In presenting this thesis in partial fulfillment of the requirements for an advanced degree at Montana State University, I agree that the Library shall make it freely available for inspection. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by my major professor, or, in his absence, by the Director of Libraries. It is understood that any copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Signature  Dorothy Baker

Date  July 30, 1969
A SURVEY OF FACTORS RELATING TO THE LENGTH OF HOSPITAL STAY OF A SELECTED SAMPLE OF MEDICAL-SURGICAL PATIENTS

by

DOROTHY JACOBSON BAKER

A technical paper submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree of

MASTER OF NURSING

Approved:

Laura Walker
Director, School of Nursing

Laura Walker
Chairman, Examining Committee

Graduate Dean

MONTANA STATE UNIVERSITY
Bozeman, Montana

August, 1969
ACKNOWLEDGMENT

I wish to express my gratitude to those whose counsel and cooperation made this study possible. I am especially indebted to Drs. Alan Goulding and Edward Gibbs of Billings, and Drs. Alan Iddles and Deane Egler of Bozeman, who contributed a great deal of time and patience.

I am especially thankful for the opportunity this study has afforded me, to work closely with a great mind, namely Dr. Laura Walker. Her time and effort in helping me with this endeavor went beyond compare, but I feel what I have gained from working with her goes beyond the scope of the processes of research.

Finally I am grateful for my husband, Douglas, whose confidence in me has been my inspiration during the times of trial involved in this endeavor.
# TABLE OF CONTENTS

## CHAPTER

<table>
<thead>
<tr>
<th>I. THE PROBLEM AND REVIEW OF LITERATURE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>The Problem</td>
<td>2</td>
</tr>
<tr>
<td>Definition of Terms Used</td>
<td>3</td>
</tr>
<tr>
<td>Assumptions</td>
<td>3</td>
</tr>
<tr>
<td>Limitations of the Study</td>
<td>4</td>
</tr>
<tr>
<td>Review of Literature</td>
<td>5</td>
</tr>
<tr>
<td>II. METHODOLOGY</td>
<td>10</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>10</td>
</tr>
<tr>
<td>Setting of the Study</td>
<td>10</td>
</tr>
<tr>
<td>Selection of the Population</td>
<td>10</td>
</tr>
<tr>
<td>Body of the Study</td>
<td>11</td>
</tr>
<tr>
<td>III. PRESENTATION OF DATA AND ANALYSIS OF FINDINGS</td>
<td>16</td>
</tr>
<tr>
<td>Part I - Survey of Environmental Aspects</td>
<td>16</td>
</tr>
<tr>
<td>Part II - Survey of Patients</td>
<td>25</td>
</tr>
<tr>
<td>Other Findings</td>
<td>31</td>
</tr>
<tr>
<td>IV. SUMMARY AND RECOMMENDATIONS</td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td>34</td>
</tr>
<tr>
<td>Recommendations</td>
<td>36</td>
</tr>
<tr>
<td>Recommendations for Further Study</td>
<td>37</td>
</tr>
<tr>
<td>CHAPTER</td>
<td>APPENDICES</td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td>APPENDIX A</td>
</tr>
<tr>
<td></td>
<td>APPENDIX B</td>
</tr>
<tr>
<td></td>
<td>APPENDIX C</td>
</tr>
<tr>
<td>LITERATURE CITED</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
</tr>
<tr>
<td>39</td>
</tr>
<tr>
<td>42</td>
</tr>
<tr>
<td>44</td>
</tr>
<tr>
<td>46</td>
</tr>
</tbody>
</table>
LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. A Comparison of Average Length of Hospital Stay According to Days in Week Admitted</td>
<td>20</td>
</tr>
<tr>
<td>II. A Comparison of Percent of Patients Admitted to Each Hospital Service for Each Day of the Week in Third Quarter of 1968</td>
<td>22</td>
</tr>
<tr>
<td>III. A Comparison of Number of Surgical Patients Admitted Each Day of Week in One Hospital in March, 1968</td>
<td>23</td>
</tr>
</tbody>
</table>
The questions investigated by the study here reported were: (1) if home nursing care were available to a selected sample of medical-surgical patients, could a number of them be going home sooner than would otherwise be medically feasible; (2) could a prepared tool be used with accuracy in predicting the post-hospitalization nursing needs of the patient, which were directly related to that hospitalization, when used by the investigator functioning as a hospital based nurse; and (3) would the need recognition by the investigator be more nearly comprehensive as a result of the investigator having had direct communication with the attending physician.

To investigate the first question the nurse interviewer collected information on the last three hospital days of fourteen Medical-Surgical patients to determine what care they required, and whether this care could be given on an outpatient basis by a home nursing service. Four physicians were contacted for permission to involve their patients in the study. Included under this first question of the feasibility of earlier patient discharge, a survey of one hospital's routines was done to determine if these routines were influential as to the day of discharge of patients.

To obtain data for the second question, a tool previously prepared by Miss Janice Mickey, was used to estimate the patients' post hospital nursing needs and their ability to cope with these needs. Estimations of these needs were made on each of the last three days of hospitalization and a home visit was made to repeat these measurements, thereby validating or refuting the hospital estimations.

To obtain data for the third question, the investigator made ward rounds with two of these four physicians, and arrangements were made for the investigator to contact them for any needed information.

The findings of the study were that eleven of the fourteen patients included in the study could have gone home earlier if home nursing care had been available to them; with an estimated savings of twenty-eight hospital days. The tool tested in the second question was found to be an accurate means of predicting home nursing needs, the intensity of the needs and the families' ability to cope with these needs. Need recognition was not found to be more comprehensive as a result of the investigator making ward rounds with the attending physicians. There were instances recognized, however, where if the investigator were actually to have been giving nursing care, direct communication with the attending physician would have been essential to giving appropriate care.

The findings of the survey of the hospital environment were that staffing on weekends is skeletal as compared to weekdays. In comparing length of hospital stay for patients, according to day in week admitted, there was no appreciable difference. The hospital records examined showed that surgical admissions are lowest on Friday and Saturday, and that on Friday and Saturday admissions to surgical units are lower than to any other departments of hospital.
CHAPTER I

INTRODUCTION

A soaring increase in the costs of medical care in the United States has been occurring in the last twenty years. At the request of President Lyndon Johnson, the Department of Health, Education and Welfare conducted a study on medical costs in 1967. The results of this study show that the cost of medical care has gone up 129 percent since World War II, and continues to climb. In 1950 the average cost per patient day in a hospital was $14.40. This had more than tripled, to over $45 per day, in 1965. The American Hospital Association estimates that costs will soar by an average of fifteen percent a year, putting the cost of a day in the hospital at close to $90 by the end of 1970.

This study was undertaken in the interest of looking at this medical cost crisis as a concern of nursing. As stated in The Code for Professional Nurses: "The fundamental responsibility of the nurse is to conserve life, to alleviate suffering and to promote health." In the administration of these duties, cost should be of concern to the nurse, just as it is indeed on the mind of her patients. The study reported in this paper was constructed around the possibility that selected patients could be discharged from the hospital earlier than would otherwise be medically advisable, if professional nursing services were available to

---


them in their home communities.

I. THE PROBLEM

Statement of the problem. The questions investigated by the study here reported were: (1) If home nursing care were available to a selected sample of medical-surgical patients, could a number of them be going home sooner than would otherwise be medically feasible; (2) Could a prepared tool be used with accuracy in predicting the posthospitalization nursing needs of the patient, which were directly related to that hospitalization, when used by the investigator functioning as a hospital based nurse; and (3) Would the need recognition by the investigator be more nearly comprehensive as a result of the investigator having had direct communication with the attending physician.

II. DEFINITIONS OF TERMS USED

The following terms were used throughout the text of the study here reported and the meaning therein is as follows:

Tool. A written format facilitating categorization.

Professional Nurse. A registered nurse with at least Baccalaureate education.

Directly. Stemming immediately from.  

Home Nursing Need. A situation in which the individual or family has a health problem that requires nursing, including therapeutic care, health teaching,

---

counseling or guidance; where the family lacks the prior knowledge or competence to meet the situation and that the provision of nursing services would produce change. 5

Anticipatory Guidance. Giving forethought to a possible future threat and considering means of dealing with this threat.

Verbal Interaction. Vocal communication exchange between two or more people.

Mental Defect. Inability to make logical judgments, encompassing functional or organic origins.

Non-Directive. To use accepted interview methods for the purpose of focusing an interview on subjects that are pertinent to the purpose of the interview.

Free Answer Interview. Spontaneously or conversationally; without direct questioning.

Non-Nursing Departments. Any service regularly offered by a hospital, whose principle task is not administered by a nurse.

III. ASSUMPTIONS

The assumptions on which this study was based were: (1) Verbal patients without apparent mental defect can relate their needs. (2) The professional nurse is responsible for helping the patient meet his health needs.

IV. LIMITATIONS OF THE STUDY

The limitations of the study reported in this paper were: (1) The effectiveness of the interviews were limited by the interviewers experience and ability at interviewing. (2) The introductory statements made by the interviewer to the patient might have had unexpected connotations to the patient. (3) The results of the home calls may have been biased toward fewer needs as a result of the first interview, which could turn a patient's thought processes toward home needs, thereby forming a type of anticipatory guidance. (4) Had the attending physician been oriented toward sending patients home early into nursing care service, they may have ordered some non-nursing functions carried out earlier. (5) The population of the study included a relatively small number of patients.

V. REVIEW OF LITERATURE

The purposes of this review of literature were: first to gather pertinent, factual information that might substantiate or refute the hypothesis developed for this study, and secondly, to set this study into the context of current developments on the issue of medical costs.

In the face of the crisis of continually increasing medical costs, the federal government had, in 1967, increased its annual investment in health from six billion dollars to fourteen billion dollars in three years and even this was not enough, for in his health message to Congress in 1968 President Johnson called for
an increase of 1.6 billion dollars, to be spent on health in 1969. To predict on past experience, Americans will spend a total of more than fifty-five billion dollars in 1969 on health, this figure includes the 15.6 billion dollar investment from the government. This sum represents an outlay of $250 for every man, woman and child in the United States.

Medical prices have been rising considerably faster than other costs in society, and may continue to do so. It is possible that in the decade starting in 1965 health costs may increase by one hundred and forty percent, while the cost of living goes up only twenty percent. The reasons underlying this medical cost crises were summarized in the words of I. J. Lewis, acting administrator of the Health Service and Mental Health Administration when he stated:

The reasons underlying the medical cost crisis have been well documented and clarified to such an extent that their validity is rarely challenged. Among them are:

1. The increase of scientific knowledge in medicine has not only greatly increased medicine's potential benefits but also generated an extremely costly technology.

2. The health industry began its rapid growth from a very low base of salaries and wages which are only now beginning to rise to a status comparable with other service occupations.

3. The consumer public is better informed about medicine's potential benefits and increasingly insistent that its health needs be met as a civic right.

4. The development of private insurance and, more recently, the governmental assistance to meet the health needs of the aged and indigent through medicare and medicaid, have translated long-standing needs for care into

---


8 Time, loc. cit.
what the economist calls "effective demand."[^9]

The medical cost crisis in America today is really one of interrelated crises in the medical field. First there is unequal distribution of health care, wherein top quality service is not available to some citizens as it is to others.[^10] Second, there is the manpower shortage, as President Nixon noted in his campaign speech of October 22, 1968: "Today we are short 50,000 doctors, 85,000 nurses and 200,000 other hospital and nursing home employees."[^11] This shortage is due in part to an increase in demand, as higher levels of patient care are attained. The standard of care as was given in 1967 represented a ratio of two hundred sixty-four hospital workers for every one hundred patients. The standards of 1969 require a ratio of two hundred seventy-two hospital workers for every one hundred patients.[^12] This increase in personnel to care for each patient is one cause of the increase in cost per hospital day, which leads to the third of the interrelated crises, the cost crisis itself. On this subject President Nixon stated: "The most serious problem is health care costs...new and old tax supported programs in the health field should be critically evaluated so that the best health care is attained and overlapping and waste are avoided."[^13] A means for such study and evaluation has been provided, for in the 1969 congressional session a senate


[^10]: Ibid.

[^11]: "Billions..." loc. cit.


[^13]: "Billions..." loc. cit.
subcommittee began an extensive study of the quality and quantity of health care that is available or should be available to all the citizens of the country, including areas of manpower needs, costs, and the need for additional medical facilities at all levels of care. The chairman of the subcommittee, Senator Ralph W. Yarbourough, stated: "...I believe it is time for us to do all in our power to alert the country to the need for national dedication toward better health care for all."\(^{14}\)

Several different approaches have been cited as means of halting this increase in costs. They include suggestions for a more liberal medicare program\(^{15}\) or readjusting the insurance set up that now pays only when a person is hospitalized.\(^{16}\) The ex-Secretary of Health, Education and Welfare, Wilber Cohen, has stated that merely shortening the average hospital stay by one day would save well over one billion dollars.\(^{17}\) To again quote I. J. Lewis as he spoke on controlling the medical cost crisis:

....The way it can be done is for each physician to weigh cost in the balance of every treatment he prescribes; for each hospital to consider total community resources rather than institutional aggrandizement in every capital investment; for each community to view its health resources to assure that lower cost alternatives--home care, for one example--are available to those who do not need the most expensive level of service; for insurance plans, private and government alike, to build in incentives for prevention and lower-cost services where these will do the job and reduce the total bill.\(^{18}\)


\(^{18}\)Lewis, \textit{loc. cit.}
These facts have implications for nurse practitioners, as well as for patients, insurance and governmental agencies. This investigation took place in the interest of considering what could be done toward shortening patients' hospital stay, through the use of available home nursing services in the community.

A similar study has been reported by Margaret D. Lewis and Louise Gaghagen. A Visiting Nurse Association was created in 1958 in Denver, Colorado, and this information was printed in 1963. The service was composed of Registered Nurses who had had additional education and experience that enabled them to carry out the following procedures on a home visit basis: remove sutures, catheterize male and female patients, give intravenous fluids, and collect laboratory specimens. The laboratory tests they were trained to collect specimens for include: prothrombin time, blood sugar, complete blood count, sedimentation rate, urine analysis, urine cultures, sensitivity tests and hemoglobin determinations. In addition to the services of the Registered Nurses, a physical therapist and home aides for housekeeping duties were included in the employ of this Visiting Nurse Association. Now eleven years old, this service continues to provide care for patients in their Denver homes.

The service maintains its communication with hospitalized patients through a nurse coordinator, who daily reviews the Kardex (a comprehensive file that has a card for each patient on the floor, and lists pertinent information on the patient including the medications and treatments ordered for him) for patients who

---


20 Ibid.
might be eligible for home nursing care. These coordinators leave requests for the physician or talk with the charge nurse regarding referrals. In some instances the doctor initiates the action, and contacts the nurse coordinator.\textsuperscript{21}

The cost of a home call is $11.00 which obviously costs less than an average of $50.00 a day in a hospital. Colorado Blue Cross has extended its services to pay for these home calls if made in the metropolitan Denver area, and if the person is under sixty-five. Persons over sixty-five are covered by Medicare, and other of their patients are covered under Medicaid. If the patient has no coverage the cost is based on the patient's ability to pay (see Appendix A). From December, 1958 to May, 1962, one thousand eighty-eight patients had received this home care, with an estimated savings of $10,602.00.\textsuperscript{22}

The study reported in this paper differs from the work done by Miss Lewis and Miss Gaghagen in that it is much more limited. In this study, a specific tool was tested for its accuracy in measuring the post-hospitalization nursing needs of the patient from the hospital. In addition to using the Kardex, chart, nurses and the patient as sources of information, the researcher in this study investigated the possibility of utilizing the attending physician as a potentially valuable source of information.

\textsuperscript{21}Ibid.
\textsuperscript{22}Ibid.
CHAPTER II

METHODOLOGY

Statement of the problem. The questions investigated by the study here reported were: (1) If home nursing care were available to a selected sample of medical-surgical patients, could a number of them be discharged earlier than would otherwise be medically feasible; (2) Could a prepared tool be used with accuracy in predicting the post-hospitalization nursing needs of the patient, which were directly related to that hospitalization, when used by the investigator functioning as a hospital based nurse; (3) Would the need recognition by the investigator be more nearly comprehensive as a result of the investigator having had direct communication with the attending physician.

Setting of the study. This study took place in two general hospitals; one of two hundred fifty beds, and the other of one hundred two beds. In each hospital one surgeon and one internist were contacted for permission to involve their patients as subjects in the study. As no difference could be identified in the discharge routines of the two hospitals, comparison of the results from patients of one hospital to results from patients of the other hospital was not deemed necessary. A survey of environmental aspects was conducted in one of the hospitals. The data for the study was collected within the time span of January 3, 1969 to April 23, 1969.

Selection of the population. The population consisted of those patients who: were under the care of one of the physicians who had given consent; were willing to participate and cooperate in the study; were able to speak; were area residents, making possible a home call; were discharged to their homes during
the period of the data collecting; were not formerly known personally by the investigator; and displayed no overt symptoms of mental defect.

Body of the study. In all cases the nurse interviewer, in uniform, called on the patients daily toward the end of their hospital stay. An introduction was given that the interviewer was a nursing student and interested in talking with patients about their hospital stay and how they felt they would progress at home; did they foresee problems arising from this hospitalization. It was explained at this time that the nurse interviewer, with their permission, would call on them daily while they were in the hospital to talk with them, and would like to call on them at home once after discharge, to again talk with them about how they were progressing. These nurse-patient interactions took place in the patient's hospital room and were conducted as a non-directive, free answer interview, with no time limit. The interviewer did not write in the patient's presence, but recordings were made later in the same day.

To test the hypothesis stated as question one of this study, information was collected and recorded on the last three days of a patient's hospital stay. The data were later analyzed to determine if the last three days of hospitalization were necessary for the purpose of nursing care, medical supervision, or the services of the non-nursing departments or any combination of these. Questions from the interview schedule which pertain to the collection of this data were:

1. Will the patient receive the services of non-nursing departments today? Yes No Specify

2. Could these services be received on an outpatient basis? Yes No Reason
3. Does the patient at this stage of illness require a physician's medical supervision, thus making hospitalization necessary?

   Yes   No   Reason

To answer question one, the nurse interviewer talked with the patient, reviewed the chart and verification or clarification was elicited from nursing personnel. To obtain the data for the second question, the same procedures as cited earlier in Lewis and Gaghagen were identified as laboratory work that could be done on an outpatient basis. To determine if X-rays and physical therapy could be done on an outpatient basis, the patient's physical condition, the area of his residence and the type of preparation the particular procedure required were used as a guide, for example, several enemas, timed doses of sugar or fasting might constitute the measure making hospitalization necessary. The third question was answered by interviewing one of the attending physicians about the patient's continued need for medical supervision.

The second question investigated in the study was: Could a prepared tool be used with accuracy in predicting the post-hospitalization nursing needs of the patient, which were directly related to that hospitalization, when used by the investigator functioning as a hospital based nurse. The prepared tool was one created by Miss Janice Mickey, and the adjustments made on this tool for use in this study, were made with her permission (see Appendix C). This tool provided a system for ascertaining what the home nursing needs of the patient would be. If the patient were discharged with any of the following needs, he would be classified as having home nursing needs, and would possibly need a home visit. As stated in question four of the interview schedule:

---

4. If the patient went home today would he (she) need one of the following:

A. surgical dressings
B. special diet
C. injections
D. special exercises
E. guidance with emotional or adjustment problems
F. scheduling of activities to provide necessary adjuncts to recovery
G. bedside nursing care
H. other
I. none needed
J. went home without medical or nursing conference

To more accurately assess if the patient would need the services of a visiting nurse, two other measurements were made. These involved the intensity of the nursing need, and a measurement of the family's ability to cope with the need. The scales for measuring the intensity and the coping ability were also from Miss Janice Mickey's study. Questions pertaining to these measurements were:

5. Estimate the intensity of posthospitalization nursing care needs: _______

Reason:

The scale for estimating the intensity of these needs, as created by Miss Mickey is as follows:

I. No Need. No apparent problems, physical or emotional. Patient is giving, or needs are being met by family and/or physician.

II. Slight Need. Some slight physical and/or emotional problems. Patient and/or family needs teaching for simple procedures.

III. Moderate Need. Needs bedside nursing care which may include surgical dressings, needs teaching in self-care, for injections or in scheduling activities to assist in recovery.

\[2\]Ibid.
IV. **Serious Need.** Patient feeling very ill and/or frightened over his condition. Family very anxious and worried. Needs professional nursing.

V. **Critical Need.** Critically ill, family and patient unable to give necessary care. Family and/or patient extremely anxious over patient's condition.

The question from the interview schedule relating to the family's ability to cope is as follows, with the scale for measurement:

6. Estimate the family's ability to cope with the post-hospitalization nursing care needs: __________

VI. **Unable to cope.** Family appears to be entirely unable to manage its problems, through lack of knowledge or ability to use it, or is unable to do so because of disorganization or marked disinterest, unable to see needs or refuses to make changes--have not sought assistance in serious conflicts, unable to follow suggestions, unable to plan.

VII. **Slight Ability.** Family has a little understanding of how to manage but exhibits very little ability to cope with its problems, but with considerable guidance might be expected to make some progress, tends to wait to seek assistance until problems are emergent.

VIII. **Moderate Ability.** Evidence of some ability to work out problems and with guidance might seek solution and put it into effect--family has some resources within themselves and/or ability to work with problems, but would be better able to cope with outside counseling and guidance, able to cope with some problems well, but not able to do so with others.

IX. **Good Ability.** Family shows it is able to manage nearly all of its own problems and needs outside help only in emergencies or for occasional teaching and guidance, has followed most of physician's suggestions well--only incidental counseling, teaching, etc., needed, accepts and tries to meet needs of patient, able to give nursing care with little assistance.

X. **Excellent Ability.** Family appears to be able to meet all its own needs without additional teaching and guidance, seeks early medical guidance and copes well with Dr.'s orders. Understands and carries out preventative health measures for family.

The predictions made in questions one through six, were recorded for the last three days of the hospital stay. To verify or refute these estimations, a home visit was made by the investigator twenty-four to forty-eight hours after the patient was discharged. This home visit was made in street clothes and
conducted as a non-directive, free answer interview, with no time limit. The interviewer did not write in the patient's presence but recordings were made later in the same day. The item from the interview schedule which pertained to this measurement was as follows:

31. Does the patient still seem to have the above assessed needs?
   
   Letter: __________
   
   Reason: __________

The home call had a second purpose in checking to find if additional nursing needs had emerged that were not recognized from the hospital interviews. As stated on the interview schedule:

32. Additional needs not identified in the hospital?
   
   Letter: __________
   
   Reason: __________

The third purpose of the home call was to again estimate the intensity of the nursing need and the family's ability to cope with this need, to test the accuracy of the estimation made from the hospital. As stated on the interview schedule:

33. Estimate the intensity of the nursing need:
   
   Number: __________
   
   Reason: __________

34. Estimate the ability of the family to cope with the need:
   
   Number: __________
   
   Reason: __________

The third question investigated by the study here reported was: would the need recognitions by the investigator be more nearly comprehensive as a result of the investigator having had direct communication with the attending
physician. For data on this aspect, the investigator made hospital ward rounds with two of the four physicians whose patients were subjects of the study. It was arranged for the investigator to contact these physicians on any questions she had. The physicians likewise kept the investigator informed of his plans for the patient. The patients of the other two doctors were evaluated by the charts, staff nurses and the patient himself, with the attending physician being contacted only for his evaluation as to whether a patient remained in the hospital for medical supervision, as was covered in question three of the interview schedule (see page 12). The results of this aspect of the study were to be shown by the home visit; would some of the needs not be predicted in those patients where the interviewer did not have the benefit of communication with the physician as an information source.
PART I

Survey of Environmental Aspects. In the examination of the time of discharge of patients, the investigator considered it appropriate to examine the environmental influences involved in the hospital routines, which might have an effect on the patient's length of stay in the hospital. The study reported in this paper took place in two general hospitals, however, examination of these environmental considerations was conducted in only one of these hospitals. The investigator found that the differences in discharge practices varied more according to the particular physician than by the nature of hospital routines and policies; therefore, this portion of the study was not repeated in the second hospital.

An investigation of the staffing patterns for weekends was made to discover if the same services were available to the patients on Saturday and Sunday, as were available Monday through Friday. Data for this portion was collected by talking with departmental personnel responsible for making out the time schedules or having experience working weekends. The services which directly influence the patient's care, were found to staff as follows on the weekends:

Nursing. Nursing service attempted to staff the same seven days a week, thus the number of ward aides and licensed practical nurses was the same each day, however, they reported being short of registered nurses for weekend duty.

Pharmacy. There was a registered pharmacist on duty from 8 a.m. until 5 p.m., at which time a registered nurse came on duty, working from 5 p.m.
until 8 p.m., every day of the week.

Inhalation Therapy. There was a registered inhalation therapist on duty every other weekend, and on the alternating weekends there was an inhalation therapist technician on duty. In both cases an eight hour shift was covered on Saturday and Sunday.

Engineers. There was a registered engineer on duty twenty-four hours a day, seven days a week.

Operating Room. This suite was open only to emergencies from Friday 4 p.m. until Monday, at 7 a.m....physicians, scrub nurses and anesthetists were on call for emergencies during the time that the suite was not open.

X-Ray Department. This department was open only for emergencies from 12 noon on Saturday, until 7 a.m. Monday. An X-ray technician was on call for emergencies during the time the department was closed.

Dietary Department. There was a certified dietician on duty from 6 a.m. until 2 p.m. every day of the week.

Laboratory. This department was open from 7 a.m. until 12 noon on Saturday, and the same morning hours apply to Sunday, with additional evening hours starting at 6 p.m. until the technician was finished with the laboratory work necessary for those patients scheduled for Monday surgery. The hours during which someone was not regularly scheduled, there was a technician on call.

Business Office. The staffing was such that persons could be discharged at any time, but if special information was needed by the patient, concerning such things as insurance problems, the patient would have to come back during the weekdays, or correspond by mail. Staffing on the weekends was considered to
be skeletal.

**Housekeeping Department.** The major influence this department had on patients directly, was the unit maids. On the weekends, no routine cleaning was done. There was a maid on duty only to prepare the room after a patient had been discharged.

**Physical Therapy.** This department was closed completely on Saturday and Sunday.

**Conclusion.** It can be seen that minimal services of all departments, other than physical therapy, were available to the patients on weekends, and that preplanning was done for emergencies. Since the room rates are the same seven days a week, there are some possible implications for further study, involving cost differentiation between weekdays and weekends, however, such information is beyond the scope of this study.

Since this survey revealed that there is some slight difference in the services available to the patients between the weekdays and the weekends, the investigator wished to examine if there was a resulting difference in the average number of hospital days between patients who were admitted early in the week as compared to those admitted later in the week. The question was whether there would be a longer hospital stay for patients who were admitted late in the week, since a weekend fell during the more acute stage of their illness.

The admission records for the month of March were studied to investigate this question.¹ To divide admission days equally, Sunday, Monday and

---
¹Monthly Reports of the Commission on Professional and Hospital Activities, Billings Deaconess Hospital, Billings, Montana, March, 1968.
Tuesday admissions were chosen to represent the beginning of the week. In like manner, Thursday, Friday and Saturday were chosen as the group of admissions representing the end of the week. The number of hospital days for each patient admitted on a Sunday, Monday or Tuesday of March, 1968 were averaged together to constitute one figure. This figure represented the average number of hospital days spent by all the patients of this group. The same procedure was done on the number of days spent in the hospital by those patients who, during the month of March, were admitted on Thursday, Friday or Saturday. The results of this averaging are presented in Table I.

**TABLE I**

**A COMPARISON OF AVERAGE LENGTH OF HOSPITAL STAY ACCORDING TO DAYS IN WEEK ADMITTED**

<table>
<thead>
<tr>
<th>Day Admitted</th>
<th>Total Number Admitted</th>
<th>Sum of Hospital Days</th>
<th>Average Number Hospital Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monday</td>
<td>329</td>
<td>1677</td>
<td>5.09</td>
</tr>
<tr>
<td>Tuesday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thursday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friday</td>
<td>183</td>
<td>914</td>
<td>4.99</td>
</tr>
<tr>
<td>Saturday</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Conclusion. These figures were not evaluated by statistical tests, for just as stated, it can be seen that there is no appreciable difference shown in these findings, as to the length of hospital stay, according to the day of the week in which the patient was admitted.

The following excerpt is but one example of the printed information of wide circulation today, as the public reacts to the medical cost crises.

Occupancy rates are as important to hospitals as to hotels. Counting the overhead, it may cost the hospital upwards of $40.00 a day to maintain a semi-private bed, even when its empty. It costs only about $3-$5 a day more when the bed is occupied—that being the charge for the patients' meals. Therefore while virtually no surgery is performed on the weekends, it is common practice to admit surgery patients on Friday. That keeps the bed filled, profitably for the hospital, until Sunday when the patient gets his first dose of medicine to prepare him for Monday's workup in preparation for Tuesday's operation.  

Information such as this prompted the last portion of the survey of the environment. This portion involved comparing the percent of patients admitted to each hospital service each day of the week. The data were obtained from the official statistical records kept by the hospital. The figures used were for the third quarter of 1968, and were so selected as they were the most recent figures available at the time of study.

---


3 Medical Audit Program of the Commission on Professional and Hospital Activities, Billings Deaconess Hospital, Billings, Montana, 1968.
TABLE II
A COMPARISON OF PERCENT OF PATIENTS ADMITTED TO EACH HOSPITAL SERVICE FOR EACH DAY OF THE WEEK IN THIRD QUARTER OF 1968

<table>
<thead>
<tr>
<th>Patient Classification</th>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wed.</th>
<th>Thurs.</th>
<th>Friday</th>
<th>Sat.</th>
<th>SUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Surgical</td>
<td>20</td>
<td>20</td>
<td>18</td>
<td>15</td>
<td>18</td>
<td>5</td>
<td>4</td>
<td>100%</td>
</tr>
<tr>
<td>Adult Medical</td>
<td>12</td>
<td>20</td>
<td>19</td>
<td>13</td>
<td>14</td>
<td>12</td>
<td>11</td>
<td>100%</td>
</tr>
<tr>
<td>Ped. Surgical</td>
<td>14</td>
<td>30</td>
<td>14</td>
<td>113</td>
<td>24</td>
<td>2</td>
<td>3</td>
<td>100%</td>
</tr>
<tr>
<td>Ped. Medical</td>
<td>12</td>
<td>23</td>
<td>19</td>
<td>12</td>
<td>11</td>
<td>15</td>
<td>9</td>
<td>100%</td>
</tr>
<tr>
<td>Births</td>
<td>10</td>
<td>16</td>
<td>19</td>
<td>12</td>
<td>17</td>
<td>14</td>
<td>13</td>
<td>100%</td>
</tr>
<tr>
<td>Obstetrics</td>
<td>11</td>
<td>16</td>
<td>18</td>
<td>14</td>
<td>17</td>
<td>15</td>
<td>9</td>
<td>100%</td>
</tr>
</tbody>
</table>
Conclusion. It can be seen that the two groups of surgical patients (adult surgical and pediatric surgical) have the lowest percent of weekend admissions of any service in the hospital.

In agreement with these findings was a survey of the surgical patients admitted in March of 1968.  

TABLE III

A COMPARISON OF NUMBER OF SURGICAL PATIENTS* ADMITTED EACH DAY OF WEEK IN ONE HOSPITAL IN MARCH, 1968

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total No. Surgicals Admitted</td>
<td>55</td>
<td>76</td>
<td>79</td>
<td>58</td>
<td>63</td>
<td>28</td>
<td>15</td>
<td>374</td>
</tr>
</tbody>
</table>

*Figures represent adult and pediatric surgicals combined.

Conclusion. It can be seen from these figures that the number of surgical admissions on Friday and Saturday is much lower than on any other day of the week. Out of three hundred seventy-four surgical admissions for the entire month, only approximately twelve percent were admitted on Friday and Saturday.

These findings have obvious limitations in that they were collected in only one hospital, and all the data included was from one year. In recognition of these limitations, this survey of environment discloses some information that legitimately refutes information earlier cited (see page 21). More extensive investigations of these environmental aspects would develop another study. However, the limited

---

4 Commission on Professional Health Hospital Achievements, Billings Deaconess Hospital, Billings, Montana, March, 1968.
findings here serve their purpose, for in the opinion of the investigator, a survey involving patient discharge routines would not be complete without considering some of the possible effects that environmental factors might have on admission and discharge procedures.
PART II

Survey of Patients. For the purposes of the study here reported, fourteen patients were selected who agreed to participate and cooperate in the survey. The study took place in two general hospitals, with four of the patients coming from one hospital and ten from the other. This group of fourteen patients consisted of thirteen females and one male, all were caucasian and they ranged in age from twenty-one to eighty-three years. The patients included in the study were discharged from the hospital into a home situation, except for one, that was a university student and was discharged to the student health center for the recuperation period. This patient was included in the population of the study to compare the discharge practices for patients who receive care through the student health center, and because the case load of a home nursing service in this area would include a number of university students.

The final three days of each patient's hospital stay was surveyed by the author, as cited earlier (see Methodology, pages 10-16). The primary purpose of this survey was to investigate the question: If home nursing care were available to a selected sample of medical-surgical patients, could a number of them be going home sooner than would otherwise be medically feasible. The results of the survey based on fourteen patients, using the prepared tool are as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients surveyed</td>
<td>14</td>
</tr>
<tr>
<td>Number that could have gone home earlier had nursing care been available in the home</td>
<td>11</td>
</tr>
<tr>
<td>Number that needed the last three days of hospitalization for medical or non-nursing care</td>
<td>3</td>
</tr>
</tbody>
</table>
Had home nursing care been available to them, it was found that eleven of the fourteen medical-surgical patients included in this study could have gone home earlier.

Since some medical-surgical patients could have gone home earlier if home nursing care were available, the author considered it appropriate to consider more specifically which general grouping of patients might most benefit from such a service, would medical or surgical patients make the most use of a home nursing service. It was recognized that no significant conclusion could be made on the basis of such a limited population. To attempt to draw some inference from the data collected, however, seemed to indicate that both groups of patients, medical and surgical, would benefit by such a service. The fourteen patients included in the study, grouped according to admission diagnosis, was as follows:

- Medical patients: 7
- Surgical patients: 4
- Surgical patients who developed medical problems: 3

The population was divided equally at admission, there being seven admitted for surgical reasons, and seven admitted for medical reasons. However, at the time of discharge, which was the concern of the survey, three of the surgical patients had medical problems develop which necessitated the last days of their hospital stay. Considered individually, one female admitted for an appendectomy developed thrombi about the site of a previous infusion, and she thus was started on anticoagulant therapy, which lengthened her hospital stay. A second similar situation occurred in a female admitted for surgical delivery, who, following the operation developed pulmonary emboli which necessitated
anticoagulant therapy and considerably lengthened her stay. The third situation involved an elderly female admitted for abdominal surgery, who late in her post operative period suffered an increase in the severity of her chronic congestive heart failure problem. This was the condition that necessitated her staying in the hospital longer than would otherwise have been necessary.

For the purposes of the survey here reported, these three patients are considered to be medical patients. The grouping according to general diagnosis at time of discharge was as follows:

Medical patients 10
Surgical patients 4

Having made the classification as to whether each patient was medical or surgical, it was then possible to proceed with the consideration of whether the medical or the surgical patients would, as a group, tend to benefit most, in that a home nursing service could meet their needs, thus enabling their earlier discharge. The eleven patients that could have gone home earlier if home nursing had been available, considered according to diagnosis showed:

Surgical patients 4
Medical patients 7

Included in these seven medical patients are the three previously cited, who were admitted for surgical reasons. In spite of the development of medical problems, all three could have gone home earlier, had home nursing care been available.

Eleven of the fourteen patients, could have gone home earlier, which left three of the population that had needs that could only be met in the hospital situation. They needed medical supervision, or non-nursing care, until the day
The three patients that would not have had their hospital stay shortened by the availability of home nursing care, were medical patients.

The nature of the prepared tool used in the survey was such that each of the last three days of the hospital stay was considered as to what needs of the patient on each of these days necessitated procedures that could only be administered in the hospital setting (see Interview Schedule, Appendix B). It is, therefore, possible to determine how many hospital days could have been saved each patient, up to three. Any patients who might have been able to have gone home four or more days earlier than they actually did, assuming the availability of home nursing services, will not be reflected in this survey, for only the last three days were surveyed. Twenty-eight hospital days might have been saved for the eleven patients that could have gone home earlier, had a home nursing service been available to them.

Conclusion. The first question investigated in the study was to survey a number of medical-surgical patients to determine if they could be going home sooner than would otherwise be medically feasible, if home nursing care were available to them. On the basis of fourteen patients, eleven of the fourteen could have gone home sooner. The findings on the fourteen patients seemed to indicate that both medical and surgical patients would benefit from a home nursing service, since a number of each general diagnostic grouping was included in the eleven that could have gone home sooner. The three patients that could not have gone home sooner through the availability of a home nursing service, were all of the general diagnostic grouping of medical patients. In totaling the number of hospital days that could have been saved for the eleven patients that could have gone
home earlier, the findings show that twenty-eight hospital days might have been saved, had home nursing service been available to them.

The second question of the survey was to investigate whether a prepared tool could be used with accuracy in predicting the post-hospitalization nursing needs of the patient, as were directly related to that hospitalization, when used by the investigator functioning as a hospital based nurse.

As was shown in the prepared tool (see Methodology, pages 10-16), used by the investigator, prediction of what the nursing needs of a patient would be following a hospitalization involved two aspects. The first aspect was the identification of the need and how acute the need was to that patient, a complex which was referred to as need intensity in the tool. Second aspect involved predicting the ability of the family to cope with this need, for different situations have a different impact on various families. As was formerly cited, the tool used in the survey here reported included scales for measuring both the intensity of the need, and the families' coping ability (see Methodology, pages 10-16). In tabulating the data on estimating the intensity of the post-hospitalization nursing needs, a comparison was made between a hospital estimation and a home estimation on each patient. On the fourteen patients included, the estimation of the intensity of the home nursing need that was done in the hospital, was shown to be accurate on the home visit, in all fourteen cases.

The same comparative method was used in estimating the ability of the family to cope with the patient's need. On the fourteen patients included, the hospital estimation was in accordance with the home estimation made in twelve of the fourteen cases. The two that were not in accordance, were due to the family being better able to meet the patient's needs than was predicted in the
hospital. In one instance a neighbor volunteered to take a small baby for a few days while the mother recuperated. In the other instance the patient's daughter decided to come home unexpectedly and help her mother. Therefore, the needs of these patients were better met than could have been anticipated from the hospital.

Conclusion. In the fourteen cases studied, it was shown that it was possible for the investigator functioning as a hospital based nurse, to correctly assess the home nursing needs of a patient with very little error, by using the prepared tool.

The third question of the study was to examine if the need recognition by the investigator would be more nearly comprehensive as a result of the investigator having had direct communication with the attending physician. In the fourteen patients included in the study here reported, no additional needs were identified for any of them, upon making the home visit. Need recognition was not found to be more comprehensive for those patients of the physicians that the interviewer made rounds with, as compared with the patients of the physicians the interviewer did not make rounds with.

During the period of data collection for the survey here reported the interviewer was not responsible for patient care, but called on the patients in the hospital and at home, as was cited earlier (see Methodology, pages 9-10). If the situation had been such that needs were to have been met, and nursing care given, there were instances identified by the investigator, where the nurse would have needed direct contact with the physician. An example of this was a patient that had had a persistent shadow in his left lung and related to the interviewer that the physician had implied to him that cancer was a possibility. The patient was
originally admitted for pneumonia. This was a patient of the physician the interviewer was not making rounds with so the interviewer had no direct information, it was not noted on the chart, and none of the nurses questioned had any knowledge of this possibility. If a referral was to have been made to a home nursing service, and nursing care given, this point would have needed clarification through the attending physician.

Conclusion. The comprehensiveness of recognition of patient needs was not increased by the interviewer having had direct communication with the attending physician, but the interviewer recognized instances where direct contact with the attending physician would be essential before thorough and appropriate nursing care could have been given to the patient at home.

Other Findings. There was a variance of opinion found among physicians as to when patients are well enough to leave the immediate medical supervision and acute care setting of the hospital. Among the patients included in the survey here reported, the opinion of two consulting physicians, as to when a patient should be discharged, varied, sometimes by several days.

When considering facilitation of earlier patient discharges from the hospital, the fact that some patients do not want to go home should be taken into account. A patient in the survey here reported was discharged by the physician three days before she actually went home. Some patients would prefer to remain hospitalized, rather than have home nursing calls, due to the nature of their health insurance policies that do not cover home calls.

One patient of the study was in the hospital not because he needed hospitalization to get better, but he could not go home as the environment there would likely have made him have a relapse, for he would not have been able to get the
rest he needed. This suggests the need for a facility which provides less service than the acute care of the hospital, but more than may be available in the home situation.

Three of the patients included in the study were readmitted within one week due to medical problems. One lady was readmitted due to diarrhea from her medications. Her original admission was for a myocardial infarction, and upon going home she needed rest. This diarrhea was very weakening to her and she had to be readmitted. A second readmission was a male, who was originally admitted for pneumonia of his left lung, and was readmitted for pneumonia involving his right lung. The third, was a lady with congestive heart failure that made her so short of breath and weak that she could no longer get around at home. Her original admission was for abdominal surgery. These findings suggest that possibly making the home call within twenty-four to forty-eight hours after the patient was discharged, as was done in this survey, was too soon to recognize some of the complications that may occur. These complications were not yet evident at the time of the home calls made by the interviewer in the survey here reported.

The patient who was a university student and discharged from the hospital into the student health center, was among the eleven patients that could have gone home earlier. She might have gone home three days sooner had some nursing care been available to her in her home. This finding suggests that university students have needs similar to those of other patients, which could be met by a home nursing service.

In the selection of the population for the survey here reported, the first fourteen patients that met the criteria for patient selection were included (see Methodology, page 10). The population, so selected, includes thirteen females and
one male. To draw any inference from these findings is beyond the scope of this study. If one assumes that the criteria for population selection that were used in the survey here reported, was similar to the criteria for selection of patients for home nursing care, it would seem then that more females than males would have need of a home nursing service. This assumption could be supported by the fact that most often the male is the financial provider of a family, and therefore, females would be more likely to be in need of someone to look after them upon discharge, as the husband is not apt to be at home to care for his wife.

In view of the increasing health needs of the country, as cited in the Review of Literature, and the findings that many of the patients' needs can be met at home, it seems evident that more and more the hospitals will come to be regarded as facilities for meeting basically acute health problems--while convalescence will have to take place in the home or extended care facilities.
CHAPTER IV

SUMMARY

This survey was conducted in the interest of considering the availability of nursing services in the community as a facility that would make possible the earlier discharge of medical or of surgical patients, from the general hospital. A survey of the last three hospital days of fourteen medical and surgical patients, using a prepared tool, was done in two general hospitals for the purpose of determining if these patients could have gone home sooner, had nursing care been available to them in their homes. The findings of the survey was that eleven of them could have gone home sooner, had nursing care been available. The findings indicate that such a service would be of value to both medical and surgical patients, and that a total of twenty-eight hospital days might have been saved for the eleven patients of the survey, had a home nursing service been available to them.

In considering the feasibility of earlier patient discharge from the general hospital, a survey was made of the environmental aspects which could be influencing factors on discharge time. An investigation of the weekend staffing patterns of the various hospital departments that directly effect patient care, was done by talking with persons of each department that made out the time schedules, or who had weekend duty. The findings were that staffing patterns, in the hospital where the survey was conducted, vary little between weekdays and weekends, however, there are some possible implications for further study involving cost differentiation between weekdays and weekends. Since some slight difference in service was found between weekdays and weekends, the question arose
as to whether patients that were admitted late in the week would have a longer hospital stay, since a weekend intervened immediately after their admission. The admission records for March were studied, and it was found that there was no appreciable difference in average number of hospital days spent between patients admitted the beginning of the week, as compared to those admitted late in the week, both spending a rounded average of five days. The final portion of the survey of environmental aspects was done in response to literature of wide circulation which makes the charge that it is common practice to admit surgical patients on Fridays and Saturdays, for the purpose of keeping a bed filled, to the economical advantage of the hospital, although surgeries are performed only on an emergency basis on the weekends. The hospital admission records for the third quarter of 1968 were studied to the conclusion that admissions on Friday and Saturday are lower in the surgical departments than any other department in the hospital, and these are the two days when surgical admissions are lowest in the week.

The findings of the survey of environmental aspects, have obvious limitations in that they include data from only one hospital, and involve one year, but they do suggest some possibilities for further study.

The second problem of the survey was to investigate if a prepared tool could be used with accuracy in predicting the post-hospitalization nursing needs of the patient, as were directly related to that hospitalization, when used by the investigator functioning as a hospital based nurse. Measurement of the post-hospitalization nursing needs, was made by using a prepared tool that included scales for identifying and measuring the intensity of the patients’ needs and the ability of the patient’s family to cope with these needs. A measurement was
made in the hospital and validated by a home call measurement, made twenty-four to forty-eight hours after the patient was discharged. The findings were that the intensity of needs could be correctly assessed, and the coping ability could be assessed correctly in most cases; twelve out of fourteen cases in the survey. It follows then, that another nurse, with similar background and training should be able to correctly assess the home needs of a patient, the intensity of the needs and the ability of the family to cope with these needs, by using the same tool.

The third problem of the survey was to examine if the need recognition by the investigator would be more nearly comprehensive as a result of the investigator having had direct communication with the attending physician. Data were collected for this portion by the investigator making rounds with two of the four physicians whose patients were included as subjects of the study. The findings indicate that comprehensive need recognition was achieved by the investigator in all fourteen cases involved, regardless of whether or not she had made ward rounds. There were instances recognized, however, where if nursing care were to have been given, direct contact with the attending physician would be essential to meeting the patient's needs for home nursing care.

RECOMMENDATIONS

1. A home nursing care service should be established to give care to medical and surgical patients, for this service could shorten the hospital stay of some patients.

2. Patients could be referred to a home nursing service by a hospital
based nurse coordinator, of similar education to the investigator, who had assessed the patients' needs by using the tool tested in this survey.

3. There should be some provision for direct communication between the nurse coordinator and the patients attending physician to provide specific information essential to meeting home care needs.

RECOMMENDATIONS FOR FURTHER STUDY

1. The survey here reported included a limited population of only fourteen patients, and included only one male. The survey was done by one investigator, and findings are, therefore, based on the evaluations of one investigator. The study should be repeated on a larger patient population with the inclusion of more male subjects for further support of or refute of the findings of this survey.

2. The obvious limitations of the survey of environmental aspects limit the validity of the findings here reported. It is recommended that a full study be made of the part that environmental factors might have in influencing the length of hospital stay of patients, that would serve to validate or refute the findings of this survey.
APPENDICES
APPENDIX A

1202 Gopher Street
Bozeman, Montana 59715
March 10, 1969

Miss Margaret Lewis
The Visiting Nurse Association
Denver, Colorado 80204

Dear Miss Lewis,

I am a graduate student in Nursing at Montana State University. Recently I came across your article in the June, 1963 issue of Nursing Outlook, on "Denver's Early Discharge Program." I find the information there to be very much in line with the study I am doing for my major paper, and would appreciate the opportunity to profit by what must by now be ten years of experience on your part, and wonder if you possibly have any more recent, comprehensive information on your program that I have not found, or that you could make available to me.

I would like to know if Blue Cross in Colorado now covers home care as one of its regular policies. Have you any more recent statistics on the financial savings of giving home care as opposed to hospital care? I also note in your article the mention of the necessity of having Blue Shield coverage to pay for physician’s home visits; are home calls by the physician a regular part of your service? I would like to know also if you frequently incur patients that could go home sooner with your program, but because of the nature of some insurance coverage that covers hospitalization only, remain in the hospital. Do the head nurses of your hospitals make ward rounds with the physicians, to be in possession of current knowledge that it would be necessary to pass on to the Nurse Coordinator?

I will appreciate any information you can give me, and will be willing to defray any reasonable expense that may be incurred. I thank you very much and wait to hear from you.

Sincerely,

Dorothy Baker

This study is being conducted in compliance with the requirements of the Montana State University School of Nursing. Any assistance you can give Mrs. Baker will be appreciated.

Sincerely,

Dr. Laura Walker, R.N., Ph.D.
Director, School of Nursing
Mrs. Dorothy Baker
1202 Gopher Street
Bozeman, Montana  59715

March 19, 1969

Dear Mrs. Baker,

Miss Lewis referred your request of March 10th to me for reply.

Our hospital coordinator program is continuing to function well.

Colorado Blue Cross has not extended home nursing visits to other than the Metropolitan Denver Area to any extent. They cancelled all Blue Cross policies for people sixty-five years of age and over, since Medicare started. They continue to pay us for visits to eligible early discharge patients under sixty-five.

We are not involved in any charges for physicians for any of our home care cases. Our only responsibility is to maintain renewal or change of orders every two months.

Obviously, home care is cheaper than an average of about fifty dollars a day in a hospital. Our cost per visit whether ½ hour or 2 hours is $11.00 per visit - not per hour.

Our private hospitals have large medical staffs. It would be impossible for any coordinator to make rounds with the physicians. The coordinators check through the Kardex daily, to look for patients who might be eligible for home nursing care. They leave notes for the doctor or talk to the head nurses regarding referrals.

When a doctor wants to refer a patient he discusses this with the coordinator, completes a referral, and the coordinator plans with the patient and family for care.

Each of our coordinators are official members of their hospital Utilization Committees. This is of great value in communicating with the hospital staff, regarding patients who have been in the hospital over two weeks. These committees assist in eliminating long term hospitalization of patients who do not need hospital care - whether they have hospital insurance or not. If they are referred by the physician for nursing care, and are not Blue Cross, Medicare or Medicaid,
we charge for our visits based on the patient's ability to pay.

I hope this answers your questions, at least in part.

Sincerely,

Louise Gaghagen
Assistant Director
Denver Visiting Nurse Service
APPENDIX B

The following is an example of the interview schedule as it was used:

<table>
<thead>
<tr>
<th>Name: Mrs. Nellie Burt</th>
<th>Date: Feb. 2, 4, and 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address: 2910 Radcliff Drive</td>
<td>Diagnosis: Gastric Ulcer, Gastric Ulcer</td>
</tr>
<tr>
<td>Age: 83</td>
<td>crippled with arthritis, diverticulitis</td>
</tr>
</tbody>
</table>

1. Will the patient receive the services of Non-Nursing departments today?  
   Yes No Specify: She goes to P.T. for hot packs to her neck.

2. Could these services be received on an outpatient basis? Yes, she does this herself at home regularly.

3. Does the patient at this stage of illness require a Drs. medical supervision, thus making hospitalization necessary? Yes, her need for Bufferin for her arthritis, on her gastric ulcer caused complications. She also had problems with diarrhea from her ulcer diet and medication, which caused cramping and an irritation to her diverticulosis.

4. If the patient went home today would he (she) need one of the following:  
   A. surgical dressings  
   B. special diet: Ulcer Diet  
   C. injections  
   D. special exercises  
   E. guidance with emotional or adjustment problems  
   F. scheduling of activities to provide necessary adjuncts to recovery  
   G. bedside nursing: Wheelchair Patient  
   H. other  
   I. none needed  
   J. went home without medical or nursing conference

5. Estimate the intensity of posthospitalization nursing care needs: III  
   Reason: She is a wheelchair patient, can get in and out by herself, but needs to be bathed, her meals cooked. She is mentally sound and could be left alone, but needs assistance with some of her life processes.
6. Estimate the family's ability to cope with the posthospitalization needs: 
   X
   Reason: She has told me her daughter cares for her completely, even to buying food that she can tolerate. She has her own room, and is quite content with the care she receives.

Day of Discharge

21. Are the services of the non-nursing departments utilized today or yesterday?
   Yes  No  Specify: P.T. for hot packs to neck, and X Ray to check size of ulcer. It has been 10 days on ulcer diet, checking to see if healing.

22. Could this have been done on an outpatient basis? No. It is too hard for her to commute.

23. Will the patient need one of the above services upon going home?
   Letter:  B & G
   Reason: same
   Home visit, twenty-four to forty-eight hours post discharge

31. Does the patient still seem to have the above assessed needs?
   Letter:  B & G
   Reason: same

32. Additional needs not recognized in the hospital
   Letter: none
   Reason:

33. Estimate the intensity of the need:  III
   Reason: same

34. Estimate the ability of the family to cope with the need:  X
   Reason: same
APPENDIX C

Miss Janice Mickey
Graduate School of Public Health
University of Pittsburgh
Pittsburgh, Pennsylvania 15213

December 16, 1969

Dear Miss Mickey,

I am a graduate student in Nursing at Montana State University in Bozeman, Montana, and am currently preparing to begin doing research for my major paper. I am interested in the posthospitalization nursing needs of adult medical and surgical patients. I want to study how accurately patient home nursing needs can be anticipated while they are in the hospital.

The information I have been able to find on your work in measuring patient home nursing needs is very much in line with what I am interested in, although it is in many areas more extensive than my study would go. I do feel it would be of great help to me if I could obtain a copy of the tool your research has developed. Would it be possible for you to send me such information? I would be willing to defray any reasonable cost that may be involved.

In hopes that you can make such information available to me, may I have your permission to modify and research with this tool? If you should desire more detailed information on my studies, I would be happy to correspond with you.

Thank you, and I will be waiting to hear from you.

Sincerely,

Dorothy Baker

This study is being conducted in compliance with requirements of the Montana State University School of Nursing. Any assistance you can give Mrs. Baker will be appreciated.

Sincerely,

Dr. Laura Walker, R.N., Ph.D.
Director, School of Nursing
Miss Dorothy I. Baker
1202 Gopher Street
Bozeman, Montana 59715

Dear Miss Baker:

Dr. Mickey asked me to write you regarding your request of December 16.

Under separate cover I am mailing a copy of the Manual of Instructions and the Interview Schedule for your information. You may zerox any portion of the Interview Schedule which may be of help to you in your study. We have just a few copies of her material on file and, therefore, I am asking that you return it as soon as you are through with it.

Should you use any of the information in the Interview Schedule, she will be interested in knowing what you do with it.

Sincerely yours,

s/s (Mrs.) Mary Jacks
Secretary to Dr. Mickey
LITERATURE CITED


"Billions Spent on Health Care; To What Effect?" National Observer, December 2, 1968.


"Hospital Indicators," Hospitals, March 16, 1969, p. 25.


Medical Audit Program of the Commission on Professional and Hospital Activities. Billings Deaconess Hospital, Billings, Montana, March, 1968.


