sub-listings. Definitions do not accompany these task listings because they were already developed in a clinical policy and procedural manual. Thirteen areas are indicated. A total of one hundred and thirty-four separate nursing tasks were listed.

Direct care categories for 1983 were redistributed so that the two subcategories of "Nursing Care" and "Medications, Treatments, and Procedures" paralleled the 1950s categories. When completed, the 1983 Direct Care Activities list included nineteen Nursing Care tasks and one hundred and forty Medication, Treatments, and Procedures task listings. "Nursing Care" tasks were 12% of the total 159 tasks and Medication, Treatments and Procedures" tasks represented 88% of the line items.

In the 1983 University Hospital Study, direct care made up 37% of the total work of a staff nurse. Nurses spent 19% of their work time involved in direct care tasks of basic

12 "Psych Only" category is used in the psychiatric adult unit, which is outside the parameters of this study so it was deleted.
"nursing care" and 19% in direct care tasks associated with medications, treatments, and procedures. Thus their direct care work time was evenly split between basic nursing care and medication, treatments, and procedures tasks.

The next part of this section will compare 1950s and 1980s direct care task listings and time spent by nurses on those tasks.

Comparison of 1950s to 1980s

I will now compare the 1950s and 1980s direct care task lists. Due to my unfamiliarity with nursing practice in the early 1950s, a medical-surgical nursing textbook from that time period served as a reference for task clarification (Fuerst and Wolff, 1959). An example of the working document appears in Figure 2 using the direct care task of blood transfusion. One can see that in 1952 a blood transfusion involved only whole blood, whereas thirty years later a transfusion is relabeled "blood component therapy" and the tasks surrounding transfusion can involve four types of transfusion. This trend towards greater complexity and specificity can be seen throughout the comparison of 1950s with 1980s tasks associated with "treatments, procedures, and medication". However, direct patient care activities associated with basic "nursing care" (i.e., hygiene, nutrition, etc.) remain quite similar over thirty years in
Figure 2. Direct Care Task List: Blood Transformation

<table>
<thead>
<tr>
<th>List No.</th>
<th>Task Title</th>
<th>Task Title</th>
<th>Sublistings</th>
</tr>
</thead>
<tbody>
<tr>
<td>27-3 211</td>
<td>Begins Transfusion</td>
<td>Monitored Meds</td>
<td>Simple, Inter, Complex</td>
</tr>
<tr>
<td>27-4 211A</td>
<td>Assist in Beginning</td>
<td>Bld Component Therapy</td>
<td></td>
</tr>
<tr>
<td>27-5 254</td>
<td>Performs Periodical Check-ups During</td>
<td>Units Cryo/Platelets</td>
<td>No. of Units</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Units WBCs</td>
<td></td>
</tr>
<tr>
<td>27-6 212</td>
<td>Terminates Transfusion</td>
<td>Units RBCs</td>
<td>No. of Units</td>
</tr>
<tr>
<td>27-7 212A</td>
<td>Assists in Terminating</td>
<td>Units Plasma</td>
<td>No. of Units</td>
</tr>
</tbody>
</table>

Humans have basic physiological needs, and when too ill to meet themselves need assistance usually from the staff nurse. One change involves tasks associated with basic care in the area of psychosocial nursing. As Figure 3 demonstrates, the tasks of 1983 are treatment-focused as opposed to the instrumental role assumed by nurses in 1952.

Note: It is important to note however that in 1952 nurses described psychosocial tasks in passive terms (i.e., "reassure"), whereas in 1983 they used treatment terms such as "reality orientation", "limit setting", and "socialization". Another change in basic nursing care occurred in terminology. "Observation" was replaced by "assessment". This change in terminology reflects a change in basic practice. The 1950s nursing texts read like a procedural manual with examples given to "train" nurses to handle specific medical diagnoses or execute specific procedures without relating them to long-range results (Fuerst and Wolff, 1959). Observation as a task with a specific list of signs and symptoms to observe for are appended to each major medical problem (Fuerst and Wolff, 1959: 121-128). In contrast, the 1980s texts focus on the nursing process -- a problem-solving approach --based
Figure 3. Direct Care Tasks: Psychosocial

<table>
<thead>
<tr>
<th>List No.</th>
<th>Task Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Reassures emotionally upset patient or patient's family</td>
</tr>
<tr>
<td>27</td>
<td>Plans recreational amusement for patient</td>
</tr>
<tr>
<td>28</td>
<td>Assists with planning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task Title</th>
<th>Sublistings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Realty Orientation</td>
<td>Simple, Inter, Complex</td>
</tr>
<tr>
<td>Socialization</td>
<td></td>
</tr>
<tr>
<td>Limit Setting</td>
<td>Simple, Inter, Complex</td>
</tr>
</tbody>
</table>

1983
upon scientific methods (Lindberg, et. al., 1983:229 and Sundberg, 1986:42-43). In the 1980s nursing approach, observation is defined as only one of eight methods of data collection (Lindberg et. al., 1983:231). Today observation is viewed as part of assessment -- the first task in the nursing process. Assessment of a client, family, or community for the purpose of identifying potential health issues, a major component of 1980s nurses' work, did not appear either on the 1950s task list nor in nursing texts of that era. Emphasis on the assessment phase, along with a formation of nursing diagnosis (a statement describing actual or potential alterations in the health state of a patient (Sundberg, 1986:43), represents the introduction of scientific problem-solving into the nursing process. Most nursing literature attributes this shift in practice to the movement of nurses from training schools into university settings (i.e., from atomized notions of rate procedure to theoretical ideas of health goal attainment).

One 1950s nursing teacher cited three examples of why merely "trained" nurses would be dysfunctional in the future (Bridgman, 1953:27-29). As a first example, increasing
responsibility for procedures such as blood transfusions would demand an educated professional -- not a technician. As a second example, bioequipment was a major factor in the growth in complexity of diagnostic and therapeutic tasks within the hospital. Nurse teachers in the 1950s documented the fact that technological growth altered nursing's work (Bridgman, 1953:28). A third argument for an "educated" nurse was the "issue of errors in physician orders" (Bridgman, 1953:29). As early as 1953, nursing was aware of potential problems for patients associated with both rapid pharmaceutical advances and medical specialization. Nursing had become sensitive to the additional basic nursing tasks of coordinating a patient's hospitalization in the environment of technological change and medical specialization.

Basic nursing care changed over thirty years so that 1980s basic nursing tasks are now framed in a perspective of scientifically-based theory and directed more towards basic exploration and cure than the 1950s model of hit-or-miss palliation. But, along with these changes the "caring" functions historically associated with the hospital nurse's

13 At the time this author wrote (1953), nurses were just beginning to assume responsibility from physicians for the tasks associated with blood transfusions.
role continued. Basic nursing care made up 23% of a staff nurse's work day in 1952. This was 60% of the total time nurses spent at bedside.

The 1983 study indicated nurses spent 19% of their work day completing basic nursing care tasks, representing 50% of the total time spent at bedside. There were differences within units sampled at University Hospital. Basic nursing care represented 67% of all bedside nursing tasks on the smaller critical care unit (7W), 52% on the large general medical unit (7E), and 33% on the small, specialized surgical unit (UI). A strong correlation exists between the unit's percent of time spent on basic nursing care and average length of patient stay in the hospital. Unit 7W had the highest percent of basic nursing care along with the longest length of stay, followed by 7E, with UI having the lowest basic nursing care percentage along with the shortest typical patient stay in the hospital. These results, although not statistically significant, suggest that the reduction in length of hospitalizations has affected the nursing tasks at bedside.

Parallel to changes in the direct care category of Nursing Care were changes in Medications, Treatments, and Procedures. The 1950s task list included sixty-nine activities under Medications, Treatments, and Procedures.
In the 1983 list this area was exactly doubled (140). Many of the additions can be attributed to greater specificity in practice as was demonstrated in Figure 3 -- Blood Transfusion. In the 1950s, only whole blood was transfused; but by the 1980s, health care workers had developed an entire therapy based on transfusion of multiple blood components.

The 1950s staff nurses spent 15% of their total work time completing tasks under the category of Medications, Treatments, and Procedures, representing 40% of the total direct care-bedside-nursing tasks. Nurses in the 1983 study spent 19% of their total direct care time in such tasks; but with the decrease in overall percent of time at bedside (39% down to 37%), overall time spent in medications, treatments, and procedures rose from 40% to 50% of total time at the patient's bedside by 1983.

With the rising costs of hospitalization and overall decreased length of stay, today patients no longer remain in an acute care setting for basic nursing care. Extended facilities and home health have replaced the last several days of surgical patients' stays, as well as eliminating patients being admitted to the hospital for only basic nursing care. The patient with a primary diagnosis of pneumonia without complications or secondary health
problems, seen often in the 1950s hospital, is non-existant. Given the formula of higher acuity plus correspondingly higher costs, a patient with viral bilateral pneumonia would routinely be treated at home.

From the hospitalized patient's perspective this shift at bedside from basic nursing care to medication, treatments, and procedural tasks could easily lead to the perception of a less personalized and more technically-oriented relationship than that traditionally associated with the bedside nurse.

The staff nurse's direct care work has changed. But the trend towards more time in medication, treatment, and procedural tasks supports an increasingly important emphasis on the "curing" function by nurses, implemented of course importantly by the traditional "caring" function of nursing. The increase in such tasks also supports the projection made by the American Nurse's Association in 1950 that these tasks would increase in number and complexity over the next several decades thus making them a category of study in the 1950s.

As the 1950s nursing leader forecasted, the proportion of direct care in nurses' work associated with "caring" has changed. The next section of this chapter focuses on indirect care -- that work completed in support of direct
care. Here, the third example of changes in nurses work -- case coordination -- will be taken up.

Indirect Care Task Analysis

Indirect Care: 1950s

Indirect care is that part of a staff nurse's work which is completed away from the patient's bedside. Indirect care has two subcategories -- variable and invariable.

Variable indirect care is labeled as such because it is considered to be "census-sensitive". That is, as the number of patients or level of overall patient-acuity rises, so does the amount of variable indirect care. This care is patient-focused work. Examples which appeared in both historical task lists are chart documentation, patient care planning and transcription of physician orders.

The second subcategory of indirect care is "invariable" (often referred to as fixed) indirect patient care. This work is associated with the hospital's mission to provide health care, but the tasks themselves are not directly related to individual patient care. Rather, work in this subcategory is directed at and completed in support of the patient care unit or hospital-wide organizational structure. Again, examples of invariable indirect patient care tasks in
both the 1950s and 1980s list are ordering supplies, checking equipment, student education, and the professional's own continuing education.

An extensive list of indirect care nursing tasks existed from the 1950s studies. A major reason for this was the professional association's goal to **remove** from the staff nurse's role all non-nursing activities, which were defined as

activity which is directed toward the provision of service within the institution which supports and facilitates the nursing service and wherein the exercise of judgment would affect patient care only indirectly (New York University, 1952:5-6).

Five areas of non-nursing activity listed in the 1952 study were care of environment, provision of and care of equipment and supplies, clerical services which facilitated patient care, messenger and transportation services on behalf of or for the patient, and servicing dietary needs of the patient (New York University, 1952. See Appendix E for a comprehensive list of tasks for each of these five areas). These non-nursing tasks are considered part of the invariable indirect care list for 1950s nursing.

Several additional categories of invariable indirect care listed in Appendix E considered to be a part of professional nursing are administration, teaching, and,
professional growth (continuing education). A breakdown of percent of work time staff nurses spent in each of these indirect care areas appears in Table 6.

Table 6. Percent of Work Time 1950s Staff Nurses Spent in Various Categories of Indirect Patient Care Activities

<table>
<thead>
<tr>
<th>Indirect Care Tasks</th>
<th>1950s Staff Nurses Spent in % of Indirect Patient Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable:</td>
<td></td>
</tr>
<tr>
<td>Pt-centered</td>
<td>11%</td>
</tr>
<tr>
<td>Invariable:</td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>17</td>
</tr>
<tr>
<td>Teaching</td>
<td>2</td>
</tr>
<tr>
<td>Professional Growth</td>
<td>2</td>
</tr>
<tr>
<td>Care of Environment</td>
<td>3</td>
</tr>
<tr>
<td>Clerical</td>
<td>9</td>
</tr>
<tr>
<td>Equipment and Supplies</td>
<td>3</td>
</tr>
<tr>
<td>Errands</td>
<td>1</td>
</tr>
<tr>
<td>Total Indirect Care Time</td>
<td>48%</td>
</tr>
</tbody>
</table>


Indirect Care: 1980s

The list of variable and invariable indirect nursing tasks in the 1983 study was not as well-developed as that in 1952.14 The distinction between variable (patient-centered) and invariable (unit-based) remained; but what was of more interest to nursing was the breakdown of indirect care work.

14 A copy of the list is appended to this study.
into the categories of paperwork, communication (face-to-face and telephone), and other (a catchall category). The 1983 indirect care work sampling results were presented both ways.

A breakdown of indirect care by categories of variable and invariable appears below in Table 7.

Table 7. Percentage of What Time 1980s Staff Nurses Spent on Indirect Care by Patient Care Unit.

<table>
<thead>
<tr>
<th>Types of Indirect Care</th>
<th>Variable (Patient-centered)</th>
<th>Invariable (Unit-centered)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Care Unit:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UI</td>
<td>36%</td>
<td>63%</td>
</tr>
<tr>
<td>7W</td>
<td>55</td>
<td>45</td>
</tr>
<tr>
<td>7E</td>
<td>43</td>
<td>57</td>
</tr>
<tr>
<td>University Hospital total</td>
<td>45%</td>
<td>55%</td>
</tr>
</tbody>
</table>

University Hospital's overall indirect care time represented 49% of a nurse's work day (U-I (44%); 7W (54%); and 7E (49%). A similar work sampling study, cited earlier, and completed the same year in a similar facility listed indirect care as 47% of a nurse's work day—Manyard et. al., 1986:31). This supports the argument that University Hospital's nurses work is typical of hospital nursing in the 1980s.
A second breakdown of indirect care task categories by paperwork, communication, and other indirect tasks is presented in Table 8.

Table 8. Percent of Work Time 1980s Staff Nurses Spent in Paperwork, Communication, and Other Indirect Tasks by Patient Care Unit.

<table>
<thead>
<tr>
<th>Type of Indirect Care Task</th>
<th>Paperwork</th>
<th>Communication</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pt Care Unit:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UI</td>
<td>41%</td>
<td>41%</td>
<td>17%</td>
</tr>
<tr>
<td>7W</td>
<td>34</td>
<td>49</td>
<td>17</td>
</tr>
<tr>
<td>7E</td>
<td>58</td>
<td>38</td>
<td>05</td>
</tr>
<tr>
<td><strong>University Hospital Total</strong></td>
<td><strong>47%</strong></td>
<td><strong>42%</strong></td>
<td><strong>11%</strong></td>
</tr>
</tbody>
</table>

Paperwork represents a significantly greater part of the general medicine unit's (7E) indirect work (58%), communication was 38%, and all other tasks made up 5% of the indirect work. The two smaller specialized units, Unit I and Seven West Organ Transplant, had different patterns. Unit I's work was evenly distributed between paperwork and communication with another 17% in other indirect. The 7-West Organ Transplant unit had a similar "other" indirect care percentage (17%); but, experienced the highest percentage of indirect work time in communication (49%) followed by paperwork (34%).
Unit size may explain some of the differences between 7E and the two other units. Certain organizational tasks are hospital-based and require equal representation from all patient units (i.e., committee participation, quality assurance studies and student supervision). So a large unit like 7E with a considerably larger staff spent a proportionately lower percent of the individual staff nurse's work time on unit-related tasks which would be recorded as "other". In addition, the ratio of nurse to patients is higher than in the smaller specialized units, so the amount of work time an individual staff nurse spends documenting patient charts is greater. As noted, the unit with the highest bed census spent the most time on paperwork, followed by the unit with the next highest census (UI). Similarly, 7W, the smallest unit with lowest ratio of nurse to patient spent the lowest percent of indirect time on paperwork.

As the amount of time spent on paperwork correlated with census, so the degree of medical specialization correlated with the category of communication. Seven-West, the most specialized unit, spent a higher percentage of indirect time in communication than did either of the non-critical care units.
Indirect Care: Comparison of 1950s and 1980s

Rademaker pointed out in her study of technical skills and registered nurses that the ANA's 1950s work sampling results ultimately accelerated the introduction of auxiliary and non-nursing personnel by its documenting that professionals were spending too much time in menial "non-nursing" types of tasks (1982:9). She further noted that, as a result of nurses' employment of Scientific Management's principles in patient unit management in the early 1960s, unit clerks began to assume many of the routine clerical and administrative functions that belonged to nursing in the 1950s (Rademaker, 1982:9). The comparison of 1950s and 1980s indirect care task composition (Table 8) clearly indicates that many non-patient-centered tasks have been redefined as outside the parameters of nurses' work.

Table 9. Comparison of Percent of Work Time Staff Nurses Spent in Indirect Care: 1952 and 1983.

<table>
<thead>
<tr>
<th>Collective Task Conception:</th>
<th>Type of Indirect Care</th>
<th>1952</th>
<th>1983</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient-centered</td>
<td>Variable</td>
<td>19%</td>
<td>45</td>
</tr>
<tr>
<td>Unit-related</td>
<td>Invariable</td>
<td>81%</td>
<td>55</td>
</tr>
</tbody>
</table>
Overall, indirect care activities as a percent of staff nurses' work remained constant over the thirty years. But of most interest is the composition of indirect care work. A significant shift in the type of indirect care tasks away from unit-related (invariable) to patient-centered (variable) work has occurred. (Table 9).

This trend is, in fact, accelerated in the 1983 study. The critical care unit (7W), a small, highly specialized intensive care unit, has a variable (patient-centered) indirect patient reading of over 55%, with tasks of communication making up one-half of this unit's indirect work. This is particularly important because the shift to a higher percentage of hospital beds as designated for intensive care is evident in the 1980s health care institution.

Summary Comparison of Collective Task Conceptions of Nursing: 1950s and 1980s

The ratio of direct to indirect care over the last thirty years is surprisingly stable. The differences in amount of time nurses spend at the bedside are small, yet, the composition of tasks has changed markedly.

The "curing" function of nursing is evident in 1983 in the treatment-focused psychosocial tasks, as has been a
transition from passive observation to active assessment and a rise in amount of time spent on medication administration, treatments, and procedural tasks at the bedside. The "caring" function still remained visible but today represents a smaller part of nursing's bedside work, perhaps contributing to the patient's perception of a less personalized but more technically-directed nurse. Bedside work driven by the nursing process had a more conceptual basis in 1983, thus reflecting the professional socialization in a university setting.

The most dramatic changes in nurses' work surfaced in the category of indirect care. The percent of a nurse's indirect work time spent on patient-centered (variable), indirect care shot from 19% in 1952 to 45% in 1983. The percent of overall work time spent on patient-centered, indirect care rose from 11% in 1952 to 26% in 1983, the sharpest rise occurring in the intensive care unit -- the prototype patient care unit of the 1990s.

Much of the non-nursing indirect care tasks listed in the 1950s studies (housekeeping, clerical, and dietary tasks) have been moved outside of 1980s nursing and evolved into their own specialized occupations.

Changes in nursing technology -- work -- have led to organizational structural changes. Chapter Five will detail
changes in the nurse's work arrangements and operational definitions of organizational structure that have followed changes in nursing technology.
CHAPTER V

NURSING: A PERSONAL SERVICE PROFESSIONAL
IN LATE-INDUSTRIAL ERA ORGANIZATION

Organization of Knowledge-Based Worker

The organizational structure of hospital nursing has shifted in response to technological change from an institutional to a patient-centered work focus. In this chapter I will discuss this shift and then use Halmos' (1970) concept of personal service professional to categorize organizationally-bound professions, labeled "semi-professionals" in the sociological literature. The personal service professional perspective serves as an explanatory model for the direction hospital nursing has taken in response to the increased differentiation and specialization of work in hospitals -- a prototype organization of late industrial society. "Knowledge-based" workers (Freidson, 1973) frequently reject traditional managerial rationalization and control (Berkley, 1971). Therefore, an alternative definition of professional power and control is offered for nurses in the dual occupational and organization role of coordinator or integrator. In this way, a convergence of occupational and organizational sociological models can be achieved.
Shift in Hospital Nursing's Organizational Structure

Operational Definition

Organizational structure was the dependent variable in this study. Since the focus of analysis was nursing’s core technology (staff nursing), the organizational structure investigated was working at the patient’s bedside. "Work arrangement", a term first coined by Dornbusch and Scott (1975:78), was used in this study to connote how nursing tasks are structurally assigned and completed by personnel on the patient care unit. A summary of each historical collective task conception with its parallel work arrangement will be presented along with a summary of technological changes over the last thirty years. I will use the Weberian ideal type as a tool for presenting and comparing the two historical periods (1964: 89-92).

1950s: Era of Generalists

The 1950s hospital health team was composed of professionals in medicine, social work, occupational therapy, physical therapy, clergy, and nursing (Lambertsen, 1953:7). But, as one 1950s' nursing textbook noted, day-to-day health care delivery was only a three-way system including physician, nurse, and patient (Fuerst and Wolff,
1959:7-9). Most patients were admitted, treated, and followed up (after hospitalization) by their own family physician. The idea of medical specialization was not yet well formalized in the early 1950s, and only about twenty medical specialties even existed (American Board of Medical Specialists Statistics for 1953). So, typically a nurse worked with one doctor per patient case.

Nursing technology, as evidenced in the 1952 collective task conception, was made up chiefly of basic nursing care at the bedside and unit-based tasks at the nursing station. The established work arrangement for assignment and completion of nursing tasks was "team nursing".

Team nursing, considered an organizational innovation in the early 1950s, lasted as an established work arrangement through the mid 1970s. One to two registered nurses, a licensed practical nurse, and perhaps one nurse's aide were assigned to a group of twenty to twenty-five hospitalized patients. The goal of team nursing was to maximize use of nursing staff skills thereby providing efficient nursing care (Lambertsen, 1953). The role of team leader was assumed by the registered professional staff nurse, and assignment and completion of nursing tasks were

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15 Certification, a means of formalizing medical specialists, did not begin until the mid 1950s.
organized around the nursing team. The team leader provided directly to all patients on the unit the professional components of care (medications, treatments, and procedures), directed non-professional staff in the completion of all other tasks, and worked with the patient's physician. Since most of 1950s nursing tasks included basic nursing care (direct) and non-skilled organizational work (indirect), team nursing as a work arrangement was quite functional.

Nursing assumed all "caring" functions, while medicine assumed the "curing" function. Adults with all types of medical and surgical problems were admitted to the same type of general medical-surgical patient care units.

Team nursing was the model of nursing service delivery in all 1950s sites included in this study. It was also the practice at the University Hospital in the 1950s as evidenced in 1954 Department of Nursing documents listing "Responsibilities of the Team Leader", found in the University library archives.

Growth of the Differentiation and Specialization in Health Care

Rapid growth in the number of hospital-based employees occurred between 1950 and 1975 (see Table 10). During the
twenty-five years during which team nursing remained the established work arrangement, many changes in the types and number of professional and technical occupations occurred.

Table 10. Rise in Hospital-Based Technicians, Physicians, and Nurses over Twenty-Five Years

<table>
<thead>
<tr>
<th></th>
<th># in 1950</th>
<th># in 1975</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technicians</td>
<td>78,038</td>
<td>397,000</td>
<td>400%</td>
</tr>
<tr>
<td>Physicians</td>
<td>220,000</td>
<td>394,000</td>
<td>79</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>375,000</td>
<td>935,000</td>
<td>149</td>
</tr>
</tbody>
</table>


Strauss demonstrated that development of technical medical occupations followed the structure of medical specialties (1966:101-102). Between 1963 and 1980 not only did the absolute number of hospital-based health workers increase, but specialization in and around medicine occurred at an accelerated rate. A comparison of total physicians by area of practice in 1963 and again in 1980 demonstrates the trend towards specialization in medicine, which (as of 1983) yielded over eighty different medical specialties recognized by the American Medical Association (1983 Statistics). Over seventeen years (1963-1980), the number of licensed physicians in general practice (typical 1950s hospital
physician) had dropped 30% (American Medical Association Statistics 1964:1981). During the same time period the number of physicians in medical specialties rose 112% as did the number in surgical specialties by 62% (American Medical Association Statistics, 1964.). Other types of medical specialties (e.g., psychiatry, ophthalmology) grew 168% (American Medical Association Statistics, 1964.). As a result 249 different hospital jobs existed by 1970 (U.S. Department of Labor, 1970) and the overall number of personnel per hospital bed rose from 73 in 1946 to over 300 by the mid-1970s (American Hospital Association Statistics, 1977).

Following the trend of specialization in medicine and the rise in number and type of hospital technicians was the increased prevalence of admission to intensive care units. ICUs were practically non-existent in the 1950s hospital setting, but by mid-1970s had been set up in 72% of all hospitals (American Hospital Association, 1977). By 1980, 30% of all hospital beds in the United States were in ICUs (Jacox, 1982:77). Due to innovation in medical technology and shorter hospital stays, hospitals are caring for much sicker patients today.

Nursing technology too has changed. The curing function of nursing has become equal in importance to the
caring function. Training of nursing students (1950 model) in the hospital was replaced by the university education of nurses. Team nursing, as a work arrangement, was becoming dysfunctional in most hospital settings by the mid-1970s. With the rise in patient acuity, increased complexity of technology, and multiple technical and professional specialists at the patient's bedside, nursing technology was forcing a change in the work arrangement.

1980s: Highly Differentiated and Specialized Work

Hospitals of the 1980s represent a typical late industrial organization in that it produces a service and employs multiple highly educated specialists with diverse technologies. The typical 1950s general medical and surgical units have given away to specialized medical and surgical units along with increased use of ICUs. An individual patient's course of treatment is under the direction of multiple medical specialists and completed by an array of technicians. The division of labor is much more complex and interdependent. The actual length of a patient's hospitalization has decreased (largely due to influences, governmental and economic, outside the social institution of health care), while the patient's actual acuity or degree of illness has risen sharply. Nursing
technology, as evidenced in the 1983 collective task conception, had changed not in the amount of time at the bedside but rather in what made up hospital nurses' work. Nursing tasks at bedside were made up equally of caring (basic nursing care) and curing functions (medications, treatments, and procedures). A major change also occurred in nurses' indirect work tasks. Patient-centered work tasks which made up 23% of indirect care tasks in the 1952 study now make up almost 47% of indirect care work. And, as evidenced in the comparison of University Hospital units, the ICU's nurses spent over 55% of their indirect care time on patient-centered indirect care activities.

This shift in work composition explains why primary nursing, as a work arrangement, gained popularity in hospital nursing in the mid 1970s. University Hospital initiated primary nursing in 1973 and by 1983 all units had implemented the conceptual structure. Originally conceived (by Marie Manthey at the University of Minnesota Hospitals) in 1970, primary nursing advocated a holistic approach to patient care adapted from an educational model developed in collegiate nursing which emphasizing individualized patient care (Marram et. al., 1974:46). A student assumed responsibility for a patient's care from admission through discharge. The purpose of this model was to teach students
patient case management in addition to providing nursing care. In the hospital, primary nurses (registered professional staff nurses) assumed accountability for providing total, comprehensive, continuous, patient-centered care for the duration of a hospital stay. This was completed through primary nurse coordination of patient care. Communication with and among patient, family, physicians, and other health workers was the chief function of primary nursing. This was obvious from the 1983 findings which indicated that staff nurses spent about 42% of their indirect care time in patient-focused communication. Again the critical care unit reported a higher percentage of time (49%) spent in communication. The other major category of indirect care activities in the 1983 study, paperwork, took up approximately 47% of nurses' indirect care work time. These findings are supported by the research of Leatt and Schneck (1982), who also found that increased complexity in health technology led to increase in number of written documents produced on a patient care unit. Two additional findings of the Leatt and Schneck study were that increase in technology produced a greater ratio of professional nursing staff to patients and a corresponding decentralization of the decision-making process concerning patient care.
The 1983 University Hospital Study results corresponded with Leatt and Schneck's statement. As technology increased, so did the proportion of professional nursing staff to patients. Within the 1983 study, differences in the medical, surgical, and the critical care units were obvious. On 7 East, a general medical unit, 60% of the personnel shifts worked were completed by registered nurses; whereas on the smaller specialized surgical unit (UI) the number rose to 64%, and on the critical care unit (7W), to 71%. Again, as the work changed so that more of it had to be completed by professional nurses, the percent of professional staff increased. This shift in technology made the team nursing work arrangement obsolete.

Actual decision-making, clinical and administrative, was not measured directly as part of this study. However, from the increased time nurses' spent both in direct care tasks associated with assessment and monitoring and indirect care tasks in the category of communication, one could infer that a high degree of patient-centered decision-making by individual primary nurses had occurred.

A great deal of nursing research in the last decade has focused on the differences in nursing care which patients receive under team versus primary nursing (i.e., Hamera and O'Connell, 1981; Shukla, 1981). Jones (1975) examined the
effect primary nursing had on patient case management. She discovered that patients on a renal transplant unit (similar to the one used in the 1983 study), where primary nursing was the established work arrangement, were discharged on average twenty-one days sooner than on a similar unit using team nursing. This research indicated primary nursing was a structurally effective work arrangement.


Professional hospital nursing work in the 1990 is projected to consist of 50% clinical assessment and 50% case management (Jacox, 1982:79). As does the federal government, nursing leaders project all-RN teams in most acute-care settings (Alfano, 1980).

Organizational Coordination: Role of 1980s Nursing

The general consensus among published authors in nursing is that the major role of 1980s hospital nursing is to integrate and synthesize volumes of differential knowledge into coordinated, safe, patient care (McClure and Nelson, 1982:65).
As health care has continued to specialize and the numbers and types of technicians have expanded, nursing's occupational and organizational roles too have changed. Nursing as a profession has clinical responsibility for a new, high-tech type of nursing care increasingly focused on the curing function. Concurrently, nursing as an organizational member in the role of primary nurse is accountable for using professional knowledge to administratively manage patient cases.

In their theoretical analysis of organizations, Lawrence and Lorsch (1969) explicated the ideas of differentiation and integration. They state that organizations are divided into subsets of people specializing in particular functions, termed differentiation. Within these subsets, people are enmeshed in their own areas of concern and develop their own sets of values, attitudes, and norms that affect their behavior differentiated groups so that they come together for the purpose of fulfilling the organization's goals and producing its product. All this is termed coordination or integration. Because integration is vital to the organization's integrity, persons serving in the role of coordinators-integrators assume increased status and power.
It is easy to apply the Lawrence and Lorsch framework to the analysis of 1980s' hospitals. Hospitals are organized into highly specialized organizational subsets. Differentiation clearly exists thus making necessary the process of integration so that the hospital's organizational goal -- to deliver health services to patients -- is met. The differentiated parts must come into play at the right time and the right place if the patient is to benefit. It is the professional staff nurse who assumes this role of coordinator-integrator at the bedside.

Convergence of Organizational and Occupational Sociological Models

This role of coordinator within an organization is not unique to hospital nursing. Other professionals, which would traditionally be considered "semi-professionals" or marginal professionals, in part due to their organizational location, have assumed the organizational role of integrator by virtue of their professional education and organizational placement. The role of social workers in industry has been researched and found to be similar to that of hospital nurses in their integrative functioning (Frank and Streeter, 1985; Gould et al., 1985). In fact, the professionalization of personnel administrators has in part been due to their
coordinative function in employee industrial relations (Baron, 1986).

Nass (1986) suggests that sociologists focus on similarities between professionals and organizations rather than differences. Perhaps the constrictive nature of traditional occupational and organizational literature has made doing this difficult. Occupational sociologists tend to view organizational affiliation as incompatible with professionals' work, and organizational sociologists try to ignore or compartmentalize professional employees. Halmos' model of personal service professions can clarify the different directions professionals can take within the boundaries of a formal organization and show how these directions support overall organizational structure. I hope such a blending of occupational and organizational models offers a more effective way to study work in the late industrial society.

Halmos (1970) suggests that the professions of nursing, teaching, and social work should be considered different from medicine, law, accounting, and engineering in that the former are professions whose principal function is to bring about changes in the client as a whole person. To do this, the professional must deal with the person as a human entity, and so he applies the label of "personal service
profession" to them. On the other hand, physicians, lawyers, et. al. tend to deal only with specific client needs or problems -- not the client as a whole person. Certainly there are professionals who combine both approaches. The family practitioner and pediatrician are examples of medical specialists who would qualify as personal service professionals, as would a family lawyer who acts as advisor and confidant. But, generally, professionals who address specific client needs or problems in isolation from the person as a whole work in what we may refer to as "impersonal service professions".

The important distinction in Halmos' model of professions for purposes of this discussion is whether or not a professional deals with a client holistically. In the case of health care, nurses and social workers can be viewed as professionals who deal holistically with patients; whereas many medical specialists, hospital administrators, and technicians deal only with a client's "third party problem". The number of physicians in hospital practice who would be considered in the category of "personal" service professionals has dropped significantly over the last thirty years. Patients coming into the hospital are subjected to many professionals who address third party problems (i.e., radiologists, anesthesiologists, and surgeons). With
increased specialization within all professions, the number and amount of "impersonal" service professionals rises, thus creating a need for integration within and between occupations.

At the same time that specialization within professions gives rise to a need for integrating the overall number of "knowledge-based" workers within organizations (Freidson, 1973), this group has challenged traditional organizational models of control and authority (Berkley, 1971).

Freidson has suggested that the division of labor in late industrial society (he uses the term "postindustrial") will be based on occupational rather than managerial authority (1973:57). He specifically cited health care as an organization which will be structured around the authority of physicians. I agree that knowledge plays a significant role not only in the technology of late industrial society but in the structural organization of work as well. Within the field of health care, knowledge has pushed technology forward and contributed to increased specialization and differentiation in all health-related work. But as discussed earlier, increased medical knowledge does not necessarily address the fundamental organizational problems of coordinating all aspects of high-tech care at the patient's bedside -- the site of service delivery. As
greater specialization and differentiation of work associated with health care delivery occurs as a result of new knowledge, the need for integration of all impersonal service professionals' services increases proportionately. Concepts of professional control and authority take on a new shape in such a structure. The sharp edges of professional control and authority are blunted into situations of "negotiated order" at the patient's bedside where multiple impersonal service professions simultaneously practice. There the personal service professionals in the role of integrators are essential in order to apply professional knowledge to organizational tasks of coordination.
CHAPTER VI

SUMMARY AND CONCLUSIONS

Summary of Findings and Limitations

This study compares and analyzes nursing tasks in hospital inpatient settings, tracing the technical changes in work over a thirty-year period. The first time period, the 1950s, was an era of low specialization in medicine and little differentiation of hospital work. It is compared with the second era, the 1980s, when medicine had become highly specialized and hospital work had undergone a higher degree of differentiation.

Work technology here is the independent variable, and organizational structure of nursing, conducted on an inpatient unit level, is the dependent variable. Structure is meant to include the ways in which nurses assign and complete their work.

The comparison of 1950s' and 1980s' nurses' work indicates that differences in actual amounts of time nurses spend at the bedside are minimal; yet the composition or nature of such tasks today is markedly different.

The curing function of nursing (i.e., assessment, medications, treatments, and procedures) is very evident in
1980s nursing. The traditional caring function of nursing (e.g., feeding and bathing patients) still remains visible but today represents a smaller part of nursing's bedside work.

The most dramatic change in nurses' work surfaced in the category of indirect work -- work done in support of bedside activities. The percent of a nurse's indirect work time spent on patient-centered tasks (i.e., paperwork and communication) shot up from 19% in 1952 to 45% in 1983.

Change in nursing technology has led to organizational structural change. This study concludes that these changes have been caused by a need for nurses to assume the role of coordinator-integrator, whereby the modern nurse distinctively coordinates the many health professionals and technicians practicing at the patient's bedside.

This study can contribute to both occupational and organizational literature chiefly because it seeks (as does the 1980s hospital staff nurse) to integrate two highly specialized but interdependent bodies of knowledge into one useful approach. It is my hope that this study also contributes to a better understanding, from a sociological viewpoint, as to what a professional staff nurse's role is in the social institution of health care as well as to the understanding of how groups labeled "marginal professions"
can contribute to the delivery of professional work. This study should assist the modern medical establishment to clarify and perhaps institutionalize this implicit and unique -- but insufficiently recognized -- nurse role.

This study has focused narrowly on the role of professional staff nurse on the patient care unit and is a study of changes in nursing technology within the organizational environment of a hospital. I believe I have demonstrated that changes in nursing technology have produced changes in nursing's organizational arrangement, which in turn have led to the identification of a new work role for staff nurses as integrator in a prototype late industrial organization (the hospital), where specialization and technical differentiation has introduced a critical need for integration. In knowledge-based organizations, the coordinator contributes an indispensable mechanism of order and control whereby the nurse-integrator uses a professional body of knowledge (nursing) to coordinate multiple medical and technical functions in the service of the organization's product -- health renewal. This new form of professional control is based on a "negotiating of order" among multiple professionals.

A major limitation of this study is that both research sites (1950s and 1980s) are urban teaching hospitals.
Indeed, the urban teaching hospital is not like smaller community hospitals in structure and in the roles nurses play. This discovery came out in Chapter III when I was forced to eliminate one research site as result of comparing the differences in urban and rural hospitals with respect to nurses' work. The urban teaching hospital, on the other hand, has become the site for most professionals' initial socialization into their health professional roles (physicians, nurses, pharmacists, social workers, etc.). All these take with them perceptions of their own and other health professionals' roles, developed here, wherever they practice. Trends first appearing in urban teaching hospitals then ultimately filter into mainstream health service delivery systems everywhere (e.g., the use of ICU's and work arrangements like primary nursing). While, many hospital nurses' work may not be identical to that of University Hospital's nurses in the 1983, the long-term trend is well established. Since both historical sites were similar, the historical projection for the change holds.

Contribution to Medical and Organizational Sociologies

Medical sociology was born in a 1950s hospital. Medicine afforded sociologists the opportunity to study a traditional profession. Nineteen-fifties' nursing was type-
cast as an occupation whose chief function was to carry out the physician's orders. The assumption that a hospital has only one technology, based on the biomedical model, around which other health-related occupations organize their work, remains for the most part unchallenged. I would like to suggest three ideas contributing to this sociological lexicon which have presented hurdles for me in the completion of this study. One idea originated in organizational theory and the second in occupational literature; the third is primarily a methodological issue.

1. One Organization -- One Technology

The role of technology in organizations gained prominence in the 1970s especially among the macro-level theorists. But, as I pointed out in Chapter III, the concept of technology remained unidimensional. Organizations were frequently characterized or categorized by their "technology", with all work, for example, in hospitals being measured according to the technology of diagnosing and treating medical problems. Thus medical technology supposedly is a hospital's raison d'être. If one starts with such an assumption, it is easy to see how one can conclude that the paraprofessionals (including nursing) are there only to assist the physicians in their work.
On the otherhand, I have taken the position that most late industrial era organizations have multiple technologies which, in the process of meeting shared organizational goals, become interdependent. I believe this perspective allowed me to examine changes in hospital nurses' work over thirty years without losing sight of their interrelationship with other professionals (physician) and the organizational workplace (hospital). As a result of studying nursing technology, I was better able to understand the relationship between changes in medicine, nursing, and the hospital's organizational structure at the patient unit level.

2. Professional Versus Organizational Affiliations

A second major sociological theme which has presented barriers for me in this study was the false dichotomy of professional authority versus administrative authority. In the beginning of Chapter II, I briefly reviewed nursing's occupational history using established sociological models of professionalization. Repeatedly, the issue of organizational affiliation and control surfaced as an explanatory variable for nursing's marginal or semi-professional status. In fact, the definitions of professional authority and power historically employed by sociologists, are challenged in a work environment of multiple professionals. The occupational literature does
not present a model of professional control or authority which accounts for the process of decision-making and accountability when multiple medical specialists practice simultaneously at one patient's bedside situation, which is the norm in 1980s hospitals.

Most medical sociological literature dealing with health professionals in the last ten years appears to be a rehash of the preceding ten years. (A recent example in a sociological journal pronounces nursing a "heteronomous organization" -- Alexander, 1984). This literature serves only to reinforce the false dichotomy of professional and organizational affiliation and overlooks the reality that most professionals in the 1980s have some kind of organizational affiliation. I believe a more productive approach is to study professionals' work arrangements and look for points of convergence, as well as divergence, in their occupational and organizational roles. The historical separation of occupations and organizations as fields of sociological inquiry has become dysfunctional and in many instances too artificial.

3. "Taylorphobia"

The third issue surrounds the methods and techniques used in this study to measure nurses' work. I experienced a certain discomfort with the use of industrial engineering
models. I viewed industrial engineering as the grandchild of Scientific Management. I wondered if the use of methods designed by followers of Taylor would be useful in a sociological study of work. Taylor's turn-of-the-century research on industry's move towards increased specialization and differentiation, along with his observations on the social relations of industry, were valuable to sociology (1911:99). But Scientific Management as a working model especially applied to professionals' work would be rejected today by most sociologists. I did make a special effort to separate the theory from the methods, and I found the methods to measure work developed at the turn-of-the-century by Scientific Management to be very useful in this sociological study of professionals in an organizational setting. I do believe one can accept the measurement techniques while rejecting the underlying model. Rademaker (1982) makes the point that many of the gains made by nursing in the 1960s to get rid of the non-nursing tasks were the results of the 1950s work studies using Scientific Management techniques.

Next Steps

The present study has not focused on the actual process of decision making at the bedside. However, I believe this would be a useful next step. This study also did not
examine many other social trends within the social institution of health care delivery which affect the work role of nurses, most particularly the effect of changes in the work role for "women" (of which status most nurses were and still now are) and the impact of labor unions (which have been gaining acceptance among hospital nurses as a means to make planned changes in the workplace). I believe research in these areas needs to be brought together.
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Isabel Steward, a prominent nursing leader, attempted in 1916 to clarify nurses' work through a listing of six functions which constituted a nurse's duty. The duties included: hygienic and sanitary, administrative and housekeeping, educational, social and civic, professional and "duties to herself" (1916: iv).

Concerns about the most effective use of nurses' time gained momentum with a post WWII nursing shortage. Hospital administrators focused on the cost of graduate nurses and the profession focused on the inappropriate use of nurses as housekeepers (Deming, 1944; Christopher, 1944; and, Lily, 1947). A committee composed of nurses, doctors, educators and civic leaders was headed by Eli Ginsberg in 1947. The committee's purpose was to study nursing functions. This committee's final report recommended nursing functions be divided into two work groups-professional and practical nursing (The Committee on the Functions of Nursing, 1948). Professional nursing supported this recommendation due to their concern over performing routine non-skilled tasks (American Journal of Nursing, 1950 and Streeter, 1950). These activities lead to the adoption of a proposal for a comprehensive study of nursing functions by the American Nurses Association House of Delegates in May of 1950. Study goals were to examine nursing functions and establish the relationship of nursing personnel (RN, LPN, and NA) in all types of work in order to improve nursing care and achieve a better definition of nursing. This plan was published in the December issue of the American Journal of Nursing and studies were funded by the ANA. As a result, multiple state associations studies of nursing using similar methodology were completed. These studies provide the historical basis of data for this research.
APPENDIX B
The practice of the profession of nursing as a registered professional nurse is defined as diagnosing and treating human responses to actual or potential health problems through such services as casefinding, health teaching, health counseling and provision of care supportive to or restorative of life and well-being, and executing medical regimens prescribed by a licensed or otherwise legally authorized physician or dentist. A nursing regimen shall be consistent with and shall not vary from any existing medical regimen.

The Definitions Used In The Preceding Are As Follows

"Diagnosing" in the context of nursing practice means that identification of and discrimination between physical and psychosocial signs and symptoms essential to effective execution and management of the nursing regimen. Such diagnostic privilege is distinct from a medical diagnosis.

"Treating" means selection and performance of those therapeutic measures essential to the effective execution and management of the nursing regimen, and execution of any prescribed medical regimen.

"Human Responses" means those signs, symptoms and processes which denote the individual's interaction with an actual or potential health problem.
APPENDIX C
BRIEF HISTORY ON FEDERAL SPENDING
ON HEALTH CARE: 1965 TO PRESENT

It has been said that the 1960s were a decade of
national spending of the health dollars. Medicare, Title
18 of the Social Security Act of 1965, created a federal
health insurance program for the aged, disabled and those
persons with end-state renal diseases. Public policy was
grounded towards improving the availability of health
services. The program was designed to supplement social
security benefits. The statutory mandate clearly states
that the health care provider should be reimbursed for all
reasonable costs incurred (42 U.S.C. § 1951 (V)(1)(A)).
Most germane to this discussion is Part A of Title 18
which covers hospital insurance benefits which covers
primarily inpatient expenses. Part B of the act provides
for supplemental medical services.

Medicare included both direct and indirect expense
reimbursement to the hospital. An additional two percent
was added to hospital costs to cover processing forms.
(42 U.S.C. § 1395X (V)(1)(A) 1967). In 1966 the total
health care expenditure was six percent of the gross
national product and only 9.9% of the population was over
65 years of age (Davis, 1983: 13).

Medicaid, Title 19 of the Social Security Act,
followed in 1968. Title 19 was designed to provide health
care services for the indigent population.

Both Title 18 and Title 19 provided unrestricted
retroactive reimbursement for documented health care
services provided. It wasn't until 1969 that any
restrictions were imposed. At that time a reimbursement
limitation was imposed as well as the removal of the
additional two percent allowance for indirect costs.

With the 1970s came new federal regulations designed
to curtail health care costs. The federal government
placed limits on the per day reimbursement of hospitals in
1972 for patients admitted with routine diagnoses. By the
fiscal year 1982 the cost of medicare benefits had reached
forty-nine point two billion dollars and represented over
ten percent of the Gross National Product. In addition
11% of the population was over 65 years of age and by 1990
the percent of population over 65 is projected at 12%
Sixty-seven percent of payments went for inpatient hospital reimbursement. This compounded to twenty-five percent of the medicaid reimbursement was for inpatient hospital costs. Twenty-one cents of every national health dollar in 1981 went to pay hospital care (Fischer, 1980:71) thus making hospital care the most expensive part of health care. A breakdown of areas when if the medicare reimbursement dollars were spent is: physicians and other supplies (24%); Outpatient Care (6%); and home health care (2%) (Fischer, 1980:71). Causes for increase expenditures especially in medicare (a higher uses of hospital-based services) are numerous. Grimaldi and Micheletti's identified four major factors causing hospital expenditures to rise at such a rapid rate (1983: 6-9).

The first factor is labelled unit price. Hospital costs rise when the hospital in turn must pay more to purchase goods and services. Changes in hospital costs can be measured by the hospital input price index -- a measurement used by the Health Care Financing Administration to place ceilings on routine operating costs in the medicine program. For the ten years from 1969 to 1979 these costs accounted for three-fifths of the increase in patient services (Freeland and Schendler, 1981). Both a slowdown in national inflation and an increase in competition would theoretically cause a decrease in the accelerating process. Increased per capita utilization on the quantity of hospital care consumed by individuals can explain, in the Gremaldi and Micheletti model, twelve point three percent of the overall increase. A demographic shift in the population over sixty-five, as cited earlier, of course is one of the causes for increased consumption of inpatient hospital services. A third factor in causing increased expenditures for hospital services is "quality". Quality is perceived to be improved by improving the number and skill mix of service providers. The Hospital Service Intensity Index a measurement of change in the cost of thirty-seven frequently provided inpatient services rose 32% in the final half of 1970s. (Phillip, 1977: 180) Increases in both the quantity and quality of hospital care have been fueled by extended insurance coverage -- the fourth factor. By 1980, 92% of national health costs were covered by third parties and 95% of those persons over the age of 65 (Gibson and Waldo, 1980).
Given Grimaldi and Micheletti's causal factor interpretation one can assure that any form of rate-setting on inpatient hospital costs will have only a partial effect in the overall increase in expenditures. Rate-setting can at best curb some increases and encourage better utilization of services. Factors outside the content of the institution of health care – primary inflation and demographic changes – will continue to increase.

Up until 1983 federal programs have determined final reimbursement or approved hospital costs after the services were rendered – retrospective reimbursement. On April 20, 1983 President Reagan signed P.L. 98-21 of the Social Security Amendment of 1983.

Under this new law hospitals will be paid a fixed amount by Medicare on or after October 1, 1983 depending on when this next fiscal year begins. This amount is determined in advance for each case in a diagnosis related group (DRG). This prospective payment made by Medicare to hospitals will be considered payment in full – the hospital cannot appeal for higher DRG payments. However, if the hospital's operating costs are less than payment allotted the hospital can keep the difference. This system applies to all Medicare participating hospitals except psychiatric, long-term care, pediatric, and rehabilitation hospitals.

As the statistics cited above in the section on rising costs in health care indicated, the greatest percentage of the federal health care dollar goes for inpatient hospital costs of those covered through medicare. It has been frequently suggested that the purpose for excluding extended on facilities, is to encourage health care professionals to treat the medicine recipient in less expensive health care facilities. The prospective payment system (P.P.S.) was tested by New Jersey's Department of Health who selected the P.R.G. classification system which was developed in 1975 by researchers at Yale University. Current information on both the trial run in New Jersey and speculations of the effect on health care providers once initiated nationally has overrun all levels of both organizational and occupational journals and papers. In a review of two prominent journals for nursing administrators (Journal of Nursing Administration and Nursing Management) for the year of 1983 no mention was made of D.R.G. or P.P.I..
DRG is a classification system that pays a fixed rate for a particular Medicare patient depending upon which of the 468 DRG categories the patient is assigned to. The variables most frequently used to assign patients to DRG categories are: principle diagnosis; principle operating room procedure; other diagnoses and procedures; patient's age; patient's sex; and discharge status. Then, one provisions for patients said to be "outliers" patients with exceptionally long or costly stay for a given DRG. This is designed to cover the costs of atypical patient. The system is patient rather than hospital-focused. The first set of DRG categories is based on the IDCA-9 cm diagnostic coding system (ICDA = International Classification of Reserve Clinical Modified) used by health care providers. Much criticism of P.P.S. and the DRG methodology exists. The categories and rates are subject to review by statute in 1986. Until this time the reality is that hospitals must accept this package as it is without an appeal process.
APPENDIX D
POSITION DESCRIPTION: CLINICAL NURSE I

- **TITLE:** Clinical Nurse I

- **JOB CLASSIFICATION:** Staff Nurse I

- **OVERVIEW:** Accountable for providing continuous, individualized, holistic and goal directed patient care to an assigned group of patients in accordance with the philosophy of the Department of Nursing utilizing the nursing process and the nursing care plan.

- **QUALIFICATIONS:** Current/pending licensure in the State of Illinois. Graduate of an accredited Associate Degree/Diploma or Baccalaureate RN Program.

- **ORGANIZATIONAL RELATIONSHIP:** Responsible to Administrative Nurse III. Responsible for the quality of patient care for those patients assigned to her/him delivered by self or other staff assigned to assist in that care. Collaborates with other members of the Health Care Team.

- **ENVIRONMENTAL CONSIDERATIONS:** Work may be performed in varied locations inside/ outside of the hospital, such as wards, operating rooms, recovery room, clinics, emergency room, clinical and research labs, and offices. Duties may include travel by vehicle.
ENVIRONMENTAL
CONSIDERATIONS, CONTINUED:

Work may involve exposure to contagious diseases, radiation, anesthesia gases, chemicals, caustic materials, sophisticated electronic equipment and hazards associated with their use, physical injury from patients, visitors, mechanical devices and other hospital equipment.

RESPONSIBILITIES:

Clinical:

1. Takes nursing histories from patients/significant others to establish baseline data that reflect patients' status relative to:
   a) Physiological condition
   b) Psychological and spiritual needs
   c) Socio-economic and cultural status
   d) Patient/significant others expectations

2. Collects subjective and objective data to determine the severity of patients' problems/needs using:
   a) Appropriate communication skills
   b) Data from documentation of previous medical care
   c) Physical assessment
   d) Diagnostic studies

3. Plans, implements and evaluates nursing care in an organized, safe humanistic manner which reflects/includes the patient's needs and priorities.
   a) Sets appropriate priorities.
   b) Establishes a specific nursing care plan.
   c) Revises the nursing care plan as needed.
   d) Implements the medical plan of care as delegated.
   e) Implements and assists others to implement strategies as defined in the nursing care plan.
   f) Identifies unusual patient's response to after-care/therapy.
RESPONSIBILITIES, CONTINUED:

Clinical, Continued:

4. Understands the rationale/techniques for the technical skills used in patient care.
   a) Is proficient in basic patient care techniques used on the unit.
   b) Is responsible for learning new technical skills used on the unit.

Nurse-Patient Relationship:

1. Explains nursing intervention to the patient and/or significant others.

2. Assesses patient's informational needs and learning readiness.

3. Uses teaching strategies and communication skills to meet informational needs of patient/ significant others.

4. Evaluates and revises the teaching strategies while supporting and promoting the patient's right to participate in his care.

Leadership Role:

1. Supports and promotes the philosophy of the Department of Nursing.

2. Participates in formulating and implementing patient care practices and makes recommendations for improvement of patient care.

3. Attends as requested/required unit/divisional/department activities/committees and is prepared to participate.

4. Increases professional competence by participating in self-evaluation and seeking guidance to improve nursing skills which have not been completely mastered.

5. Assumes responsibility for own continuing education and participates in educational activities to increase professional competency.
POSITION DESCRIPTION: CLINICAL NURSE I

RESPONSIBILITIES,
CONTINUED:

Leadership Role, Continued:

6. Participates in unit orientation by introducing general routine and general unit policies and procedures to new staff.

7. Participates in teaching, guiding and evaluating the performance of nursing personnel on a limited basis and communicates observations appropriately.

8. Participates in and supports ongoing research and utilizes research findings to improve patient care.

9. Serves as a positive role model for peers, ancillary nursing personnel and nursing students.

10. Contributes to the learning experiences of nursing students in collaboration with other nursing staff and the clinical instructor.

These duties are reflective of the more significant functional responsibilities assigned to the nurse. In addition, the nurse may be required to assume other responsibilities in order to promote quality patient care.
APPENDIX E
1950'S NURSING TASKS

CHECK LIST OF GROUPED NURSING DUTIES

1. NURSING CARE

(1) Message and exercise patient
   101 Gives general massage to patient
   827 Exercises patient's arm and/or leg
   823 Massage fundus

(2) Tube feed patient
   102 Tube feeds patient

(3) Assist in tube feeding patient
   102A Assists in tube feeding patient

(4) Take blood pressure or apical heart rate
   103 Takes blood pressure
   841 Takes apical heart rate

(5) Collect blood, cultures or smears
   104 Collects peripheral blood specimen
   105 Collects venous blood specimen
   106 Collects cultures and smears

(6) Assist in collecting blood, cultures or smears
   104A Assists in collecting peripheral blood specimen
   105A Assists in collecting venous blood specimen
   106A Assists in collecting cultures and smears

(7) Read orders; plan patient care
(8) 108 Reads orders and reports (physician, hospital, nursing) pertaining to patients
    109 Plans patient care

(9) Make oral report to physician
   110 Makes oral reports to physicians

(10) Make rounds with physician
    111 Makes rounds with physician

(11) Transcribe or check orders
    112 Transcribes and forwards orders or checks for proper transcription
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

1. NURSING CARE - (continued)

(12) **Take medical history**

113 Takes and records medical histories

(13) **Assist with patient ambulation**

118 Assists with patient ambulation

(14) **Turn, lift, or hold patient**

121 Turns, lifts, postures or holds patient

(15) **Use mechanical devices for patient**

122 Uses mechanical devices for comfort or well being of patient

(16) **Admit, transfer or discharge patient**

114 Receives newly admitted patient and assists to bed
123 Prepares patient for or assists with transfer
124 Prepares patient for or assists with discharge
147 Cares for patient's clothes and possessions

(17) **Perform personal services for patient**

115 Performs routine morning care of patient, including bed bath and change of linens
116 Performs routine evening care of patient, including back rub
117 Gives or removes bedpans or urinals
119 Gives bed bath
120 Gives back rubs
146 Makes or changes linens on occupied bed
148 Gives tub bath or shower
160 Performs routine personal care for comfort of patient
161 Performs oral hygiene for patient

(18) **Serve diet tray or nourishment**

125 Plans patient's menu
126 Selects patient's menu from standard menus
127 Checks diet trays
128 Serves or removes trays
130 Serves patients drinking water or between-meal nourishments

158
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

1. NURSING CARE - (continued)

(19) **Feed patient orally**
   129 Feeds patient orally

(20) **Assist in feeding patient**
   129A Assists in oral feeding of patient

(21) **Take temperature, pulse and respiration**
   131 Takes temperature, pulse and respiration

(22) **Collect specimens of excretions**
   132 Collects urine specimen
   133 Collects feces specimen
   134 Collects vomitus specimen
   135 Collects sputum specimen
   829 Collects gastric specimen
   832 Obtains specimens for saliva cholesterol test

(23) **Perform urinalysis, blood feces test**
   136 Performs urinalysis for patients, i.e., sugar, acetone, albumin
   842 Performs blood feces test for infant

(24) **Transport patient**
   137 Transports patient to or from surgery, delivery room, or special services

(25) **Assist with procedures of other services**
   138 Assists with special procedures performed by other services

(26) **Explain orders; talk to patient**
   107 Explains physician's orders or treatments to patients or patient's family
   139 Explains hospital routines to patient and/or patient's family
   140 Reassures emotionally upset patient or patient's family
   142 Teaches patient special procedures, techniques, and health habits
   158 Talks to or sits with patients

159
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

1. NURSING CARE - (continued)

(27) Plan recreation for patient
     141 Plans recreation or amusement for patient

(28) Assists with recreation for patient
     141A Assists with recreation or amusement for patient

(29) Make report to or receive report from nurses
     143 Makes reports to or receives reports from nurses

(30) Chart in patient's record
     144 Charts in patient's medical record

(31) Perform post-mortem care of patient
     145 Performs post-mortem care of patient

(32) Give shampoo to patient
     149 Gives bed shampoo
     150 Gives lavatory shampoo

(33) Shave male patient
     151 Shaves male patient

(34) Assist in shaving male patient
     151A Assists in shaving male patient

(35) Dress patient
     152 Dresses patient

(36) Assist in dressing patient
     152A Assists in dressing patient

(37) Record patient's intake and output
     153 Records patient's food or fluid intake and/or output

(38) Answer patient's light
     154 Answers patient's light

(39) Transport body to morgue
     155 Takes body to morgue
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

1. NURSING CARE - (continued)

(40) Perform personal errand for patient
156 Performs personal services and errands for patient

(41) Order patient's diet
159 Orders diets, baby formulas, nourishments, or refreshments for patients

(42) Hand-lift patient's bed
162 Hand-lifts patient's bed

(43) Weigh patient
163 Weighs patient

(44) Give or remove emesis basin
168 Gives and removes emesis basin

2. MEDICATIONS, TREATMENTS AND PROCEDURES

(1) Give medication by instillation
201 Administers prescribed medications by instillation

(2) Assist in giving medication by instillation
201A Assists in administering prescribed medications by instillation

(3) Give medication by intramuscular injection, etc.
202 Administers prescribed medications by subcutaneous injection
203 Administers prescribed medications by intracutaneous injection
204 Administers prescribed medications by intramuscular injection
809 Performs tuberculin test or other intradermal injections

(4) Assist in giving intramuscular injection, etc.
202A Assists in administering prescribed medications by subcutaneous injection
203A Assists in administering prescribed medications by intracutaneous injection
204A Assists in administering prescribed medications by intramuscular injection
809A Assists in performing tuberculin test
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

2. MEDICATIONS, TREATMENTS AND PROCEDURES (continued)

(5) **Give medication by intravenous injection**
   205  Administers prescribed medications by intravenous injection

(6) **Assist in giving intravenous injection**
   205A Assists in administering prescribed medication by intravenous injection

(7) **Begin oxygen or other gases**
   213  Begins the administration of oxygen or other gases by tent
   215  Begins the administration of oxygen or other gases by mask
   217  Begins the administration of oxygen or other gases by nasal catheter or nasal inhalator

(8) **Assist in beginning oxygen, etc.**
   213A Assists in beginning the administration of oxygen or other gases by tent
   215A Assists in beginning the administration of oxygen or other gases by mask
   217A Assists in beginning the administration of oxygen or other gases by nasal catheter or nasal inhalator

(9) **Terminate oxygen or other gases**
   214  Terminates the administration of oxygen or other gases by tent
   216  Terminates the administration of oxygen or other gases by mask
   218  Terminates the administration of oxygen or other gases by nasal catheter or nasal inhalator

(10) **Assist in terminating oxygen, etc.**
    214A Assists in terminating the administration of oxygen or other gases by tent
    216A Assists in terminating the administration of oxygen or other gases by mask
    218A Assists in terminating the administration of oxygen or other gases by nasal catheter or nasal inhalator
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

2. MEDICATIONS, TREATMENTS AND PROCEDURES (continued)

(11) Perform eye irrigation
219 Performs eye irrigations

(12) Assist in performing eye irrigation
219A Assists in performing eye irrigations

(13) Care for patient in respirator
220 Cares for patient in respirator

(14) Assist with puncture procedures
206 Assists in administering prescribed medications by intraspinous injection
221 Assists with lumbar puncture
222 Assists with pneumothorax or pneumoperitoneum
223 Assists with thoracentesis
224 Assists with abdominal paracentesis
225 Assists with aspiration of joint
226 Assists with paracentesis of eardrum
227 Assists with phlebotomy or venesection
228 Assists with aspiration of pericardium

(15) Begin suction siphonage
231 Begins suction siphonage

(16) Assist in beginning suction siphonage
231A Assists in beginning suction siphonage

(17) Terminate suction siphonage
232 Terminates suction siphonage

(18) Assist in terminating suction siphonage
232A Assists in terminating suction siphonage

(19) Begin tidal drainage
234 Begins tidal drainage

(20) Assist in beginning tidal drainage
234A Assists in beginning tidal drainage

(21) Terminate tidal drainage
235 Terminates tidal drainage
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

2. MEDICATIONS, TREATMENTS AND PROCEDURES (continued)

(22) Assist in terminating tidal drainage
   235A Assists in terminating tidal drainage

(23) Assist with diagnostic procedures, i.e. laryngoscopy, etc.
   236 Assists with laryngoscopy
   237 Assists with bronchoscopy
   238 Assists with esophagoscope
   239 Assists with gastroscopy
   240 Assists with thorascoscopy
   241 Assists with peritoneoscopy
   242 Assists with pneumoencephalogram
   243 Assists with sternal puncture
   244 Assists with performance of biopsies
   245 Assists with stellate blocks
   246 Assists with nerve blocks
   247 Assists with proctoscopy
   248 Assists with cystoscopy
   249 Assists during surgical removal of skin tumor

(24-1) Perform ptismagraph
   247 Performs ptismagraph

(24-2) Assist with ptismagraph
   247A Assists with ptismagraph

(25) Prepare medication and solutions
   248 Prepares medications and calculates dosages
   826 Prepares solutions (boric, zephiran, etc.)

(26-1) Give internal medications
   249 Administers prescribed medications, orally
   250 Administers prescribed medications, rectally
   251 Administers prescribed medications, by inhalation
   824 Administers medication vaginally
   836 Administers prescribed medication by throat spray

(26-2) Assist with internal medications
   249A Assists in administering prescribed medications, orally
   250A Assists in administering prescribed medications, rectally
   251A Assists in administering prescribed medications by inhalation
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

2. MEDICATIONS, TREATMENTS AND PROCEDURES (continued)

(27-1) Add medication to, change or discontinue fluids

803 Adds medication to an intravenous infusion or hypodermoclysis already in progress
804 Discontinues, changes, or begins the administration of prescribed fluids on an intravenous infusion, transfusion, or hypodermoclysis already in progress

(27-2) Assist in adding medication to I.V., etc.

803A Assists in adding medication to an intravenous infusion or hypodermoclysis already in progress

(27-3) Begin I.V., clysis or transfusion

207 Begins the administration of prescribed fluids by hypodermoclysis
209 Begins the administration of prescribed fluids by intravenous infusion
211 Begins a transfusion

(27-4) Assist in beginning I.V., clysis or transfusion

207A Assists in beginning the administration of prescribed fluids by hypodermoclysis
209A Assists in beginning the administration of prescribed fluids by intravenous infusion
211A Assists in beginning a transfusion

(27-5) Check I.V., clysis or transfusion

252 Performs periodic checkups during hypodermoclysis
253 Performs periodic checkups during intravenous infusion
254 Performs periodic checkups during transfusion

(27-6) Terminate I.V., clysis or transfusion

208 Terminates hypodermoclysis
210 Terminates intravenous infusion
212 Terminates transfusion
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

2. MEDICATIONS, TREATMENTS AND PROCEDURES (continued)

(27-7) Assist in terminating I.V., clysis or transfusion
- 208A Assists in terminating hypodermoclysis
- 210A Assists in terminating intravenous infusion
- 212A Assists in terminating transfusion

(28) Apply medication to skin
- 255 Appliesointments or medications to skin

(29) Check during oxygen administration
- 256 Performs periodic checkups during administration of oxygen or other gases by tent
- 257 Performs periodic checkups during administration of oxygen or other gases by mask
- 258 Performs periodic checkups during administration of oxygen or other gases by nasal catheter or nasal inhalator

(32) Apply heat or cold
- 259 Applies hot water bag, electric pad or heat lamp
- 293 Prepares and applies ice bags

(33) Apply compress or stupe
- 260 Applies hot or cold compresses
- 261 Prepares and applies stupes and poultices
- 262 Gives hot or cold wet pack

(34) Give Sitz or sedative bath
- 263 Gives hot tub or Sitz bath
- 264 Gives sedative bath
- 265 Gives emollient bath

(35) Soak hand or foot; sponge bathe patient
- 830 Soaks hand and/or foot in prescribed solution
- 838 Sponge bathes patient to reduce temperature
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

2. MEDICATIONS, TREATMENTS AND PROCEDURES (continued)

(36) Give steam inhalation
266  Gives steam inhalation

(37) Give enemas; insert rectal tube
267  Gives cleansing enema
268  Gives retention enema
298  Inserts or removes rectal tube
835  Applies digital pressure to remove bowel impaction

(38) Perform ear, nose and throat irrigation
269  Performs nose, throat and ear irrigations

(39) Assist with ear, nose and throat irrigation
269A  Assists in performing nose, throat and ear irrigations

(40) Perform bladder, colon irrigation, etc.
270  Performs irrigation of colon
271  Performs irrigation of colostomy
272  Performs irrigation of urinary bladder
273  Performs irrigation of vagina

(41) Assist with bladder irrigation, etc.
270A  Assists in performing irrigation of colon
271A  Assists in performing irrigation of colostomy
272A  Assists in performing irrigation of urinary bladder
273A  Assists in performing irrigation of vagina
820  Cleans, changes or applies colostomy bags

(42) Catheterize urinary bladder
274  Catheterizes urinary bladder

(43) Apply dressing, binder; remove surgical clips
275  Applies, changes, checks, or assists with dressings, bandages and binders
840  Removes sutures and/or surgical clips

(44) Apply orthopedic cast
276  Applies orthopedic casts

(45) Assist in applying orthopedic cast
276A  Assists in applying orthopedic casts
2. MEDICATIONS, TREATMENTS AND PROCEDURES (continued)

(46) Apply or adjust traction, etc.
- 277 Applies or adjusts orthopedic frames
- 278 Applies or adjusts orthopedic traction
- 828 Cuts orthopedic casts

(47) Assist in applying or adjusting traction
- 277A Assists in applying or adjusting orthopedic frames
- 278A Assists in applying or adjusting orthopedic traction

(48) Give preoperative preparation for surgery
- 279 Gives immediate pre-operative preparation for surgery

(49) Shave patient for surgery or delivery
- 280 Shaves patient for surgery or delivery

(50) Assist physician with physical examination
- 281 Assists physician in the conduct of physical examination

(51) Observe patient for special condition
- 282 Observes post-operative patient
- 283 Observes patient following special procedures or treatments, or requiring special watching because of condition

(52) Care for tracheotomy tube
- 825 Inserts, removes or cares for tracheotomy tube

(53) Perform gastric lavage or tracheal wash
- 284 Performs gastric lavage
- 229 Performs gastric wash or tracheal wash

(54) Assist with gastric lavage, etc.
- 284A Assists in performing gastric lavage
- 229A Assists in performing gastric wash or tracheal wash
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

2. MEDICATIONS, TREATMENTS AND PROCEDURES (continued)

(55) **Perform gastric intubation**
- 285 Performs gastric intubation
- 233 Performs administration of gastro-enterostomy tube

(56) **Assist with gastric intubation**
- 230 Assists in performing Miller Abbot tube intubation
- 285A Assists in performing gastric intubation
- 233A Assists with administration of gastro-enterostomy tube

(57) **Check suction siphonage**
- 286 Performs periodic checkups on suction siphonage
- 290 Performs periodic checkups during tidal drainage

(58) **Perform throat suction**
- 823 Performs throat suction

(59) **Begin proctoclysis**
- 287 Begins proctoclysis or Murphy's drip

(60) **Assist in beginning proctoclysis**
- 287A Assists in beginning proctoclysis or Murphy's drip

(61) **Check proctoclysis**
- 288 Performs periodic checkups on proctoclysis or Murphy's drip

(62) **Terminate proctoclysis**
- 289 Terminates proctoclysis or Murphy's drip

(63) **Assist in terminating proctoclysis**
- 289A Assists in terminating proctoclysis or Murphy's drip
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

2. MEDICATIONS, TREATMENTS AND PROCEDURES (continued)

(64) Perform basal metabolism, x-ray, etc.
   294 Performs basal metabolism test
   295 Performs electrocardiogram
   296 Performs electroencephalogram
   839 Takes x-ray pictures

(65) Perform diathermy treatment
   831 Performs prescribed diathermy treatments

(66) Assist with basal metabolism, etc.
   294A Assists with basal metabolism test
   295A Assists with electrocardiogram
   296A Assists with electroencephalogram

(67) Put patient on stretcher or in bed
   297 Places patient on stretcher or puts patient to bed upon return from surgery, delivery room, or following special procedures

(68) Insert or remove body pack
   300 Inserts or removes packs into body cavities

(69) Assists in inserting body pack
   300A Assists in inserting or removing packs into body cavities

3. JIPMENT AND SUPPLIES

(1) Maintain sterile equipment
   401 Selects, assembles and sets up sterile trays, sets, carts and supplies
   402 Removes unwrapped supplies and instruments from sterilizer
   403 Cleans and sterilizes special apparatus (proctoscope, cystoscope, etc.)
   422 Wraps, sorts or puts up supplies for sterilization
   423 Sterilizes supplies and instruments
   437 Assembles and sets up apparatus for intravenous infusion or transfusion
   440 Places wrapped packs in and out of autoclaves
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

3. EQUIPMENT AND SUPPLIES (continued)

(2) Maintain general equipment
   417 Goes after, returns or transports supplies and equipment
   418 Selects, assembles and sets up unsterile trays, sets, carts and supplies
   420 Cuts, wraps, and rolls bandages and dressings; folds linen, winds surgical thread
   421 Cleans needles and syringes
   424 Cleans glassware
   425 Cleans and sterilizes ward utensils (basins, bedpans, glasses, etc.)
   435 Cleans surgical and obstetrical instruments
   436 Washes, sterilizes, dries, sorts, or tests rubber gloves
   441 Cleans or cares for autoclaves or sterilizers
   442 Sharpens luer needles

(3) Maintain special equipment
   404 Maintains special equipment in the proper condition
   412 Selects, assembles and sets up oxygen nasal catheter or inhalator equipment
   413 Selects, assembles and sets up suction siphonage apparatus
   414 Orders exchange or repair of defective equipment
   415 Improvises apparatus for special needs
   419 Selects, assembles and sets up oxygen tent equipment
   426 Makes minor repairs to equipment
   805 Dismantles special apparatus and equipment

(4) Order supplies; take inventory
   405 Orders, receives and stores medical and/or surgical supplies and equipment
   406 Orders, receives and stores drugs
   409 Takes inventory of medical and/or surgical supplies
   410 Takes inventory of drugs
   411 Maintains inventory records of drugs
   416 Maintains inventory records of medical
3. EQUIPMENT AND SUPPLIES (continued)

and/or surgical supplies
428 Checks to see supplies are on hand

(5) Dispense medical and surgical supplies
407 Dispenses medical and/or surgical supplies
408 Dispenses drugs

(6) Maintain linen supplies
427 Orders, receives and stores linens
429 Dispenses, assembles, or sets out linens
431 Takes inventory of linens
433 Maintains inventory records of linens

(7) Maintain household and office supplies
428 Orders, receives and stores household and/or office supplies
430 Dispenses household and/or office supplies
432 Takes inventory of household and/or office supplies
434 Maintains inventory records of household and/or office supplies

4. CLERICAL AND ADMINISTRATIVE

(1) Hold conference and instruction
507 Participates in training course for students or auxiliary nursing employees
515 Participates in conference with medical personnel
516 Participates in conferences with nursing personnel
517 Plans orientation or in-service training programs for personnel
518 Conducts orientation or in-service training programs for personnel
519 Prepares for student lectures, demonstrations and discussions
520 Conducts student lectures, demonstrations, discussions and examinations
521 Prepares and maintains records of student nurses
527 Participates in training courses for own development
532 Participates in conference with non-nursing hospital staff or persons conducting official business with the hospital
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

4. CLERICAL AND ADMINISTRATIVE (continued)

(2) Plan and give supervision

508 Plans or checks daily and weekly time schedules for nursing and auxiliary personnel assigned to unit

509 Plans and makes work assignments for nursing and auxiliary personnel assigned to unit or team

510 Plans and makes case assignments to students

511 Makes "on-the-spot" work assignments

512 Gives special instructions, answers questions of or receives reports from assigned workers

513 Makes rounds of assigned unit and/or patients

514 Prepares evaluation reports for assigned employees

533 Interviews personnel under supervision

534 Interviews with supervisors or other hospital personnel

542 Supervises or follows up on assignments to staff

802 Supervises student nurse during performance of special procedure or treatment

812 Arranges for physical examinations or special appointments for personnel

814 Checks references on nursing personnel or prospective students

818 Plans or writes hospital procedures

819 Observes procedures for own instruction or receives special instructions from supervisors or other workers

(3) Perform clerical duties

501 Prepares post-mortem reports

526 Prepares bed census reports

531 Prepares and maintains routine hospital records and reports

535 Takes patient count at specified time

537 Sorts and distributes mail, reports, or pay checks

540 Makes up, assembles, or rules forms, charts, or records

544 Prepares hospital charge or credit slips

545 Makes or receives telephone calls regarding reservation or admission
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

4. CLERICAL AND ADMINISTRATIVE (continued)

(4) Perform administrative duties

502 Takes orders from, gives information to, or asks questions of physician by telephone or in person

505 Prepares reports regarding seriously ill patients, infections, or unusual occurrences or the condition of patients in the unit or hospital

506 Accounts for drugs, supplies and equipment

524 Makes or follows up on special patient appointments

536 Gives and receives routine information

538 Plans arrangement of or moves supplies, beds, and equipment

547 Obtains patient's release for operation or special procedure

548 Makes or plans bed assignments

549 Orders special duty nurses from nurses' registry or other sources

550 Assists physician or patients in securing nursing home accommodations

551 Interviews applicants for employment or prospective students

552 Composes or dictates letters, reports, or memoranda

553 Schedules patients for surgery

554 Follows up on patient's reports required for surgery or special services

557 Contacts undertakers, coroners, or necessary public officials upon death of patients

580 Reviews or approves payrolls, requisitions, leave requests, mail, memoranda, reports or related material

585 Receives or handles complaints

586 Plans housing of students

587 Inspects new equipment or confers with commercial vendors regarding new equipment
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

4. CLERICAL AND ADMINISTRATIVE (continued)

(5) Perform duties relating to patient
   503 Calls patient's family in an emergency
   504 Gives information on patient's condition
   522 Locates physician or other personnel in emergency
   523 Calls patient's minister in an emergency
   525 Receives patient visitors in unit
   539 Checks on patient's clearance for discharge
   546 Takes patient to assigned floor or room upon admission
   813 Observes patient immediately following expiration

(6) Perform admission procedures
   528 Takes and records information regarding patient's family and financial status
   529 Performs hospital admission procedures (may include the collection of deposit, listing of personal possessions, etc.)
   530 Makes bed reservations

(7) Receive supervisor's order
   541 Receives assignment or orders from supervisor

5. HOUSEKEEPING AND MESSENGER

(1) Perform housekeeping and messenger duties
   601 Runs errands for unit
   602 Takes specimens to laboratory
   603 Dusts patient's unit
   604 Kops or sweeps floor
   605 Cleans or straightens treatment, operating, or delivery rooms
   606 Cleans or straightens utility room
   607 Straightens patient's unit
   608 Regulates temperature and ventilation of patient's unit
   609 Cares for patient's flowers
   610 Makes unoccupied bed
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

5. HOUSEKEEPING AND MESSENGER (continued)

<table>
<thead>
<tr>
<th>Number</th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>611</td>
<td>Makes anesthetic bed</td>
</tr>
<tr>
<td>612</td>
<td>Makes unoccupied bassinets</td>
</tr>
<tr>
<td>613</td>
<td>Disinfects floors and woodwork by scrubbing</td>
</tr>
<tr>
<td>614</td>
<td>Disinfects and sterilizes dishes and utensils</td>
</tr>
<tr>
<td>615</td>
<td>Disinfects bedsteads, bed springs and bed supplies</td>
</tr>
<tr>
<td>616</td>
<td>Air room or area</td>
</tr>
<tr>
<td>617</td>
<td>Prepares mattresses and pillows for sterilization</td>
</tr>
<tr>
<td>618</td>
<td>Disposes of soiled linens</td>
</tr>
<tr>
<td>619</td>
<td>Cleans and straightens closets, cupboards, drawers, worktables, or nurses' chart room or maintains office and household supplies in order</td>
</tr>
<tr>
<td>620</td>
<td>Cleans and straightens unit kitchen</td>
</tr>
<tr>
<td>806</td>
<td>Cleans bathrooms or bathroom fixtures</td>
</tr>
</tbody>
</table>

6. SPECIAL SERVICES

(1) Perform labor and delivery duties

<table>
<thead>
<tr>
<th>Number</th>
<th>Task Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>710</td>
<td>Assists with delivery as sterile nurse</td>
</tr>
<tr>
<td>711</td>
<td>Assists with delivery as unsterile nurse</td>
</tr>
<tr>
<td>712</td>
<td>Administers or assists in administering anesthetic to patient during normal delivery</td>
</tr>
<tr>
<td>713</td>
<td>Takes fetal heart rate</td>
</tr>
<tr>
<td>714</td>
<td>Stimulates newborn to cry</td>
</tr>
<tr>
<td>715</td>
<td>Resuscitates or assists in resuscitating newborn</td>
</tr>
<tr>
<td>716</td>
<td>Dresses cord of newborn and applies band</td>
</tr>
<tr>
<td>717</td>
<td>Gives immediate post-natal bath to newborn</td>
</tr>
<tr>
<td>718</td>
<td>Weighs and measures newborn immediately following delivery</td>
</tr>
<tr>
<td>719</td>
<td>Marks newborn for identification</td>
</tr>
<tr>
<td>720</td>
<td>Puts drops in eyes of newborn</td>
</tr>
<tr>
<td>721</td>
<td>Administers carbon dioxide or oxygen to newborn</td>
</tr>
<tr>
<td>732</td>
<td>Gives perineal care</td>
</tr>
<tr>
<td>749</td>
<td>Observes patients in labor and/or times labor pains</td>
</tr>
<tr>
<td>762</td>
<td>Performs rectal examination on labor patient to determine imminency of delivery</td>
</tr>
<tr>
<td>821</td>
<td>Takes hand or footprints of mothers and newborn for identification purposes</td>
</tr>
</tbody>
</table>
6. SPECIAL SERVICES (continued)

(2) Check security patient
   725 Checks on security measures in psychiatric unit
   747 Makes special reports of patient's condition during restraint

(3) Perform first aid
   726 Administers first aid (pressure dressings or tourniquets; temporary immobilization of parts of body when bones are broken; cuts, burns, sprains, shock, etc.)
   727 Removes foreign particles from eyes

(4) Attend premature baby
   722 Maintains cribs for premature babies
   723 Cares for newborn in respirator
   724 Cares for newborn in incubator

(5) Attend newborn and infant
   728 Performs or assists with intratibial infusion to infants
   729 Performs or assists with pushclys to infants
   730 Performs or assists with infant transfusions
   733 Feeds infants
   734 Bathes infants
   735 Takes infant to and from mother
   736 Takes temperature of infant
   737 Weighs infant
   738 Diapers infant
   739 Displays infant to visitors
   740 Prepares infant's formula
   748 Straightens or changes occupied bassinets
   750 Takes newborn from delivery room to nursery
   751 Assists mother to nurse infant
   753 Heats formula bottles
   754 Assists with circumcision of infant
   755 Wraps or dresses infants
   759 Prepares infants for or following circumcision or special procedures
   761 Administers suction to newborn or infant
CHECK LIST OF GROUPIED NURSING DUTIES (Continued)

6. SPECIAL SERVICES (continued)

(6) Perform delivery and operating room duties

701 Scrubs
702 Selects and lays out sterile instruments and supplies
703 Hands sterile instruments and supplies to surgeon
704 Counts sponges and dressings
705 Notes and disposes of contaminated supplies and instruments
706 Preserves and labels surgical specimens for laboratory examination
707 Accompanies and observes patient on return to assigned unit following surgery or delivery
708 Prepares sterile supplies and equipment for surgery or delivery
709 Prepares patient locally and generally for, or immediately following surgery or delivery
731 Selects and lays out unsterile supplies, equipment and instruments for surgery or delivery
741 Gowns, masks, or gloves self
742 Gowns and masks physician or visitor
752 Makes up stretcher or delivery or operating tables
756 Assists during surgery as circulating nurse
763 Prepares operation, anaesthesia, or delivery reports
808 Performs suction during surgery
822 Administers surgical anaesthesia by inhalation or injection
837 Assists surgeon by holding sterile instrument in patient's body during surgery or assisting with cautery

(6-1) Assist with surgical anesthesia

822a Assists in administering surgical anaesthesia by inhalation or injection

(7) Disinfect articles: dispose of waste

743 Disinfects surfaces and articles
744 Disinfects excreta by chemical methods
745 Disposes of excreta (includes blood, placenta, etc.)
746 Disposes of waste of contaminated materials and supplies
CHECK LIST OF GROUPED NURSING DUTIES (Continued)

7. TIME OFF

(1) **Take time off**

- 800 Takes time off duty for meals
- 801 Time out for religious duties
- 834 Undergoes physical examination required by the hospital
- 900 Takes time off duty for rest periods or personal reasons
- 543 Holds conversation with other employees

8. STAND BY TIME

(1) **Stand by for assignment**

- 167 Stands by for assignment or patient requests
APPENDIX F
Twelve hospitals were selected. In each hospital only general medical-surgical units were used. Two hospitals were located in Rochester and ten hospitals in New York City. In 1952, New York State had a total bed capacity of 58,885 (N.Y.U. 1952: 8). Of this total 35,117 were located in the metropolitan region of New York and 3,467 in the Rochester metropolitan region. Therefore, the sample include sixty-five percent of all beds in the state of New York.

A ten to one ratio existed between down-state to up-state areas selected. The ratio of bed capacity of Rochester to New York City hospital was one to fifteen.

The professional nurses to be observed were selected at random. The selection was completed by writing the name of each nurse on a slip of paper, placing the slips in a box and then drawing names right before the work sampling was to be completed. On units where only one staff name was assigned, that staff nurse was used for the study.

The staff were work sampled for one twenty-four day. In both studies nurses worked one of three eight hour work shifts - days (7:00 a.m. - 3:30 p.m.), evenings (3:00 p.m. - 11:30 p.m.) or nights (11:00 p.m. - 7:30 a.m.). (The same work schedule existed in the 1983 study also).

A total of fifty professional nurses were observed by trained work samples for a total of six thousand separate observations of nurses' work. Going back to the original formula for calculating the number of observations needed for a +/-5% standard of error at a 95% Confidence level outlined earlier in this chapter, only 2,400 observation were necessary if the percent of direct care was equal to forty percent (which it was). Therefore, using this formula, the number of work sampling observations necessary using a 95% confidence level for the category of direct care was met, in fact, doubled. The percent of indirect care was 46.4%. Only 1,880 observations would have been necessary to validate the accuracy of the work sampled. Again the number of observations was more than adequate.
APPENDIX G
UNIVERSITY OF ILLINOIS
DEPARTMENT OF NURSING
PATIENT CLASSIFICATION PROJECT

PRELIMINARY REPORT

APRIL, 1983
UNIVERSITY OF ILLINOIS
DEPARTMENT OF NURSING

PATIENT CLASSIFICATION
PILOT PROJECT

Preliminary Report
April 1, 1983

Submitted by Karole Schafer Heyman, M.A., R.N., member of the Pilot Project Task Force, to the Department of Nursing Patient Classification Committee for approval on April 28, 1983.
UNIVERSITY OF ILLINOIS
DEPARTMENT OF NURSING

PATIENT CLASSIFICATION PILOT PROJECT

Summary
Report
Appendix A: 1982-83 Patient Classification Committee
Appendix B: Unit-Based Pilot Project Participants
Appendix C: Pilot Project Proposal and Activity Calendar
Appendix D: Experimental Tool Subcommittee Membership
Appendix E: Experimental and Control Tools
Appendix F: Tool Return Statistics and Coding Sheets
Appendix G: Technician Report
The University of Illinois Department of Nursing has a two year long commitment to the development of a patient classification system specifically designed to address the hybrid institutional needs of a university hospital.

The purpose of the Department's Patient Classification Pilot Project is to develop tools and techniques for assessing nursing care services delivered that are compatible with both the current and projected trends in health care reimbursement.

Phase One of the project, completed on March 31, 1983, was focused on testing the Department of Nursing's experimental tools (including a medical-surgical, critical care, and behavioral format) for comprehensiveness in documenting direct nursing services delivered in selected clinical sites. This report contains an outline of activities associated with the planning, implementation, and evaluation stages of the pilot project.

The project was conducted in four clinical sites--Unit I, 7 East, 7 West Organ Transplant, and BE-Psychiatry. Participants selected possess a range of clinical skill levels consistent with their respective unit's typical twenty-four hour staffing pattern.

A preliminary analysis of six hundred and forty-five experimental tools indicates that the University of Illinois Department of Nursing patient classification tool represents a comprehensive composite list of direct nursing services provided by nurses to their clients in University Hospital.

Specific recommendations for a future course of action as a result of this project are included at the end of this report.
INTRODUCTION

The purpose of the Patient Classification Project was to test tools and techniques designed to refine the current patient care acuity system in the direction of developing a methodology that will be compatible with the projected medical system of classification (i.e. Severity of Illness-Intensity of Service Index and the Diagnostic Related Groups).

This preliminary report documents all activities associated with the planning, implementation, and evaluation stages of the pilot project.

This report is formative in nature. The author assumes: reader familiarity with issues referred to in this report; and secondly, inherent in such a format, that the reader recognizes this work as only a part of a larger evolving evaluation process.

It is important to include in this introductory section of the report a statement regarding responsibility for this project. Although one group of names may be associated with authorship to this report, that fact should not be confused with the project ownership. From inception through implementation and evaluation, this project represents a two year departmental effort involving many members with a multitude of specialized skills. Although this report cannot acknowledge every contribution, an attempt has been made to list the 1982-83 Patient Classification Committee membership (Appendix A) and the unit-based nursing personnel that participated in this project (Appendix B).

This report will be divided into five sections: an overview of the Patient Classification Committee activities here at the University of Illinois Hospital to date; a very brief discussion of the project proposal and activity calendar development; a more extended presentation of the actual activities associated with pilot project implementation; a presentation of the preliminary analyses findings; and recommendations for phase two of this report.

Brief History of Patient Classification Committee Activities

In November of 1981, the Nursing Executive Council approved a proposal for implementing a modified patient classification system developed by St. Luke's Hospital in Phoenix, Arizona.

A task force was then appointed. The first meeting occurred on December 17, 1981. The task force met biweekly from January through July of 1982.
Outcomes of these meetings were:

1. Clarification of charge with committee members.
2. Education of members regarding patient classification.
3. Identification of pilot units:
   a) Two medical/surgical units - one Technicon and one non-Technicon unit;
   b) One unit to test the behavioral tool; and
   c) One critical care unit
4. Preliminary modification of medical/surgical tool to represent nursing care at University of Illinois Hospital.
5. Definitions developed for all items on the preliminary medical/surgical tool.
6. Initial modification of behavioral tool including definitions.

The Patient Classification Committee convened on October 14, 1982 with approximately fifty percent new membership from that of the original task force. Fall meetings were spent clarifying committee purposes and objectives, educating new members, and completing work on the experimental tools to be tested in the pilot project.

Three separate subcommittees were formed to work on the medical-surgical, behavioral, and critical care experimental tools.¹

The medical-surgical tool subcommittee consisted of three members. Their chief activity was to estimate average times spent by the nurse in the completion of each task listed on the medical-surgical tool constructed by the original Patient Classification Task Force from the St. Luke's prototype.

Review of specific items such as "treatments and procedures" was done by the full committee. This strategy was employed because the full committee was seen as a better representative body of all clinical nursing specialties.

The behavioral tool subcommittee began also with the St. Luke's prototype and refined the tool to adapt to the University of Illinois Hospital's needs based on the 8 East-Psychiatric nursing staff's feedback.

The critical care tool subcommittee decided to adopt the revised medical-surgical tool's format and definitions with some modifications.

Upon completion of these three subcommittees' work the pilot project implementation task force contacted selected unit-based nurse administrators to begin site preparations.

¹A list of these subcommittees' membership is contained in Appendix D.
Once the pilot project was initiated much of the committee's meeting time was focused on evaluating early project returns and discussing the implications of project findings specifically as they would apply in some of the clinical areas such as the Parent/Child and OR/RR Divisions.

The next part of this report outlines the development of a pilot project proposal and activity calendar.

**Project Proposal and Calendar Development**

In early Fall of 1982 a five person task force was formed from the Department of Nursing's Patient Classification Committee membership. The purpose of this task force was to make recommendations concerning a patient classification pilot project which were to include: project objectives; a methodology for data retrieval and analysis; and, a calendar indicating the specific step-wise activities to be completed plus a projected timetable indicating dates for task completion.

A final draft of both the project proposal and calendar appears in Appendix C.

Primarily the purpose of this pilot project was to evaluate the usefulness of the committee's medical-surgical, behavioral, and critical care experimental tools in assessing the direct nursing care needs of clients at the University of Illinois Hospital.

Once the task force completed their work the proposal and calendar were submitted for full committee approval. This phase of the pilot project was completed January 13, 1983.

**Pilot Project: Shifting From Conceptualization to Implementation**

Following the full committee's approval of the project proposal and activity calendar and the completion of the subcommittees work, the task force shifted from a recommendation to implementation mode of action.

**Site Selection** - As indicated in the project calendar (Appendix C) the first activity was to meet with AN IIIIs on each of the four selected pilot units to discuss the project. Exhibit 1 on the next page outlines this meeting's agenda.

The four patient care units selected to participate in the pilot project were:

- Unit I, 7 East, 8 East-Psychiatry, and 7 West - Organ Transplant Unit.

The two units testing the medical-surgical tool were Unit I and 7 East.

Unit I is a small, twenty-nine bed surgical unit specializing in the care of patients with acute disorders. This unit has a typical weekday day shift staffing of: 1 AN I, 1 CN II, 2 CN Is, and 2 LPN IIs. According to the current census-acuity measurement, 6.8 hours per each 24 hours is allocated per patient for both direct and indirect nursing care services.
Seven East is a sixty-two bed adult general medical unit with three medical services. Additionally, six beds are reserved for patients with dermatological disorders. A typical casemix of patients includes those with cardiac, respiratory, gastrointestinal and endocrine system disorders. A typical weekday day shift staff pattern would include: 1 CN I, 8 CN Is and 1 CN II, and 6-8 other personnel (including LPN II, LPN I and NA classifications). Approximately 6 hours per every 24 hours per patient is allocated in the current census-acuity measurement for both direct and indirect nursing care services.

Unit I has had approximately one year of experience in using the computerized on-line information system (Technicon) and staff completed the medical-surgical tools using Technicon whereas 7 East is not yet "on-line" and participants completed an identical paper tool.

The behavioral tool was tested on 8 East Psychiatry. 8 East is a 22-bed locked psychiatric unit. The nursing staff participate as part of a multidisciplinary treatment team providing services to patients with a broad range of psychiatric disorders. The use of the milieu as both a diagnostic and therapeutic modality is central to treatment. A typical weekday day shift staffing pattern would be: 4 - 5 RNs (including classifications of AN I, CN II, and CN I) and 2 - 3 MHCs (Mental Health Counselors). The census-acuity measurement for direct and indirect nursing personnel services per patient in a 24-hour period is 7 hours. Eight East is already "on-line" and participants completed their tools using the computerized system.

Seven West Organ Transplant unit was selected as the site for testing the critical care tool. Seven West Transplant unit has a total of fifteen open beds. A typical weekday day shift staffing pattern includes: 5 - 6 RNs (including classifications of AN I, CN II, and CN I) and 1 NA. The current census-acuity assessment allocates 8.4 hours of every 24 hours per patient as an average measurement of direct and indirect nursing service time needed. Seven West personnel used a paper version of the critical care tool.

Subject Selection and Preparation - The original pilot project proposal (Appendix C) stipulated specific subject selection criteria concerning participants' classification, length of clinical experience, and work shift. The rationale for this degree of specificity was that, although the unit of analysis in this phase was the experimental tool, project coordinators felt it important to begin to develop some baseline data regarding staff skill levels in completing the tool's indicated tasks over a twenty-four hour period.

When members of the task force began meeting with individual unit nurse administrators it became apparent that the stringent subject selection criteria was imposing an artificial staffing pattern onto each respective unit and therefore, would perhaps reduce the project findings validity. As a result, an amendment was made to the original proposal in order to select subjects by classification and experience that reflect each unit's average twenty-four hour staffing pattern. This move would improve the evaluation's assessment of the unit's natural organization.
The pilot was not initiated on any unit until:

- every participant had adequate preparation in using both the experimental and control tool;
- all unit staff had been briefed on the project's purpose and associated activities; and,
- the unit nurse administrator had assessed the unit's readiness to begin.\(^2\)

On average, each unit's preparation time positively correlated with the unit's nursing staff size. The larger the unit nursing staff, the longer it took to complete the preparation phase. Usually, the preparation time was between one to two weeks.

**Data Retrieval and Coding**

Each project participant was asked to complete one copy of the University of Illinois experimental classification tool for each of the patients s/he was assigned to care for over a two-week work schedule. Since most hospital personnel are assigned every other weekend off, it was felt that a two-week work assignment segment would represent the most natural time frame.

In addition to filling out the experimental tool, each participant filled out a control tool for each assigned patient. Control tools selected (one used for the medical-surgical and critical care areas and one to correspond with the psychiatric area) had already been tested in other clinical areas for reliability and validity.

A project log was also placed on each participating unit for subjects' comments and questions.

Unit nurse administrators (both AN III and AN I) assumed responsibility for checking participant compliance on a daily basis.

Tools were collected, reviewed, and hand coded as they were turned in thus catching potential problems as they arose.\(^3\) Data collection and coding was completed on April 6, 1983.

The next section of this report will describe the preliminary analysis of information retrieved from these tools.

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\(^2\)Unit's readiness included: full preparation of participants as well as taking into consideration any factors that would alter the unit's normal activities (i.e. altered patient case mix or personnel problems).

\(^3\)A copy of all experimental and control tools (with definitions and references) appears in Appendix E.

\(^4\)Behavioral tools were coded by participants in the Career Awareness Program sponsored by the Department of Nursing through the Vice Chancellor's office and the Urban Health Early Outreach Program.
Preliminary Analysis

Focus - This phase of the project was focused on examining the University of Illinois experimental patient classification tool's direct nursing care services lists with definitions for tool comprehension and completion.

Several key variables were selected which dictated the data coding format. This course of action was decided upon because of limited human resources to complete the coding process.

Data was coded by: patient care unit, participants' assigned work shift, acuity measurement as assessed on control tool, and the participants' grouped entries for each of the direct nursing care services as listed in each of the three experimental tools.

This system of coding allowed the reviewer to examine the total range of direct nursing services, provided by project participants, from simple to complex in each of the six major categories on each patient care unit over a period of 24 hours while observing the assigned control tool acuity measurement. Thus this format allowed for gathering the maximum amount of information while using a hand tally method.

Additional sources of information, namely the unit project log and informal ongoing interviews, were useful but their content usually focused on project protocol rather than the tools themselves.

Other data which could still be retrieved from the tools at a future date includes range of subjects' skill level and civil service classification. In addition, the critical care experimental tool includes participants' estimated times for completion of each direct service rendered.

General Statistics - Appendix F contains the original work sheets used to construct all project statistics.

The completed experimental/control tool returns included:

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>232</td>
<td>medical-surgical tools</td>
</tr>
<tr>
<td>286</td>
<td>behavioral tools</td>
</tr>
<tr>
<td>127</td>
<td>critical care tools</td>
</tr>
<tr>
<td>545</td>
<td>TOTAL TOOLS</td>
</tr>
</tbody>
</table>

Tool Completion and Comprehension - Participants were directed to closely follow the tool's definition parameters when completing their documentation. Participants expressed no problems in following the experimental tools direction nor in comprehending the respective definitions. Although it had been clearly articulated during the preparation period that these tools were designed to measure only direct nursing care services delivered, many participants still felt a need to write on the tool or express to project coordinators documentation of indirect nursing services.
Interestingly enough, most interaction concerning tool completion was focused on the medical-surgical/critical care control tool. An overwhelming number of participants felt the control tool activity list did not adequately represent a comprehensive range of the typical University Hospital patient.

The control tool appears to be built on the assumption that the major predictors of patient acuity are I.V. treatment and activity level.

Many experienced nurse clinicians remarked that these "predictors" were obsolete in present day health care. Maintaining an individual's maximum activity level is a primary goal of professional nursing care, as well as, the fact that I.V. therapy is only one of a large range of both interdependent (treatment done in conjunction with medical orders) and independent nursing care services provided.

These above comments may help in understanding why many of the participants rated their assigned patients in low acuity categories on the control tool.

The breakdown of ratings were as follows:

<table>
<thead>
<tr>
<th>Patient Care Unit:</th>
<th>Control Tool Acuity Measurement: (by percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1  2  3  4</td>
</tr>
<tr>
<td>Unit I (77 cases)</td>
<td>85 13 1  1</td>
</tr>
<tr>
<td>7 East (155 cases)</td>
<td>50 37 11 2</td>
</tr>
<tr>
<td>7 West-Transplant (127 cases)</td>
<td>38 52 5  5</td>
</tr>
<tr>
<td></td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>8 East-Psychiatry (286 cases)</td>
<td>61 25 10 2  2</td>
</tr>
</tbody>
</table>

The control tools do appear to represent an assessment of patient acuity based on a dated functional approach. They do not help to gather data in direct nursing services by provider's skill level nor do they offer any potential in establishing treatment outcomes as a result of the direct nursing services provided.

The University of Illinois experimental tool does however structurally represent a means towards establishing such baseline information.

Exhibit 2 "A sample of a Unit I Patient Hospitalization Pattern" indicates one method whereby the present U of I tool could be incorporated into a grid format in order to provide information on: direct nursing care service patterns; for a particular category of patient; and such grouped information could be used as the basis for constructing an assessment of the number and skill level of nursing personnel required in a particular clinical area as correlated with the patient caseload on category during the course of a set time frame.
Noticeably absent is a discussion of the role played by the hospital information system (Technicon). Because of the highly technical nature of this information a separate pilot project report was prepared by Barbara Ostrowski, the Department of Nursing Information Management System specialist. Her report appears in Appendix G.

Suggested additions to the current U of I tool appear in Appendix F. Most of these suggestions are in the category of "treatments and procedures."

The last section of this report will outline several recommendations.

Recommendations

The following list of recommendations are made as a result of: the pilot project's task force experience with this first phase of implementation; the responses of the University of Illinois Department of Nursing Patient Classification Committee; participation in the hospital-wide utilization review committee; and a review of literature in this area.

General recommendations for phase two of the patient classification project are:

1. Expand the list of "treatments and procedures" and organize it on the Technicon system through use of an alphabet system screen.

2. Establish approximate time estimates for such direct nursing care service listed on the experimental tool to increase the tool's validity and reliability thus enabling its extended application in the near future.

3. Initiate exploration and testing of the experimental tool format application in extended clinical areas such as Labor and Delivery and Operating Room/Recovery Room.

4. Direct future tool modification and project activities in concert with other patient outcome assessment activities, namely those associated with the D.R.G. and I.S.D. systems.

5. Begin the process of developing a method to provide estimates of both "indirect" and "overhead" expenses associated with direct nursing services delivered. The cost estimates would be the basis for creating an absolute cost for nursing services to be used for either internal or external billing purposes.


7. Assess the role of Technicon in future documentation and develop a realistic budget to cover any major equipment purchases or personnel requirements for any expanded activities associated with this project.
**Exhibit 2**
SAMPLE OF UNIT:
PATIENT HOSPITALIZATION PATTERN

Total of 4 work shifts (out of possible of 6 shifts) documenting patient acuity using tool

<table>
<thead>
<tr>
<th>U of I Tool: Work Shift Control Tool Acuity</th>
<th>HOSP DAY 1 01/31</th>
<th>HOSP DAY 2 02/01</th>
<th>HOSP DAY 3 02/02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum/Independent Hygiene</td>
<td>5 X X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple Hygiene</td>
<td>15 X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate Hygiene</td>
<td>25 X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complex Hygiene</td>
<td>35 X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stable Vital Signs</td>
<td>5 X X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequent Vital Signs</td>
<td>30 X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unstable Vital Signs</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPO</td>
<td>5 X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diet Check</td>
<td>5 X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calorie Count</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist with Tray</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist Feed</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Feed</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complex Total Feed</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tube Feed</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Feed</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimal I &amp; O</td>
<td>5 X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple I &amp; O</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate I &amp; O</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complex I &amp; O</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimal I &amp; O</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routine Height</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complex Weight</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Assistance</td>
<td>5 X X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimal Assistance</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate Assistance</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complex Assistance</td>
<td>45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Exhibit 3**
SAMPLE OF UNIT:
MEDICATION/MOBILITY/HYGIENE

Minimal Medication Therapy | 5 X X |               |                  |
Simple Medication Therapy | 15 X X |               |                  |
Intermediate Medication Therapy | 30 |               |                  |
Complex Medication Therapy | 60 |               |                  |
Maximal Medication Therapy | 75 |               |                  |

195
### EXHIBIT 2
SAMPLE OF UNIT I
PATIENT HOSPITALIZATION PATTERN

Total of 4 work shifts (out of possible of 6 shifts) documenting patient acuity using tool

<table>
<thead>
<tr>
<th>U of I Tool: Work Shift Control Tool Acuity</th>
<th>HOSP DAY 1 01/31</th>
<th>HOSP DAY 2 02/01</th>
<th>HOSP DAY 3 02/02</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Evenings</td>
<td>NOCS</td>
<td>Days</td>
</tr>
<tr>
<td>Routine Admission</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complex Admission/Transfer</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimal Discharge Planning and Teaching</td>
<td>15</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Moderate Discharge Planning and Teaching</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complex Discharge Planning and Teaching</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routine Discharge</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate Post-Op/Post ICU</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsive to Care</td>
<td>20</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Barriers to Care</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty Interacting with Others</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confusion/Disorientation</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression/Regression</td>
<td>40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hallucinations/Delusions</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disruptive/Manipulative</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treating Physical Harm</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self/Others</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TREATMENTS/PROCEDURES**

- drsng ✓ -5
- I.V. sites -15
- incision ✓ -5

✓ = word check

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EXHIBIT I:
PATIENT CLASSIFICATION PILOT PROJECT
MEETING WITH UNIT NURSING ADMINISTRATION

Agenda

I. Review proposal outline and discuss "goodness of fit" with unit specific needs.

II. Review experimental (University of Illinois) tool and control (Public Health Service) tool.

III. Discuss issues associated with use of Technicon.

IV. Implementation Strategy
   A. Reasonable time schedule.
   B. Participant selection, education and work schedule.
   C. Data collection process.
   D. Problem solving and resource personnel (administrative--unit and program--and clinical).

V. Evaluation process

KSH/cc
1/14/83
### Med-Surg/Critical Care
### Patient Classification Manual Tool

<table>
<thead>
<tr>
<th>ACTUAL</th>
<th>PREDICTED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1. ASSESSMENT</th>
<th></th>
<th></th>
</tr>
</thead>
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### DIRECTIONS:
1. Use only in case of Tech/Team failure.
2. Caregiver: Check 'ACTUAL' items as they apply to your patient.
3. R.N. Assigned: Complete "PREDICTED" items.
4. Addressograph each page.
5. Sign Tool.

### ACTUAL | PREDICTED
---|---|
|        |   |
|        |   |
|        |   |

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<th>8. MOBILITY</th>
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<tr>
<td>Suicidal Complex</td>
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Caregiver's Signature

RN Assigned Signature - IF different from Caregiver

SHIFT: N D E

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Caregiver's Signature

ADE DISP: P.E. 201
DIRECT

ACTIVITY

LINE ITEM

DEFINITIONS

Medical-Surgical/Critical Care
Patient Classification Tool
DIRECT

ACTIVITY

LINE ITEMS

Medical-Surgical/Critical Care

Patient Classification Tool
**MED-SURG/CC TOOL LINE ITEMS BY CATEGORY**

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20. MONITORED MEDICATIONS
   Simple
   Intermediate
   Complex

21. REALITY ORIENTATION
   Simple
   Intermediate
   Complex

22. SOCIALIZATION

23. LIMIT SETTING
   Simple
   Intermediate
   Complex

24. ADMISSION/TRANSFER/DISCHARGE
   Admission
   Transfer (unit to unit)
   Transfer (room change within unit)
   Discharge
   Discharge AMA
   Expiration

25. ENVIRONMENT
   Safety Precautions (Initiation)
   Smoking (Simple)
   Smoking (Intermediate)
   Smoking (Complex)
   Suicidal Simple
   Suicidal Complex
ASSESSMENT

Simple: System - oriented assessment including neuro, resp, CV, renal and extremities every 8 hours.

Intermediate: System - oriented assessment including neuro, resp, CV, renal and extremities twice in 8 hours.

Complex: System - oriented assessment including neuro, resp, CV, renal and extremities more than twice in 8 hours.
HYGIENE

Independent: Provide equipment for AM/PM care to patient who needs no assist. Includes making unoccupied bed, linen disposal, room tidying, and back rub PRN.

Simple: Provide equipment for AM/PM care to patient who needs assist for hard to reach areas and oral care OR assist to tub or shower and explain use of equipment and assist with oral care. Includes making unoccupied bed, linen disposal, room tidying and back rub PRN.

Intermediate: Provide equipment for AM/PM care to patient who needs full assist on supervision in bathing and oral care (intubated/nonintubated). Includes making occupied/unoccupied bed, linen disposal, room tidying and skin care PRN. Only one staff required.

Complex: Provide equipment necessary for AM/PM care to patient who is unable to cooperate and/or assist. Includes making occupied/unoccupied bed (regular/circo-electric/kinetic), linen disposal, room tidying, skin care PRN, oral care q 1-2 hours. Requires one or more staff.

Intermediate Incontinence Care: Provide equipment necessary for partial/whole bath. Includes linen change and disposal. Frequency: 1 to 2 times/shift. Incontinence used here includes urine, stool, emesis, drainage or anything requiring the above care in addition to what is routine.

Complex Incontinence Care: Provide equipment necessary for partial/whole bath. Includes linen change and disposal. Frequency: 3 or more times/shift. Incontinence used here includes urine, stool, emesis, drainage or anything requiring the above care in addition to what is routine.
VITAL SIGNS

Simple: T (oral/rectal/axillary); P (radial/brachial/apical); R (ventilator/nonventilator) and BP. Frequency: every 4 to 8 hours.

Intermediate: T (oral/rectal/axillary); P (radial/brachial/apical); R (ventilator/nonventilator); and, BP (T or F arterial line). Frequency: every 2 to 3 hours.

Complex: T (oral/rectal/axillary/core); P (radial/brachial/apical); R (ventilator/nonventilator); and, BP (T or F arterial line). Frequency: every one hour or more often.
**MONITORING**

**Simple:** Calibration of all monitoring equipment. CVP reading every 8 hours.

**Intermediate:** Calibration of all monitoring equipment. CVP reading every 2 to 4 hours.

**Complex:** Calibration of all monitoring equipment. Continual EKG and/or CVP reading every 1 hour or more often. Includes electrode changes.

**Intermediate Invasive:** Calibration of all monitoring equipment. MAP = PAS - PAD - PWP every 4 to 8 hours and/or cardiac output, every 6 hours, and/or LAP readings every 1 hour.

**Complex Invasive:** Calibration of all monitoring equipment. MAP = PAS - PAD - PWP every 2 hours or more often and/or cardiac output every 4 hours or more often and/or LAP readings every 30 minutes or more often and/or ICP monitoring and/or continuous apneas monitoring. Includes electrode placement.
DOPPLER

**Simple:** Doppler at bedside. Includes measurement of 1 to 2
peripheral pulses/indices every 4 to 8 hours.

**Intermediate:** Requires locating and collecting a Doppler. Includes
measurement of 3 or more peripheral pulses/indices and/or
a frequency of every 2 to 3 hours.

**Complex:** Doppler at bedside or requires location and collection
and >3 peripheral pulse/ index measurements and/or every
1 hour or more often.
## ISOLATION

**Simple:** Enteric or respiratory isolation. Includes gathering supplies for isolation technique (no gowns) and disposing of linen, garbage and other items from room.

**Intermediate:** Wound and skin isolation. Includes gathering supplies for isolation techniques, (gowning, etc.) and disposing of linen, garbage and other items from room.

**Complex:** Reverse/protective/strict isolation. Includes gathering supplies for isolation techniques (gowning, etc.) and disposing of linen, garbage and other items from room.
RESTRAINT

Simple: Apply/remove soft extremity or posey jacket restraint to patient who is not resistant. Requires one staff person. Does not include "ENVIRONMENT."

Intermediate Application/Removal: Apply/remove soft extremity or posey jacket restraint to patient who requires more than one staff. Does not include "ENVIRONMENT."

Complex Application: Apply soft restraints to patient who requires more than 2 staff OR apply leather restraints. Does not include "ENVIRONMENT."

Complex Removal/Rotation: Remove restraints of any kind from a patient who requires more than 2 staff present. Does not include "ENVIRONMENT."
<table>
<thead>
<tr>
<th><strong>Mobility</strong></th>
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<tbody>
<tr>
<td><strong>Independent:</strong></td>
<td>Up ad lib. Requires no assistance.</td>
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<tr>
<td><strong>Simple:</strong></td>
<td>Assist in/out of bed 1 to 2 times per shift. Includes collection and handing of assistive device to patient (cane, walker, etc.).</td>
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<tr>
<td><strong>Intermediate:</strong></td>
<td>Assist in/out of bed or to dangle with supervision 1 to 2 times per shift. Includes collection of and assistance with assistive and prosthetic devices.</td>
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<tr>
<td><strong>Complex:</strong></td>
<td>Collect and position hoist or other transfer device 1 to 2 times per shift. Includes transfer in/out bed to chair, cardiac chair or cart and/or application/removal prosthetic device. Usually requires more than one person.</td>
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</tbody>
</table>
BEDREST

Independent: Explain and remind of BR every shift. No assistance needed to turn or position.

Simple: Assist patient to turn and position every 2 hours.

Intermediate: Turn and position without assistance from patient every 2 hours.

Complex: Turn and position with assistance from other personnel every 2 hours.
<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
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<tbody>
<tr>
<td>Simple</td>
<td>Includes collection of standing scale, weight measurement and recording for patient who needs no assistance.</td>
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<tr>
<td>Intermediate</td>
<td>Includes collection of standing scale, weight measurement and recording for patient who needs assist to step up and be steadied.</td>
</tr>
<tr>
<td>Complex</td>
<td>Includes collection and placement of bedside scale, transfer to and from scale, weight measurement and recording. Requires 1 or more person assist.</td>
</tr>
</tbody>
</table>
NUTRITION

Independent: No assistance required. Includes tray check, AM/PM snack and water pitcher refill.

Simple: No assistance required. Includes NPO (0 or ½ ice chips), calorie count, pass or pick-up tray and water pitcher refill.

Intermediate: Assist with set-up and/or intermittent supervision. Includes calorie count, AM/PM snack and water pitcher refill.

Complex: Assist with set-up and supervise during meal and/or feed. Includes calorie count, AM/PM snack, water pitcher refill and post-meal hygiene.

Simple Tube Feeding: Collect and set-up equipment and feeding 1 to 2 times per shift. Includes nourishment per NG, G tube, J tube, or Dobbhoff tube utilizing a Dial-a-flow or continuous infusion pump.

Intermediate Tube Feeding: Collect and set-up equipment and feeding for bolus every 2 to 4 hours. Includes nourishment per NG, G tube.

Complex Tube Feeding: Collect and set-up equipment and feeding for bolus every 1 hour or more often. Includes nourishment per NG, G tube.
<table>
<thead>
<tr>
<th><strong>Intake</strong></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Simple:</strong></td>
<td>Measure and record every 8 hours. Includes p.o., I.V., NG, GU or any other fluid intake or irritant.</td>
</tr>
<tr>
<td><strong>Intermediate:</strong></td>
<td>Measure and record 2 to 4 times per shift. Includes fluid push, p.o., IV, NG, GU or any other fluid intake or irritant.</td>
</tr>
<tr>
<td><strong>Complex:</strong></td>
<td>Measure and record every 1 hour or more often. Includes peritoneal dialysis, fluid push p.o., IV, NG, GU or any other fluid intake or irritant.</td>
</tr>
</tbody>
</table>

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TOILET

**Simple:** Check elimination status every 8 hours.

**Intermediate:** Collect equipment, place on bedpan or commode or assist to bathroom 1 to 2 times per shift. Includes intermittent supervision and post-toilet hygiene.

**Complex:** Collect equipment, place on bedpan or commode or assist to bathroom 3 or more times per shift. Includes constant supervision and post-toilet hygiene.
OUTPUT

Simple: Measure and record any type of output one time per shift. Includes urine, stool, emesis and any drainage from any type of drain, tube, ostomy, or dressing.

Intermediate: Measure and record any type of output every 2 to 4 hours. Includes urine, stool, emesis and any drainage from any type of drain, tube, ostomy, or dressing.

Complex: Measure and record any type of output every one hour or more frequently. Includes urine, stool, emesis and any drainage from any type of drain, tube, ostomy, or dressing. Also includes peritoneal dialysis.
SCHEDULED MEDICATIONS

(All Routes Except IVPS and Main IV Bag)

Simple: Prepare, administer and chart med. Requires 1 to 2 approaches per shift.

Intermediate: Prepare, administer and chart med. Requires 3 to 4 approaches per shift.

Complex: Prepare, administer and chart med. Requires more than 4 approaches per shift. Includes peritoneal dialysis.
UNSCHEDULED MEDS (STATS AND PRN)

(All Routes Except "Monitored Meds")

**Simple:** Prepare, administer and chart med. Requires 1 to 2 approaches per shift.

**Intermediate:** Prepare, administer and chart med. Requires 3 to 4 approaches per shift.

**Complex:** Prepare, administer and chart med. Requires more than 4 approaches per shift.
<table>
<thead>
<tr>
<th><strong>SCHEDULED IV/IVF MEDICATIONS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Simple:</strong> Prepare, administer and chart med. Requires 1 to 2 approaches per shift.</td>
</tr>
<tr>
<td><strong>Intermediate:</strong> Prepare, administer and chart med. Requires 3 to 4 approaches per shift.</td>
</tr>
<tr>
<td><strong>Complex:</strong> Prepare, administer and chart med. Requires more than 4 approaches per shift.</td>
</tr>
</tbody>
</table>
IV THERAPY INITIATION / TERMINATION

**Simple:**
Initiate or discontinue peripheral IV. Initiation requires one person and one venipuncture. Includes collection and set-up of equipment, dressing, and documentation.

**Intermediate:**
Initiate peripheral IV or discontinue CVP line. Requires one person and 2 to 3 venipunctures. Includes collection and set-up of equipment, dressing and documentation.

**Complex:**
Initiate peripheral IV. Requires one or more person and 4 or more venipunctures. Includes collection and set-up of equipment, dressing and documentation.
**IV THERAPY MAINTENANCE**

(Including Hyperalimentation and Intralipid)

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Simple:</strong></td>
<td>Collect and prepare equipment for 1 IV line. Includes bag, tubing and dressing change 1 time per shift. Also includes site and infusion observation every 4 to 8 hours and documentation.</td>
</tr>
<tr>
<td><strong>Intermediate:</strong></td>
<td>Collect and prepare equipment for 2 to 3 IV lines. Includes bag, tubing and dressing changes which require 2 to 3 approaches per shift. Also includes site and infusion observation and documentation.</td>
</tr>
<tr>
<td><strong>Complex:</strong></td>
<td>Collect and prepare equipment for 4 or more IV lines. Includes bag, tubing and dressing changes which require 4 or more approaches per shift. Also includes site and infusion observation and documentation.</td>
</tr>
</tbody>
</table>
MONITORED MEDICATIONS
(Scheduled or Unscheduled)

Requires continual assessment of patient status during and after administration. Includes collection, preparation, titration, and documentation and requires:

Simple: 15 minutes per shift.
Intermediate: 16 to 30 minutes per shift.
Complex: More than 30 minutes per shift.
REALITY ORIENTATION

**Simple:** Assess whether patient can relate correct information re: person, place and time and orient as necessary. Includes documentation and requires 1 to 2 approaches per shift.

**Intermediate:** Assess whether patient can relate correct information re: person, place and time and orient as necessary. Includes documentation and requires 3 to 4 approaches per shift.

**Complex:** Assess whether patient can relate correct information re: person, place and time for a patient with unrestricted movement who needs frequent observations, i.e., staff need to assure whereabouts at all times.
Assess comprehension of illness and treatment plan and identify barriers (cognitive, cultural, language).
**Limit Setting**

**Simple:** Remind patient of role in treatment plan 1 to 2 times per shift. Includes, for example, fluid and dietary and/or activity restrictions.

**Intermediate:** Remind patient of role in treatment plan 3 to 7 times per shift. Includes, for example, fluid and dietary and/or activity restrictions.

**Complex:** Remind patient of role in treatment plan every 1 hour or more often for a patient who is unable or unwilling to cooperate in a treatment plan.

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ADMISSION/TRANSFER/DISCHARGE

Admission: Place patient in room/bed, orient to unit/hospital/room, complete clothing and valuables list. Includes admission interview and initial care plan.

Transfer (unit to unit): Accomplished by sending unit. Includes bed verification, nursing report, notification of ancillary services, arranging transport and stripping unit.

Transfer (room change within unit): Includes moving patient, belongings and furniture and notification of ancillary services.

Discharge: Includes instructions re: discharge meds, clinic and lab appts., activity and diet restrictions, notification of housekeeping, stripping unit, discharge note and medical record mechanics.

Discharge AMA: Includes all of "Discharge" as well as Department of Nursing policy 20-00-00 requirements.

Expiration: Includes preparation of patient for morgue, notification and counseling of significant others, completion of medical record mechanics, notification of ancillary services and stripping of unit.
ENVIRONMENT

Safety Precautions (Initiation):
Identify and remove materials potentially dangerous (unprescribed drugs or food and/or smoking materials and/or sharps). Includes informing patient and/or family, explanation and rationale, documentation and presence of one additional staff as witness of applicable.

Smoking (Simple):
Staff maintains control of smoking materials and distributes on request. Includes direction of patient to smoking area and intermittent observation. Frequency: 4 times a shift.

Smoking (Intermediate):
Staff maintains control of smoking materials and distributes on request. Includes direction of patient to smoking area and intermittent observation. Frequency: 4 times a shift or patient who requires constant supervision 2 times per shift.

Smoking (Complex):
Staff maintains control of smoking materials and distributes on request. Includes direction of patient to smoking area and intermittent observation. Includes frequency of more than 8 times per shift or patient who requires constant supervision more than 2 times per shift.

Suicidal Simple:
One-to-one observation where observer is also caregiver.

Suicidal Complex:
One-to-one observation where observer is not the caregiver.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Invariable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charting on Technician</td>
<td>Assignments</td>
</tr>
<tr>
<td>Manual charting</td>
<td>Inservice</td>
</tr>
<tr>
<td>Transcription of orders</td>
<td>Committees</td>
</tr>
<tr>
<td>RN co-signing orders</td>
<td>Conference days</td>
</tr>
<tr>
<td>Telephone calls</td>
<td>Administrative days</td>
</tr>
<tr>
<td>Interdisciplinary rounds</td>
<td>File text/labs</td>
</tr>
<tr>
<td>MD rounds</td>
<td>File Technician reports</td>
</tr>
<tr>
<td>Communications</td>
<td>Scrub exchange</td>
</tr>
<tr>
<td>Patient conferences</td>
<td>Staff meetings</td>
</tr>
<tr>
<td>Care plan updates</td>
<td>Telephone calls</td>
</tr>
<tr>
<td>Inservices</td>
<td>Management reports</td>
</tr>
<tr>
<td></td>
<td>Unit reports</td>
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<tr>
<td></td>
<td>Shift reports</td>
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<tr>
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<td>Ordering supplies</td>
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<tr>
<td></td>
<td>Communications</td>
</tr>
<tr>
<td></td>
<td>Off-unit errands</td>
</tr>
<tr>
<td></td>
<td>Performance appraisals</td>
</tr>
<tr>
<td></td>
<td>Unit clean up</td>
</tr>
<tr>
<td></td>
<td>Crash cart and emergency supply check</td>
</tr>
<tr>
<td></td>
<td>Chart thinning</td>
</tr>
<tr>
<td></td>
<td>Empty trash</td>
</tr>
<tr>
<td></td>
<td>Q.A. activities</td>
</tr>
<tr>
<td></td>
<td>Research</td>
</tr>
<tr>
<td></td>
<td>Locate missing charts</td>
</tr>
<tr>
<td></td>
<td>Assemble charts</td>
</tr>
</tbody>
</table>
APPROVAL SHEET

The dissertation submitted by Karole Schafer Heyrman has been read and approved by the following committee:

Dr. Ross Scherer, Director
Professor, Sociology, Loyola

Dr. Kirsten Gronbjerg
Professor, Sociology, Loyola

Dr. Philip Nyden
Associate Professor, Sociology, Loyola

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

[Signature]
Director's Signature

[Date] November 23, 1987