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Staffing patterns of nursing homes

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STAFFING PATTERNS OF NURSING HOMES

By

Helen M. Shannon, R. N.

Bachelor of Science in Nursing

Duquesne University, Pittsburgh, Pennsylvania

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Reader:

Lena M. Plaisted

Lena M. Plaisted

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CHAPTER I

INTRODUCTION

For many reasons the adequate staffing of nursing homes has been a matter of increasing concern as the number of persons in nursing homes mounts steadily. Greater longevity and the lowest birthrate since the war has increased the proportion of aged in our population. Little more than one hundred years ago in the United States there was one person over age sixty-five for every ten under fifteen years of age. Today the proportion is one aged person to two youths under fifteen years of age. From 1900 to 1950 the proportion of aged in this country increased seventy-two per cent.¹ In the following ten years to 1960, the total number of persons age sixty-five and over in the population increased thirty-three per cent or from twelve million to sixteen million. The population age group seventy-five and older increased even faster--up thirty-eight per cent. This age group now numbers 5.4 million compared to 3.9 million in 1950, an increase of 1.5 million. Concomitantly the nursing home population increased a minimum of fifty per cent--forty-one per cent between 1954

¹Arthur Richardson, "Gerontology Lectures", Boston University, February, 1963.

and 1960 alone.² There are strong indications that the total number of people in need of long-term care will not decrease in the foreseeable future and that, among all invalids, the proportion seeking care in hospital units, homes for the aged, and nursing homes will continue to increase, at least until it approaches a ratio of approximately half of all long-term patients in need of care.³ This suddenly expanded need for staff in nursing homes aggravates a long standing problem, the universal shortage of nurses. The number of professional nurses in practice between 1950 and 1962 increased from 375,000 to 550,000, or from 249 to 297 nurses per 100,000 population. However, since 70,000 of the added number were employed only part time, the effective increase was not that large.⁴ The feasible goal for 1970 is 680,000 professional nurses or 317 per 100,000 population.

The Consultant Group estimates that a desirable goal of 850,000 professional nurses by 1970 to provide services which are safe, therapeutically effective and efficient, is

²U.S. Congress Senate Subcommittee on Problems of the Aged and Aging of the Committee on Labor and Public Welfare, The Condition of American Nursing Homes, 86th Cong., 2d Sess., 1960, p. 2. Cited hereafter as Senate Subcommittee on Problems of the Aged, 1960.

³Edna E. Nicholson, Planning New Institutional Facilities for Long-Term Care (New York: G.P. Putnam's Sons, 1956), p. 12.

⁴U.S. Department of Health, Education, and Welfare, Toward Quality in Nursing Needs and Goals, Report of the Surgeon General's Consultant Group on Nursing, Public Health Service Publication No. 292 (Washington: U.S. Government Printing Office, 1963), p. 6.

not feasible in view of the present number of applicants and school capacities.⁵ Of the 550,000 professional nurses in practice in the United States during 1962, sixty per cent served in hospitals; thirteen per cent engaged in private practice; and seven per cent were in doctors' offices. Nursing homes shared a sixteen per cent distribution of professional nurses among public health agencies, industry, military service and nursing education. More than half of the 225,000 practical nurses in practice in 1962 were employed in hospitals. All other services shared the remaining group.⁶ It is predicted that by 1970 there will be 40,000 nursing homes giving "skilled nursing care."

It is self evident that the availability of nursing staff is a prerequisite to nursing care. Only following this may the standard of nursing care provided be evaluated. An important question arises as to the present staffing pattern of nursing homes and how much nursing time each patient receives. How else may there be prudent planning for the future?

Statement of the Problem

What is the number of hours of nursing care per patient per day provided to patients in nursing homes? It is to this question that this study is directed. The areas of study are

⁵Ibid., p. 23.

⁶Ibid., p. 9.

subdivided as follows:

1. To determine the number of hours of nursing care per patient provided by all personnel providing nursing care to the patients during the three eight hour shifts in a selected number of nursing homes.
 - a) To determine the number of hours of nursing care per patient provided by professional nurses during the three eight hour shifts.
 - b) To determine the number of hours of nursing care per patient provided by licensed practical nurses during the three eight hour shifts.
 - c) To determine the number of hours of nursing care per patient provided by non-licensed personnel during the three eight hour shifts.
2. To determine the number of hours of non-nursing service per patient provided by all personnel serving the patients during the three eight hour shifts, in a selected number of nursing homes.
 - a) To determine the number of hours of non-nursing care per patient provided by professional nurses, licensed practical nurses and non licensed nursing personnel during the three eight hour shifts.
 - b) To determine the number of hours of non-nursing care per patient provided by auxiliary person-

nel during the three eight hour shifts.

- c) To determine the number of hours of non-nursing care per patient provided by volunteer workers during the three eight hour shifts.
3. To determine the types of patients in the nursing homes according to specified criteria.

Justification of the Problem

One of the foremost problems encountered by our society is the care of the aged. Predictions of continued population explosion have alerted the professions to develop our present deficit resources to provide a comfortable and reasonable standard of care for the future. Since a knowledge of present staffing patterns of nursing homes will be useful in improving and planning extension of this service, it is hoped that some information may be obtained from this study which would indicate the amount of nursing service presently available to patients and the preparation of the nursing personnel providing it.

Scope and Limitations

This study is centered on the determination of the average number of hours of nursing care given daily to the individual patient in five proprietary nursing homes in a large New England metropolitan area. The number of hours of nursing care per patient per day is apportioned among professional, licensed practical nurses and non-licensed personnel

during the three eight hour shifts. Time allocated to non-nursing services per patient during the three eight hour shifts and by whom provided is included so that an opinion may be formulated as to whether nursing time is diverted to ancillary services. Patients are categorized in accordance with specified criteria to suggest the extent of disability and nursing service required. It is evident that this small sampling of five proprietary nursing homes totaling 136 beds, of which 120 were occupied, is one of the limitations of this study. Possibly another is the omission of a category for the graduate nurse who is unlicensed.

Definitions of Terms

The following terms as used in this study are defined as follows:

1. Nursing Home

The term 'nursing home' means a facility or unit which is designated, staffed and equipped for the accommodation of individuals who are not in need of hospital care but who are in need of nursing care and related medical services which are prescribed by or performed under the direction of persons licensed to provide such care or services in accordance with the laws of the state in which the facility is located.⁷

2. Patient Activity

⁷U.S. Department of Health, Education and Welfare, Nursing Home Standards Guide, Public Health Service Publication No. 827 (Washington: U.S. Government Printing Office, 1961), p. 1.

- a. Bed: Patient spends less than one hour per day out of bed.
- b. Wheelchair, stretcher: Patient spends one or more hours out of bed, but ambulates less than one hour of that period (i.e. spends greatest part of time out of bed in wheelchair or on a stretcher).
- c. Ambulatory: Patient spends more than one hour out of bed and ambulates more than one hour of that period.⁸

Preview of Methodology

Suggestions of the Boston University Faculty Committee who reviewed the subject of the field study and Mary E. Shaughnessy,⁹ together with an unpublished study by Bonney and Rothberg,¹⁰ were utilized as a guide in formulating categories for the collection of data. From the literature and the writer's past experience, categories for the study of the nursing home personnel, professional, auxiliary and volunteers, their duties and work schedules were constructed into interview schedules.^{11, 12, 13, 14}

⁸Virginia Bonney and June Rothberg, "Nursing Needs of the Chronically Ill" (unpublished Draft #5, restricted material pending publication used with permission of the authors, New York University, (August, 1962).

⁹Interview with Mary E. Shaughnessy, Assistant Professor of Public Health of the Boston College School of Nursing, on November 13, 1962.

¹⁰Bonney and Rothberg, loc. cit.

¹¹Appendix A.

¹²Appendix B.

¹³Appendix C.

¹⁴Appendix D.

The homes were selected from the list of licensed, proprietary nursing homes published by the Department of Health of the state in which they were located. The only criterion for selection other than proprietary licensure was that the nursing home did not exceed a fifty patient bed compliment.

Through personal interview by appointment with either the administrator or the charge nurse of the nursing home, the requested data were furnished. Interviews were held on weekdays during the seven to three thirty four of duty and ranged from fifty minutes to one hour and thirty minutes in length.

The questions were phrased so that replies could be recorded by checking the appropriate column on the interview schedules. Occasionally a few words of explanation were added for clarity. Except for the birth dates and an occasional diagnosis, almost all of the data were given from memory by the informant. As the guest of the administrator or charge nurse, the writer briefly visited all of the patients and was introduced to them. The data obtained are presented in numerical and percentage values. The number of hours of nursing and non-nursing care per patient provided will be shown as to the range and the means.

CHAPTER II

THEORETICAL FRAMEWORK OF THE STUDY

Review of Literature

Recent studies in various sections of the United States have measured the nursing care in hours per patient day.

A recent time and motion study conducted by the organization of John G. Steinle, demonstrated that two hours and fifty-nine minutes of nursing care per patient day could be considered adequate. The study sample consisted of ten nursing homes of various sizes. The study homes, by general agreement of the State Department of Health, the State Department of Welfare and local physicians, had excellent facilities and provided high quality care. Each patient was classified as either maximum, intermediate or minimum, depending upon the type of care each required. Physicians, staff, and the administrators of the homes collaborated in establishing the classifications which were based upon observations of patients by graduate students. After a period of five days' observations on a twenty-four hour basis, the tasks were consolidated and duplications eliminated so that the result was a complete list of tasks performed by nursing and auxiliary personnel. These tasks were listed on forms and further observations were made for one week. The total time required to perform

each task for each type of patient, according to the classification of the nursing personnel giving the care was computed. Improper performances were omitted from the calculation. An average time required to perform each task, by classification of the nursing personnel and type of patient, was determined. This average time was multiplied by the frequency. This total reflected the number of times each task was properly performed and the number of times it was improperly performed. The adjusted time required to perform a task represented the total time required in one week to perform each task properly. This was computed for each classification of nursing personnel and each type of patient. The total time required to do each task properly in a week, by each classification of employee, was divided by the number of patient days represented by each category of patient. The total time of each category of nursing personnel was computed. From this was subtracted the total time represented by the actual performance of the tasks resulting in non-productive time. The nonproductive time was apportioned to each task. Thus, the total time required, by classification of nursing personnel, to perform adequate care for each type of patient in a day was developed. The combined average hours of nursing care per patient per day was found to be two hours and fifty-nine minutes.¹

Four Hospital Advisors collected data for A Study of Nursing Home Care in Maryland in the 158 licensed nursing homes in that state. The Bureau of Medical Services and

¹John G. Steinle, "Consultant's Corner," Hospital Topics, (December, 1962), p. 54.

Hospitals, the Office of Research and Planning, and the Division of Public Health Nursing of the State Department of Health, the Baltimore City Health Department and the Montgomery County Health Department participated in these investigations from February through September, 1960. The following resume seemed particularly pertinent to the author's study and is quoted in detail:

Maryland's Standards and Regulations for Nursing, Convalescent and Care Homes adopted in 1947 and revised in 1953 stipulate that there shall be a registered nurse or a licensed practical nurse responsible for the nursing service and that sufficient personnel shall be employed to give adequate care to patients day and night. The minimum requirement is two hours of bedside care per patient per day. In this study information on nursing personnel was obtained from 123 homes in the State. The average number of hours of bedside care per patient-day was found to vary with the size of the home. By relating the hours worked by all nursing and attending personnel to the number of patients in homes of varying bed capacity, it was found that in all groups of homes with a bed capacity below 70 (a total of 112 homes) the minimum requirement of two hours of bedside care per patient per day was, on the average, met or exceeded. If the homes with less than ten beds are excluded, the average of daily nursing service was found to range from 3.5 hours in homes of 10 - 19 bed capacity to 2.2 hours in homes of 50 - 69 beds.

Of the 123 homes studied, there were eleven with a bed capacity over 70, six of them with 70 - 89 beds and five with 90 beds or more. The average number of hours of bedside care per patient per day in these two groups was 1.5 and 1.9 respectively, falling short of minimum requirements. These figures are averages for homes grouped by bed capacity; some individual homes greatly exceeded the minimum requirement while others fell far below. It is noteworthy that of the two groups containing eleven of the largest homes which, on the average, failed to meet minimum requirements, six had almost exclusively welfare clients.

The quality of care was often unsatisfactory even

in homes where the total number of nursing personnel met the minimum requirements of bedside care per patient-day. After visiting 25 homes in 5 counties (excluding Montgomery County) interviewers summarized their experience as follows: 19 homes employed either registered nurses or licensed practical nurses but 6 homes had no qualified nursing personnel. Even the homes employing full-time nurses usually had insufficient qualified personnel to cover a 24-hour period. Fourteen of the homes employed their nurses for one eight-hour shift only, without provision for relief personnel. The nurse to whom responsibility was assigned did not always have authority to carry out her functions and in a large proportion of these 25 homes the nursing service personnel also carried responsibility for cleaning, laundry, food service and miscellaneous shopping. . . .

It was difficult to categorize nursing home patients by diagnosis because of the paucity of recorded medical information in the homes. Patients apparently suffered from a wide range of chronic illnesses with cardiovascular conditions predominating. Numerous handicaps such as defects in speech, hearing and vision were associated with the various illnesses.

Almost one half of the patients were unable to walk with or without assistance; 8 per cent were completely bedridden. Incontinence of nursing home patients had to be dealt with almost universally; 98 per cent of all patients had some incontinence and 26 per cent were completely incontinent in one or both functions. One fourth of all patients were mentally confused at least part of the time. . . .

Interviewers noted some discrepancies between care actually received and needed care. The quality of care given frequently reflected the background and preparation of the individual employed for nursing service. In the homes where professional nursing direction was available on a 24-hour basis there was marked superiority in the quality of nursing care.

Absence of medical supervision and professional nursing personnel led to hazardous practices in the handling of medicines in some instances. Oral and parenteral medications were administered by non-qualified personnel on occasion, and medicines were placed in unmarked cups and glasses. . . .

Most nursing home operators were not specifically trained for their jobs. This was reflected in general

management problems and lack of professional supervisory personnel. Although the nursing home is a type of medical institution, there was, on the part of management, a lack of awareness of the need for medical supervision. The fact that physicians' services were available to individual patients was not sufficient for good medical management.

The minimum requirement for hours of bedside care per patient day was met or exceeded, on the average, by the majority of homes. The group of larger homes with a bed capacity of 70 or more failed, however, to fulfill the minimum requirement of two hours per patient day. . . .

In general the quality of nursing care was poor. Few homes had qualified personnel working around the clock, as is needed in a medical institution. . . Too many homes relied on aides for most of their bedside care and did not have registered nurses to plan or supervise such care.²

This study illustrates that general compliance with regulations requiring an average of two hours nursing care per patient per day does not insure adequate care. It is interesting to note that in homes ranging in total bed capacity from ten to thirty-nine patients in the Maryland study the average number of hours of nursing care per patient per day varied from 2.7 hours to 3.5 hours per patient day. The range of ten to thirty-nine beds per nursing home coincided with the size of the nursing homes in the writer's study.

The report of Solomon and Betty Loeb Center project located at Montefiore Hospital contained information relative to staffing for nursing home type patients. The Center cares

²Maryland State Department of Health, Bureau of Medical Services and Hospitals, A Study of Nursing Home Care in Maryland, (October, 1960), pp. 3-18.

for patients who are not in need of hospital care. A staffed ratio of slightly better than 1-1 prevailed, with ninety-two persons serving eighty patients. Slightly over 4.0 hours of nursing care per patient day was budgeted at Loeb. This fairly closely paralleled the amount of nursing care at Montefiore Hospital. However, a considerably larger proportion of professional care was given at the Loeb Center. The goal for nursing encompassed all aspects of nursing in a family-centered approach into which public health concepts were integrated. Another major responsibility of nursing was to channel the therapies of the other disciplines to reach the patient in a coordinated program of care and teaching, through which he has the opportunity to heal and grow. With these concepts in mind the pattern for each forty patient unit per tour of duty Monday through Friday follows:

A.M. Tour of Duty - One Head Nurse
 Five Registered Nurses
 Two and one half Attendants (male and female)

P.M. Tour of Duty - One Head Nurse
 Five Registered Nurses
 Two and one half Attendants (male and female)

Night Tour of Duty - One half Head Nurse
 Two Registered Nurses
 Two Attendants (male and female)

One Ward Clerk on each Nursing Unit 9:00 A.M. - 5:00 P.M.
 Monday - Friday. One Team Clerk for the Group Unit.³

³Lydia E. Hall, Project Report - The Solomon and Betty Loeb Center at Montefiore Hospital. (New York: August, 1960), p. 23.

The weekend and holiday coverage was somewhat reduced.

The embarrassing lack of information about present practices in nursing homes which handicapped planning for construction and licensing programs lead to a study of "Personnel Time in Nursing Homes of Washington State" in 1956.⁴

The first objective was to collect and analyze data on the number and kinds of personnel employed in the various types of nursing homes. The nursing homes in Washington State were classified for purposes of the payment of public assistance grants for the care of patients. The classifications I, II, III, or IV, related to the qualifications and number of skilled nursing personnel employed in the home, ranged from the highest to the lowest. Medical examiners classified the patients receiving public assistance and recommended the appropriate type of nursing home care. Group I patients were usually confined to bed, unable to feed themselves, and in need of skilled care. Group II patients were ordinarily non ambulatory and might be incontinent or required parenteral medication. Group III patients might be semi-ambulatory and required semi-professional nursing service. Group IV patients were usually ambulatory, needed simple nursing service and, possibly, had mild mental confusion.

⁴Elizabeth Lamberty Tucker and Mildred A. Snyder, "Personnel Time in Nursing Homes of Washington State," Selected Articles on Nursing Homes, Public Health Service Publication No. 732, (Washington: U.S. Government Printing Office, 1960), pp. 178, 179.

According to State regulations the following personnel were required for classification of Group I and Group II nursing homes.

1. GROUP I LICENSED NURSING HOME

A licensed nursing home to be classified as a Group I home shall employ the following full-time active staff:

- a. One registered nurse employed as Supervising Nurse, on day duty, who shall direct all nursing care given in the home; and who shall be employed full time (minimum 8-hour day, 40-hour week)
- b. One registered nurse on p.m. or evening duty
- c. One licensed practical nurse on night duty
- d. One registered nurse for relief duty
- e. Sufficient additional nursing personnel to adequately care for the type and number of patients in the nursing home
- f. Arrangements must be made so that at all times there is either a registered or a licensed practical nurse on duty.

2. GROUP II LICENSED NURSING HOME

A licensed nursing home to be classified as a Group II home shall employ the following full-time active staff:

- a. 1 RN employed as Supervising Nurse, on day duty, who shall direct all nursing care given in the home, and who shall be employed full-time (minimum 8 hour day, 40-hour week)
- b. One licensed practical nurse on p.m. or evening duty
- c. One LPN on night duty
- d. LPN for relief duty
- e. Sufficient additional nursing personnel

to adequately care for the type and number of patients in the nursing home.

- f. Arrangements must be made so that at all times there is either a RN or LPN on duty.⁵

It appeared interesting to compare the findings in the Tucker-Snyder report on a daily rather than the weekly basis reported in the study as it would be more comparable to this investigator's data.

The amount of nursing time available to patients in group I homes averaged about 13 hours [1.86 hours per patient per day]^a but varied from 2 [.3 to 3.7 hours per patient per day] to more than 26 [3.7 hours per patient per day] per patient per week (7 days). One-third of these homes provided 12.0-13.9 [1.7 to 1.98 hours per patient per day] hours of nursing time per patient per week. Nursing time per patient per day in group I homes averaged 113 minutes, 44 minutes of which was skilled nursing time.

Group II homes averaged 12 [1.7 hours per patient per day] of nursing time per patient per week, with a range of from 6.0 to 23.9 [.86 to 3.4 hours per patient per day] hours. There was an average of 102 minutes of nursing time per patient per day, 43 minutes of which was skilled nursing time. . .

This study has demonstrated that specific requirements for skilled nursing staff influence the staffing patterns, particularly in small homes. In spite of the shortage of nurses, 24-hour skilled nursing supervision in 'intensive care' homes has been required in Washington since the licensing program began in 1951. In 'limited care' homes, one full-time skilled nurse in charge of the nursing service has been required. Almost all homes meet these standards, and many large ones exceed them. It is recognized, of course, that an official standard of requirement alone does not bring nurses into employ-

⁵State of Washington; State Department of Health, State Department of Public Assistance and Division of Vocational Rehabilitation, Final Report: Rehabilitation Education Service (Seattle: State Department of Health, June 15, 1962), p. 261.

ment. . . The present standards for skilled nursing staff appear to be realistic, and it would seem that they could be increased if indicated.⁶

Group III and group IV nursing homes are not reported here for the reason that a question could be raised as to their being comparable to boarding homes.

In New York State another study in relation to staffing was done. The Homestead Study project was also of interest to the investigator. The Homestead Program operated by the Department of Hospitals of New York City is a 360 bed unit for chronically disabled patients no longer in need of specific hospital services and for whom no suitable home in the community was available. It is a separate unit of the Goldwater Memorial Hospital but is thought of as a home and has no resident physicians or internes assigned on a regular basis. When a patient becomes ill and is in need of hospitalization he is admitted to the general hospital just as he would if living in his own home. The Homestead opened two years prior to the beginning of the Nursing Study. Pertinent information as to staffing pattern changes follows:

Original staffing was planned on the initial assumption that this group would require fewer professional nursing services than patients in a general hospital. In other words, it was assumed that their nursing needs could be met by aides and practical nurses with a scattering of nurse technicians and professional nurse supervisory personnel. Experience has demonstrated that this is not the case. These patients require a

⁶Tucker and Snyder, loc. cit., pp. 186, 187. ^a(Calculations in parenthesis have been made by the investigator.)

particular expertise in nursing. Without active, intelligent interest in their improvement or maintenance (whichever goal is appropriate); without knowledgeable nursing intervention, patients tend to lose the skills they have acquired and to regress toward greater physical dependence and emotional disability. Services which are primarily custodial tend to promote rather than combat this tendency, contributing to human wastage and reflecting in added economic burden to society. This hypothesis is supported by considerable evidence. . .

The purpose of the Nursing Study of the Homestead Study Project was to secure information on which to develop a nursing staffing pattern for the unit. The nursing investigators' philosophy was based on the concept that each resident had the right to optimum nursing services which would contribute toward maintenance and improvement of his condition. Residents' needs for nursing had to be identified in order to plan and administer nursing care intelligently. Having been identified, these needs for nursing services then became the determining factors in establishing staffing patterns. It is recommended that all nursing staff recruited for a Homestead be familiarized with the differences in approach and philosophy inherent in this type of unit. The staffing pattern which we present is predicated on the development and implementation of Homestead nursing policies in accord with this philosophy. . .

It should be emphasized that staffing exchange cannot be made among nurses of different preparation with the expectation that an increased number of nurses of one preparation will replace the skills of a nurse prepared at another level. For example, two professional nurses do not possess the scientific knowledge, skills, and understandings of a nurse specialist; nor are two technical nurses the equivalent of one professional nurse; nor do two practical nurses have the technical knowledge or abilities of a technical nurse (Registered Nurse). However, this is not to be construed as meaning that certain specific functions may not be performed safely by nurses with varying preparation. . .

A staffing ratio for a forty-five bed ward of residents of the type found in the study group (see below) is presented. This ratio is a basic on-duty figure for a twenty-four hour period (three shifts) and does not include provision for relief personnel for days-off, vacation etc. It has been suggested that addi-

tional personnel of between fifty and sixty percent of the base figure are required for relief purposes.

Staff ratio: 2 Professional Nurses
 1 Technical Nurse
 2 Practical Nurses
 8-10 Nurses Aides
 1 Ward Clerk

It is emphasized that the above ratio is based on a sample which was found to have forty-five percent of its subject moderately or fully dependent in the total activities of daily living. Variations in staffing can be made according to disabilities and the degree of physical dependence displayed by residents. For the most part, these variations will occur in the number of nurses aides required. . . A most important part of the study revolved about the use of a full time ward clerk assigned to each of the test wards during the study period. It can be said, without doubt that, literally, hours of nursing time were thus released to be used in direct patient care.⁷

It should be emphasized that the above recommendations are suggested only, inasmuch as work on this study has continued. A working draft for the benefit of students from which excerpts have been taken had kindly been made available, although the work was not completed. Because of the influence which it is felt that the completed work will have in upgrading standards the suggested recommendations have been included.

An Interim Report of the Special Commission to Study Convalescent or Nursing Homes in a study of fifty-five nursing homes in Massachusetts states three of its objectives this way:

⁷Virginia Bonney and June Rothberg, Nursing Needs of The Chronically Ill (unpublished Draft #5--Restricted material pending publication used with permission of the authors, New York University, August, 1962), pp. 1-8.

7. Excluding licensed personnel in supervisory position, the remaining number of licensed employees in this survey render .50 hours of nursing service per twenty-four hour day per patient.
8. Including graduate nurses and practical nurses with licensed employees this group renders .70 hours of nursing service per patient, per twenty-four hour day.
9. Nurses' aides render .61 hours of nursing service per patient, per twenty-four hour day. This percentage is estimated since aides as indicated perform in dual and triple roles in the nursing home.

It appears that the total nursing care per patient per day exclusive of supervisory personnel total 1.31 hours of nursing care per patient per day.⁸

A study of experimental staffing conducted in a hospital situation in Kansas defined "low hours" as 1.9 to 2.4 hours of care per patient per day; "medium hours" as 2.9 to 3.4; and "high hours," 3.9 to 4.4. At certain times the high hours exceeded five. The percentage of registered nurses observed in each category ranged from twenty-five to seventy-five per cent. Additional variables created by physicians, administrators, dieticians, technicians and others were considered. Both nurses and patients' opinions were analyzed. No evaluation of the quantity and quality but rather the type of work was made. The conclusion evades the confining limits of a fixed number of optimum hours of nursing care but states

⁸ Commonwealth of Massachusetts, Interim Report of the Special Commission to Study Convalescent or Nursing Homes, March 1, 1963.

that, depending upon the prevailing circumstances, a definite recommendation can be made for each situation.⁹

Another study, also showing the actual nursing hours per patient day, done in New York makes the following pertinent observations of its own findings in relation to similar studies in several areas of this country:

Although there is little agreement as to what constitutes adequate overall staffing of a typical nursing home, the minimum amount of nursing care has been firmly established by code in a few localities. New York City is one of these. Even so, the theoretical or pragmatic determination of what constitutes adequacy (numerically) of nursing care is subject to wide variation where it has been attempted. . . The following tabulation will give an indication of the ranges of staffing in three widely separated sections of the country, supplemented by the opinions of authoritative people on the subject.

- A Florida study done in 1955 showed that nursing home patients were receiving an average of 2.6 hours of nursing care.
- A State of Washington study indicated that nursing home patients were receiving about two hours of nursing care per day.
- A Chicago study showed a range among nursing homes of 1.25 to five hours of nursing care per patient day.
- Edna Nicholson, a recognized authority and author on the subject, says that 3.2 hours of care per day is minimal.
- The present staffing formula as required by Code in New York City provides a range of 2.58 hours to 2.73 hours of nursing care per day in medium sized homes (at 87 percent occupancy).

⁹Peter Kong-ming New, Gladys Nite, and Josephine M. Callahan, Nursing Service and Patient Care: A Staffing Experiment. (Kansas City: Community Studies, Inc., Publication No. 119, 1959).

- The staffing formula proposed in Chapter VI of this report would yield 3.1 hours of nursing care per day in all sizes of homes.
- The Community Council of Greater New York recommends a minimum of 2.9 hours of nursing care per patient day.
- The Interdepartmental Health Council of New York City Government proposes 2.73 hours of care (not counting the supervising nurse) for 120 bed homes, and three hours of care (presumably counting the supervisor) for 45 bed homes.
- A technically valid time and motion study recently conducted by the University of Texas under the direction of John G. Steinle demonstrated that two hours, 59 minutes was the amount of nursing care per patient day that could be considered as optimal.

One Hundred and eight proprietary nursing homes in New York City provided data on registered nurse, practical nurse, and attendant hours of nursing care being given (measured by the actual staff on the day or reporting).

Weighted averages of the data provided are as follows:

Hours of Nursing Care Per Patient Day

Registered Nurse Care	.30 hours
Practical Nurse Care	.50 hours
Attendant-Aide Care	1.89 hours
Combined (total hours of nursing care per patient day)	2.69 hours

As compared with practices elsewhere and with collective opinion and findings of what constitutes adequacy of daily nursing care hours for nursing home type patients, the amount of care now being provided by New York City nursing homes cannot be said to be sub-standard. Neither can it be said to be optimum.¹⁰

It is sad to contemplate that rehabilitation personnel

¹⁰ John G. Steinle and Associates, A Comprehensive Study of Proprietary Nursing Homes in New York City, John G. Steinle and Associates (Garden City, New York: By the authors, December, 1959), Vol. I, Chapter III, pp. 35-36.

was not included in the basic nursing home staffs in this study. This same lack of awareness of patients' needs was found in a study of proprietary nursing homes in Detroit. Some of Mahaffey findings illustrate this lack of rehabilitation personnel and are quoted in detail.

The skills of nursing the aged patient did not appear to warrant special schooling or training in the opinion of most operators. It was felt that a little on-the-job training would be sufficient unless a person were just not capable of adjusting to such nursing. In view of the increased interest in all phases of geriatrics, the low response favoring special schooling or training is disappointing. It would seem that the problems given by the operators in caring for the aged patients might be considerably lessened if these were expected before-hand, and methods to solve them known. The larger number of laymen in the study may explain this, since they were not involved in actual nursing duties.

The staffs of the nursing homes did not list any persons in the rehabilitation fields. Their size would probably not support such personnel, . . . The large number of laymen caused the medically trained owners and operators to express concern in many different ways.

The general feeling was that knowledge of what constituted good medical and personal care varied greatly depending upon the owners' education and experience. Many of the nurses firmly believed that the layman's ignorance of medicines and drugs actually deprived many patients of the benefits of new medicines and treatments. They also believed that minimum care, rather than good care, might be given by profit conscious laymen, whereas the trained nurse does not put profit before the patients' welfare.

The extent and quality of medical and personal care depends upon the honesty and integrity of the owners. If laymen employ qualified personnel there should be no difference in the operation of their nursing homes, than in the homes owned by doctors or skilled nurses.

There is little doubt that the owners and operators as a whole were not providing the finest care possible. The reasons are numerous. Cost is the most important

for those depending largely upon public assistance payments are able to provide only minimum care. . .

Aside from cost, the amount of education and training a person has in all aspects of medicine does have an effect on what they believe to be 'good' nursing care. An owner holding a registered nurses certificate is a better judge of types of care and methods to be used, than a layman without a high school degree. The ability to judge the effectiveness of medicines and treatments depends upon experience and education, and an awareness of the advances being made in medicine. The person primarily interested in the profit aspects of a business is less likely to be aware of these things, or if aware, less likely to be influenced by them than persons trained to accept the comfort and care of the patient as being most important . . .

The data concerning patient needs and services is most revealing on the subject of rehabilitation. Despite all that has been done in this area of geriatrics, the proprietary nursing home operators hold little hope for the rehabilitation of most of their patients. On the bases of their experience, the hope for rehabilitation of the type of patient they receive is generally poor.

Too much needs to be done before the processes of aging are completely understood, and the relief of these disabling processes discovered. On the basis of all the present information, the proprietary nursing homes have not attempted rehabilitation programs of any sort. A few nursing homes have some programs, but for the most part, a patient entering a typical nursing home can expect little rehabilitation. The extent of rehabilitation practiced in any given nursing home will vary with the knowledge and skill of the people working in that nursing home, but on the basis of this study, too few homes provide any rehabilitative programs, and some do not know what the word implies. Perhaps the type of patients received in the nursing homes are beyond hope, as many operators indicated. This is something that warrants further study.

There must be a point at which human beings are no longer capable of being rehabilitated. The body is only capable of a certain length of life. With modern medicine continuously increasing the life expectancy of humans, and of sustaining faint glimmers of life for long periods of time through the use of drugs and medicines, at what point does a human being cease being

nothing but a heartbeat, to be fed, bathed and changed? Perhaps the population being found in nursing homes now is the beginning of a much larger group that will represent future aged patients forced to live out their lives under constant care. Is the nursing home an institution that will grow into a vast operation, where the very old people must live out their days? Such questions seem very pertinent as science keeps lengthening the limits of life. The comments of the operators seem to hint that their function is to furnish space to those who retain life, but are reduced to near creature existence.¹¹

¹¹Thomas E. Mahaffey, "A Study of the Proprietary Nursing Home and Operator in the City of Detroit" (unpublished Master's dissertation, Department of Political Science, Wayne State University, Detroit, Michigan, 1959), pp. 60-69.

CHAPTER III

METHODOLOGY

In order to determine the number of hours of nursing care per patient per day it was felt that the most effective method to collect data would be to visit the homes under study and interview the person in charge.

Selection and Description of Sample

The study was conducted in a large metropolitan area of New England. Nursing homes were selected because the nursing needs of these patients are fairly uniform among such institutions. Boarding homes and many non profit institutions accommodate well aged persons. The five nursing homes cooperating in this study were independent, proprietary homes unrelated to any educational institution. Since the health of this community is the direct responsibility of the local health department¹ and the latter's certification that the nursing homes meet minimum standards of safety and sanitation is a requirement for licensure,² an agency release was secured from

¹ Brookline Health Department, Annual Report for the Year Ending December 31, 1962, p. 4.

² Brookline Health Department, Health Bulletin, XXXIX, No. 10, Fall, 1959, 3.

it. Inclusion of any home in the study was only at the option of each individual home. Every home approached was agreeable and generously cooperative. This was particularly liberal in view of recent strongly, unfavorable newspaper publicity upon disclosure of the report of a special legislative commission studying nursing homes in the area involved which will "undoubtedly" be followed by legal action.

The criteria for selection of the nursing homes were based upon the findings of the Senate Subcommittee on Problems of the Aged that seventy-one per cent of nursing home patients are in proprietary homes. Seventeen or eighteen is the average number of beds per nursing home.³ Proprietary nursing homes of fifty beds or less were selected from the list of licensed nursing homes published by the State Department of Health. Presently within the town limits of the study area there were twenty-three proprietary nursing homes with a total bed capacity of more than 600. These homes varied in size from 9 to 105 beds.⁴ Recently an intensive study of nursing homes had been done in this area and an effort was made to select the sample homes from those which had not been involved

³Senate Subcommittee on Problems of the Aged, 1960, loc. cit., p. 11.

⁴Leon J. Taubenhau, James E. C. Walker, and John G. McCormick, "A Public Health Approach to Nursing Home Care," Paper presented to the Health Officers' Section, American Public Health Association, Ninetieth Annual Meeting, Miami, Florida, October 15, 1962, p. 2. (Mimeographed.)

in the previous study. The five nursing homes participating in the study had a maximum bed capacity of 136 beds of which 120 were occupied at the time of the writer's visit.

Table 1 and 2 describe the sample as to number of beds in each home and the percentage of existing vacancies when the data were collected.

TABLE 1
DISTRIBUTION OF NURSING HOMES ACCORDING TO
NUMBER OF AUTHORIZED BEDS

Authorized Beds	Number of Homes
15 - 24	3
25 - 34	1
35 - 44	1

TABLE 2
PERCENTAGE OF VACANCIES IN THE FIVE
NURSING HOMES IN THE STUDY

Home #	Vacancies
#1	19%
#2	17%
#3	11%
#4	0
#5	13%

Table 3 presents the nursing staff plan in each of the five nursing homes in the study.

TABLE 3
NURSING PERSONNEL STAFFING PLAN
FOR TWENTY-FOUR HOUR PERIOD
FOR THE FIVE SAMPLE HOMES

	Registered professional nurse		Licensed Practical Nurse		Non Licensed Personnel
	Degree	Diploma	Exam.	Waiver	
Home #1	0	0	1 ^a	2	1 ^b
Home #2	0	0	0	2 $\frac{1}{2}$ ^c	6 $\frac{1}{2}$ ^a
Home #3	0	1 ^d	0	1 ^a	4
Home #4	0	1	0	3 ^{a,e}	0
Home #5	0	0	3	1	3 $\frac{1}{2}$

^aIncludes supervisor.

^bIncludes one nurse for whom information concerning licensure was not available.

^cPart time nursing included.

^dNo medications were given in this home.

^eIncludes two nurses the method of whose licensure was not available.

Thirty full time nursing personnel and one part time nurse comprised the staff of the five nursing homes in the study. There was no licensed professional nurse who had a degree. Two licensed professional nurses were graduates of diploma schools but in one of the homes concerned no medications were given for religious reasons. Four practical nurses were licensed by examination. Seven full time practical

nurses and one part time practical nurse were licensed by waiver. In one of the nursing homes the owners who shared the duties of administrator and nursing supervisor stated that the method of licensure for two of their licensed practical nurses was unknown to them. Inasmuch as the supervisor in this home was licensed by waiver it seemed reasonable that if her staff nurses had a higher level of preparation than her own it would have been apparent to her. For this reason the two nurses in question were included with the practical nurses licensed by waiver. Fourteen nursing personnel were unlicensed. The educational background of one of the nursing personnel was not known to the supervisor and the administrator was absent from this home. This aide was included with the unlicensed group. One supervising nurse licensed by waiver stated that she was a graduate of a diploma school. No medications were given in the home which she supervised for religious reasons. One unlicensed supervising nurse said that she graduated from a diploma school some years ago but that she had never become licensed.

Non nursing employed personnel included cooks, cleaning and maintenance personnel whose duties commonly overlapped in each home. Insofar as possible, these services were separated as to the number of hours devoted to each activity and then apportioned as to the number of hours per patient per day. In four homes, with the possible exception of personal laundry, the bulk of the laundry was done outside the home.

The available information about laundry done in the nursing homes in the sample was simply stated in hours with no attempt to measure the laundry service done outside the nursing homes.

Data concerning the administrative staff were available in only three nursing homes in the sample where the owners were present and actively participated in the management and maintenance of the nursing homes. In the other two nursing homes the supervising nurses interviewed stated that they had no knowledge of the amount of service given by the absent owner-administrators or other possible employees outside the nursing homes.

No volunteers gave service in any nursing home in the sample. If volunteer nursing service averaged ten per cent or more daily this contribution could not properly have been omitted from the overall total hours of nursing service provided.

The number of hours of service performed by non nursing personnel demonstrated the time allocated to auxiliary services as distinguished from the nursing service. This information was included because the absence of auxiliary personnel could raise a question as to whether nurses were performing non nursing duties. This reservation appears to have been unfounded.

No physicians, physiotherapists, social workers or professional personnel, other than nurses, were employed by the nursing homes in the study. Physicians and, occasionally

other professionals, were called upon to serve individual patients but were not employed by the nursing homes in the sample.

Tables 4 and 5 are presented to further describe the locale of the study and specifically the diagnoses of the patients at the time the data were collected.

TABLE 4
 PATIENTS' "DIAGNOSES" BY PERCENTAGE
 IN ORDER OF FREQUENCY OF OCCURRENCE^a

Cancer	15%
Diabetes	13%
Arteriosclerosis	13%
Blind	12%
Senility	11%
Arthritis	11%
Cardiovascular Accident	5%
Stroke	5%
Fracture of Hip	4%
Hypertension	3%
History of Hip fracture	3%
Partial Blindness	2%
Vertigo	2%
Partially Deaf	2%
Pneumonia	2%
General Deterioration	2%

^aSome patients had more than one diagnosis.

TABLE 5

PATIENTS' "DIAGNOSES" WHICH OCCURRED
LESS FREQUENTLY THAN ONE PER CENT

Muscular spasm
Post operative stomach tumor, hernia
Asthma
Mental Condition
Muscle Strain
Gastrointestinal disturbance
Emphysema
Leg ulcers
Breast Resection
Colostomy
Anemia
Senile Dementia
Cirrhosis of Liver
Toe amputation
Parkinson's disease
Cerebral thrombosis
Aphasia
Old prostrate case
Bladder infection
Impaction
Nervous
Virus condition
Post stroke
Ulcers
Weakness of legs
Congenital malformation
Gas attacks, frightens, chokes her
Needs home supervision
Amputee
Old age
Intestinal obstruction
History of broken back
Cataract extraction
Questionable carcinoma
Post surgery exploratory abdomen
Retarded
Heart failure
Arteriosclerotic heart disease
Gangrene
Severe deafness

Tools Used to Collect Data

Categories describing the problems of patients in nursing homes were formulated from suggestions by the Boston University Faculty Committee who reviewed the subject of the field study and Mary E. Shaughnessy, Assistant Professor of Public Health of the Boston College School of Nursing, together with an unpublished study by Bonney and Rothberg. From the literature and the writer's past experience, categories for the classification of nursing, auxiliary and volunteer personnel, their duties and work schedules were constructed.

The various interview schedules are described and presented as follows:

1. NURSING PERSONNEL

A. Licensure and Education

1. Professional Nurses:

- a) degree
- b) diploma

2. Licensed Practical Nurses:

- a) examination
- b) waiver

3. Non Licensed Personnel:

- a) 60 hours class, minimum
- b) 20 hours inservice, minimum
- c) no instruction

4. Personnel about whom information was not available.

B. Nursing Duties:

1. regular nursing supervisor
2. regular charge nurse on one shift
3. occasional charge nurse on one shift
4. works under supervision

C. Non Nursing Duties:

1. 1 - 4 hours daily
2. 4 - 8 hours daily
3. indefinite

D. Daily work schedule.**II. NON-NURSING EMPLOYED PERSONNEL****A. Duties****B. Daily work schedule.****III. VOLUNTEERS****A. Duties**

1. Nursing
2. Recreation
3. Other

B. Daily work schedule**IV. DATA ON PATIENTS****A. Age****B. Sex****C. Diagnosis****D. Mobility**

1. Bed
2. Wheelchair or stretcher
3. Ambulatory

E. Medications other than vitamins

F. Incontinent

1. Bladder

a) regularly

b) occasionally

c) catheter

2. Bowels

a) regularly

b) occasionally

G. Decubitus

H. Other dressings

I. Treatments

J. Confused

Procurement of Data

A preliminary visit to outline the project and secure an appointment for the collection of data was made to each home. Interviews were held on weekdays between 7:00 A.M. and 3:30 P.M. since these are the hours when the charge nurse or the administrator was on duty. Visits ranged from fifty minutes to one hour and thirty minutes in length. All visits were completed within a two weeks' period.

The data for this study were procured through the utilization of these tools by interview with the administrator or charge nurse in the former's absence. In instances where the administrator did not actively participate in the management of the home, the charge nurse furnished the information

to complete the interview schedules. This occurred in two homes where the owners or administrators did not participate daily in the residence activities of the homes.

From the verbal information usually supplied from the informant's memory, the appropriate classifications for nursing personnel were checked and the hours of duty were noted. No non nursing duties were reported for nursing personnel. The non nursing personnel, together with their duties and daily working hours for one week, were listed. No volunteers gave service in the nursing homes in the sample.

Appropriate categories for data on patients were checked. Their ages and diagnoses were also noted. Where patients were said to be confused a brief explanation was requested and included.

Two visits were made to each nursing home in the sample. On the first visit an appointment was requested at the home's convenience. On the second visit the data were procured. The length of visits ranged from fifty minutes to one hour and thirty minutes. Visits were made during the day tour of duty because that was the time during which the administrator or charge nurse was on duty. The investigator visited the patients briefly either with the administrator or the charge nurse. Upon completion of the collection of the data on the second visit to each nursing home in the sample, the results were tabulated and analyzed. These data are presented in Chapter IV.

CHAPTER IV

FINDINGS

Presentation and Discussion of Data

The data obtained on each nursing home in the sample through interview with the administrator or supervising nurse will be presented for each home; first in relation to the average number of hours of nursing care per patient provided by all categories of nursing personnel, secondly in terms of supervision by the various categories of nursing personnel, thirdly in relation to the average number of hours of non nursing service per patient per day provided by all employed auxiliary personnel, and fourthly as to patients' conditions in percentages of their occurrence.

Table 6 illustrates the average number of hours of nursing care per patient during each eight hour tour of duty in a twenty-four hour period. It further subdivides the average number of hours of nursing care for each eight hour tour of duty in a twenty-four hour period for each category of nursing personnel. The average number of hours of nursing care per patient day for all five nursing homes in the sample is also shown.

Figure 1 illustrates the average number of hours of nursing care per patient day provided by each classification of nursing personnel.

TABLE 6

AVERAGE NUMBER OF HOURS OF NURSING CARE PER PATIENT
DURING EACH EIGHT HOUR SHIFT IN A TWENTY-FOUR
PERIOD PROVIDED BY ALL CATEGORIES OF
NURSING PERSONNEL IN FIVE
NURSING HOMES

Nursing Home	Eight Hour Shift	Registered Professional nurse			Licensed Practical Nurse			
		De- gree	Di- plo- ma	Total	Exam- ina- tion	Total	Waiver	Total
#1	7-3	0	0		.238 ^a		.000	
	3-11	0	0		.095		.333 ^b	
	11-7	<u>0</u>	<u>0</u>		<u>.000</u>	.333	<u>.381^b</u>	.714
#2	7-3	0	0		0		.000	
	3-11	0	0		0		.225 ^b	
	11-7	<u>0</u>	<u>0</u>		<u>0</u>		<u>.258^b</u>	.483
#3	7-3	0	0		0		.312 ^a	
	3-11	0	0.312 ^b		0		.000	
	11-7	<u>0</u>	<u>0.062</u>	0.374	<u>0</u>		<u>.000</u>	.312
#4	7-3	0	0		0		.933 ^a	
	3-11	0	0		0		.466 ^b	
	11-7	0	0.533 ^b	0.533	<u>0</u>		<u>.000</u>	1.399
#5	7-3	0	0		0.324 ^b		.189	
	3-11	0	0		0.068		.189 ^b	
	11-7	<u>0</u>	<u>0</u>		<u>0.216^b</u>	.608	<u>.000</u>	.378
Grand Total				.907		.941		3.286
Average for five homes				.181		.188		.657

^aIncludes supervisor.

^bIncludes charge nurse on one shift.

^cNo nursing supervisor in this home.

TABLE 6 (Continued)

Non licensed personnel	Total	Average number of hours per patient provided by all personnel
.285		
—		
.919 ^a	.285	1.332
.435		
<u>.258</u>	1.612	2.095
.875		
.562		
<u>.437^b</u>	1.874	2.560
		1.932
0.432		
0.000		
<u>0.000</u>	.432	1.418
	4.203	
	.840	1.87

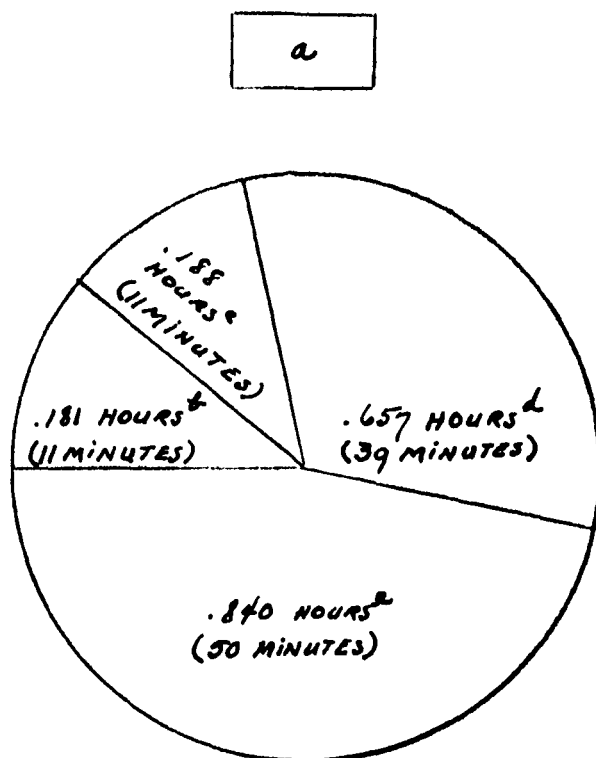


Fig. 1--Average number of hours of nursing care per patient per day in five nursing homes provided by all personnel, including supervisors, during a twenty-four hour period.

^aRegistered professional nurse with degree--no representation.

^bRegistered professional nurse with diploma.

^cLicensed practical nurse by examination.

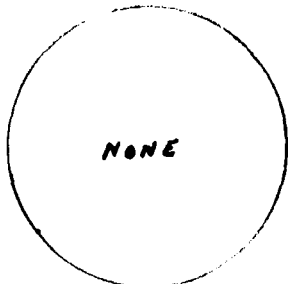
^dLicensed practical nurse by waiver.

^eNon licensed nursing personnel.

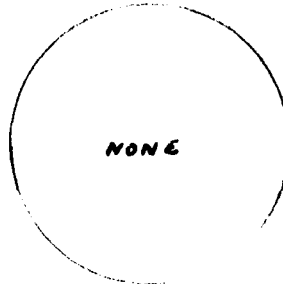
Figure 2 illustrates by percentage the number of patients in five nursing homes supervised by the various classifications of nursing personnel.

Supervised by Registered Professional Nurses

Degree

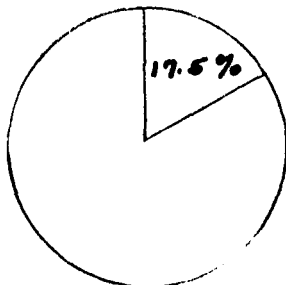


Diploma

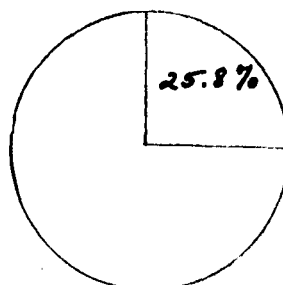


Supervised by Licensed Practical Nurses

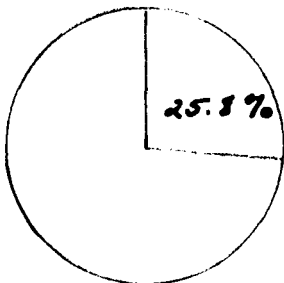
Examination



Waiver



Supervised by Non Licensed Personnel



No Nursing Supervision

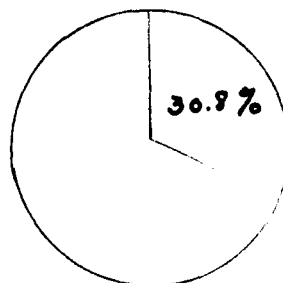


Fig. 2.--Percentage of patients in five nursing homes supervised by registered professional nurses, licensed practical nurses, and non licensed personnel. One home had no nursing supervisor.

The number of hours of nursing care per patient given by all personnel in the five nursing homes in the sample, providing nursing care to 120 patients during the three eight hour shifts ranged from 1.33 to 2.10 hours per patient per day and averaged 1.87 hours per patient per day.

There was no supervision by professional nurses. Nursing care by professional nurses was represented in only two instances but these nurses were in charge on the afternoon or evening shift and carried no responsibility for the overall supervision of nursing care. The licensed practical nurses or non licensed personnel carried major responsibility for patients' care in the homes studied. Of this group the number of hours of service by practical nurses licensed by waiver exceeded that of the practical nurses licensed by examination by three to one. Within the number of nurses licensed by waiver there was one supervising nurse who was a graduate of a diploma school. Another supervising nurse was a graduate of a diploma school and was unlicensed. In one home the charge nurse on the night shift and the professional nurse in charge on the evening shift were graduates of a denominational school of nursing which was not accredited. All of the aides in this home had in excess of sixty hours of formal classes in the same denominational school of nursing. No medicines nor treatments were permissible in this home because of religious beliefs. The number of hours of nursing service furnished by non licensed personnel exceeded the number given by practical nurses licensed by waiver by slightly less than five to four.

In no instance was it apparent that the nursing time as stated was diverted to auxiliary service. There were no volunteers giving any type of service in any home in the sample. No other professionals such as physicians, physiotherapists or social workers, were listed as staff employed by the home. In one instance a patient was being exercised by a visiting therapist. Physicians visit on an individual basis.

Table 7 is presented to describe the non nursing service provided by auxiliary personnel.

The number of hours of non nursing service per patient provided by all personnel in the five nursing homes in the sample during a twenty-four hour period ranged from .73 to 1.705 with an average of 1.13 hours. There was no indication that the time of nursing personnel augmented this figure. The number of hours of administration and laundry done outside the home were not estimated.

Among the auxiliary services in five nursing homes, cooking predominated with an average of .373 hours per patient day. The major portion of the cooking time occurred during the day shift. As is reasonable, about one third of the cooking time occurred on the evening shift. None was scheduled on the night shift. In some instances, the nurse was said to begin preparations for breakfast. However, in such an instance the nurse was relieved by an overlapping morning shift.

TABLE 7

AVERAGE NUMBER OF HOURS OF NON NURSING SERVICE DURING EACH EIGHT HOUR SHIFT IN A TWENTY-FOUR HOUR PERIOD PROVIDED BY ALL EMPLOYED AUXILIARY PERSONNEL IN FIVE NURSING HOMES

Home	Eight Hour Shift	Cleaning and help with trays ^a		Cooking		Bookkeeping, administration ^b	
			Total		Total		Total
#1	7-3	.224		.285			
	3-11	.102		.119			
	11-7	—	.326	—	.404		
#2	7-3			.177			
	3-11			.048			
	11-7			—	.225		
#3	7-3	.425		.297		.159	
	3-11			.093			
	11-7	—	.425	—	.390	—	.159
#4	7-3			.266		.266	
	3-11			.107		.533	
	11-7			—	.373	—	.799
#5	7-3			.324		.263	
	3-11			.148		.108	
	11-7			—	.472	—	.371
Average			.150		.373		.266

^aItems not separated

^bInformation not available in homes with absentee owners.

^cWhere information not available commercial laundries were used.

TABLE 7--Continued

Maintenance, Cleaning, etc. ^a	Laundry ^c		Average number of hours of all per- sonnel
	Total	Total	
			.73
.193		.193	
—	.193	—	.611
.268			
.107			
—	.375		1.349
.533			
—	.533		1.705
.297			
.108			
—	.405		1.248
	.301		1.128
		.038	

Cleaning personnel assisted with dishes or trays in some homes while in others a portion of their time was employed in the maintenance of the building and grounds. The hours of such services were indefinite and varied among the nursing homes in the sample. Two nursing homes grouped cleaning and trays while three nursing homes combined maintenance and cleaning. The average number of hours per patient day for five nursing homes for personnel combining cleaning and trays was .15 hours, and for personnel combining maintenance and cleaning the average for five nursing homes was .301 hours. Information concerning maintenance in one home was not available.

No information concerning bookkeeping and administration was available in two homes in which the nursing supervisors gave the data. The average number of hours of bookkeeping and administration per patient day for five nursing homes in the study from the data available was .266 hours.

Only one nursing home furnished data concerning laundry service. Four nursing homes stated that the laundry, with the possible exception of personal laundry, was done commercially. The average number of hours per patient day for laundry in five nursing homes was .038 hours.

All of the non nursing services reported were limited to the day and evening tours of duty. The major portion of non nursing service occurred during the day tour of duty.

Discussion of the data relative to the characteristics of patients is now presented.

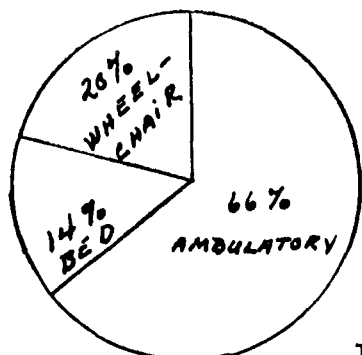
TABLE 8

THE CONDITION OF 120 PATIENTS SHOWN BY PERCENTAGE
IN FIVE NURSING HOMES

Homes	Mobility			Medications other than vitamins	Incontinent					Decubitus	Other dressings	Treatments	Confused
	Bed	Wheelchair or stretcher	Ambulatory		Bladder		Catheter	Bowels					
					Regularly	Occasionally		Regularly	Occasionally				
Percentage													
#1	4.7	---	95.3	85.7	4.7			4.7		4.7	14	33	14.0
#2	9.7	35.5	54.8	67.7	---	19.3	-	3	3	3	3	--	41.6
#3	6.0	19.0	75.0	---	12.0	6.0	-	6	-	---	--	--	25.0
#4	27.0	27.0	46.0	100.0	---	---	7	---	-	---	--	--	13.0
#5	27.0	16.0	57.0	95.0	38.0	16.0	5	38	14	---	11	11	76.0
Average for all homes	14.4	19.5	65.6	69.6 ^a	10.9	8.2	2	10.3	3	2	6	9	33.9

^aIncreases to 87% with the exclusion of Home #3 in which no medications are given for religious reasons.

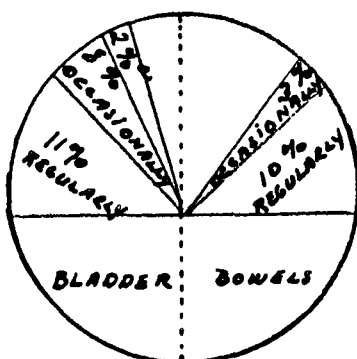
Mobility



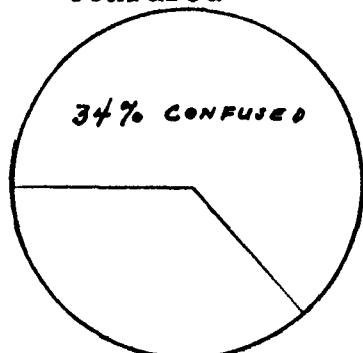
Medications other than vitamins



Incontinent



Confused



Other conditions

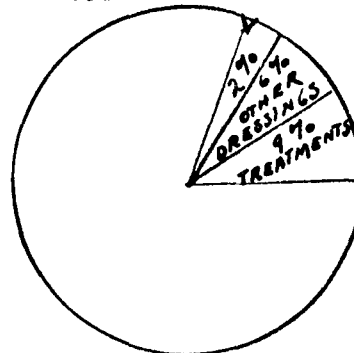


Fig. 3--Patients' conditions in percentages in the five nursing homes in the sample.

^a Patients having catheters

^b Patients having decubitus

Table 8 and Figure 3 describe the condition of patients in percentages.

At the time of the study, one hundred twenty patients whose average age was eighty years were in the five proprietary nursing homes included in the sample. Only fifteen per cent of the patients were male. In the five nursing homes with a capacity of 136 beds, the number of vacant beds in any one home ranged from five to zero. The smallest home had no vacancy and the largest home had less vacancies than the middle group. The highest percentage of vacant beds was found to be nineteen per cent.

Only four per cent of the patients were under sixty-five years of age. Fourteen per cent of the patients were considered to be "bed" patients, that is not out of bed for at least one hour daily; twenty per cent were in wheelchairs or on stretchers, that is out of bed for one or more hours but able to ambulate less than one hour of that period; and sixty-six per cent were ambulatory.

Thirty-four per cent of all the patients studied were "confused", This confusion was described as follows:

forgetful

mind wanders

retarded

lives in the past

mixes names and dates

occasionally wanders at night

out in left field and unaware of surroundings
confused as to place
asks the same things over and over
doesn't make sense in speech
at times gets things mixed up in talking
talks about past
blows top occasionally
imagines a lot and thinks people around
belligerent at times
upset now and then about foolish things and has crying
spells although she knows what she is doing
neurotic talker, and at times cranky and hard to handle.

More than half of the "confused" group were in the ambulatory group of patients. Seventy per cent of the total patients are taking medications other than vitamins. The number is even higher, eighty-seven per cent, if the home is excluded in which medications are banned for religious reasons. Eleven per cent of the total patients were regularly incontinent of bladder and eight per cent were occasionally so. Two per cent had indwelling catheters. Ten per cent regularly, and three per cent occasionally, were incontinent as to bowels. Included among the incontinent group were about three per cent of the patients who were incontinent of both bladder and bowels.

Two per cent of the patients had decubitus areas and six per cent needed surgical dressings for other causes. Nine

per cent of the patients received treatments other than the aforementioned surgical dressings.

Fifteen per cent of the patients were said to have cancer and thirteen per cent diabetes and arteriosclerosis. Twelve per cent of the patients were blind. Arthritis and senility, each eleven per cent were next highest in incidence.

It is interesting that of the eleven per cent of the "senile" patients half were not coincidentally designated as "confused", while about five times that number said to be "confused" were not termed "senile." Five per cent had cardiovascular accidents and an equal number had "strokes." Four per cent had "fractured hips" although half of this number were said to be ambulatory. Three per cent had a "history of a fractured hip" as a diagnosis. Three per cent had hypertension. Two per cent had pneumonia, "general deterioration," partial deafness, partial blindness or vertigo. In one instance cancer was "apparently arrested" and an additional one was "questionable." No definite information was given for "post operative stomach tumor, intestinal obstruction, colostomy, breast resection, post surgery exploratory abdomen" and an instance where research was said to be in progress.

CHAPTER V

SUMMARY, CONCLUSIONS

Summary

The number of aged, sick persons in nursing homes in the United States has increased at least fifty per cent between 1950 and 1960. This increase is far more rapid than the proportionate increase of aged persons in our population which in itself is one of the foremost concerns of our society. The problem of providing fully adequate nursing services to patients in nursing homes is only a part of the difficulty in meeting the demand for nursing services to our entire society. In planning for the continued expansion of long term care it is necessary to first assess the present nursing resources. Since a knowledge of present staffing patterns of nursing homes will be useful in improving and planning extension of this service, it is hoped that some information may be obtained from this study which would indicate the amount of nursing service presently available to patients and the preparation of the nursing personnel providing it.

The data for this study were obtained by interviewing the administrator or supervising nurse in each of the five nursing homes. The sample consisted of 120 patients and thirty full time and one part time nursing personnel. The

study was conducted in a large metropolitan area in five proprietary nursing homes unrelated to any educational institution. The study centered on the average number of hours of nursing care per patient day apportioned among the various classifications of nursing personnel. The average number of hours of non nursing services per patient day was included in order that an opinion might be formulated as to the possible diversion of nursing time from patients' care. No volunteers gave service in any of the nursing homes in the study. An initial visit to each nursing home in the sample to explain the project and request an appointment was followed by a second visit for the collection of data. Visits ranged from fifty minutes to one hour and thirty minutes in length. Categories were formulated of the classifications to be observed and the major portion of the recording was done by checking the columns, hours of employment, age and diagnosis excepted. The type of patients were classified in accordance with specified criteria and shown in percentages.

Conclusions

The study of five nursing homes revealed the following results:

- I. A. The average number of hours of nursing care per patient day provided by all categories of nursing personnel 1.87 hours
- B. Apportionment of the average of 1.87 hours of nursing care per patient per day:

1. Registered professional nurses:
 - a) Degree
 - b) Diploma (11 minutes) .181
2. Licensed Practical nurses
 - a) Examination (11 minutes) .188
 - b) Waiver (39 minutes) .657
3. Non licensed personnel
(50 minutes) .840 1.87 hours

II. Supervision of patients represented by percentages:

- A. Registered professional nurses:
 1. Degree 0
 2. Diploma 0
- B. Licensed practical nurses:
 1. Examination 17.5%
 2. Waiver 25.8%
- C. Non licensed personnel: 25.8%
- D. No nursing supervision: 30.8 99.9

III. A. Average number of hours of non nursing service per patient day provided by all employed auxiliary personnel 1.128

- B. Apportionment of the average of 1.128 hours of non nursing service per patient day:
 1. Cleaning and helping with trays .150
 2. Cooking .373
 3. Bookkeeping and administration .266
 4. Maintenance and cleaning .301
 5. Laundry .038 1.128

IV. Patients' conditions in percentages of the frequency of their occurrence:

- A. Mobility:
 1. Bed 14%

2.	Wheelchair or stretcher	20%
3.	Ambulatory	66%
B.	Medications other than vitamins	70%
C.	Incontinent:	
1.	Bladder	
	a) Regularly	11%
	b) Occasionally	8%
	c) Catheter	2%
2.	Bowels	
	a) Regularly	10%
	Occasionally	3%
3.	Decubitus	2%
4.	Other dressings	6%
5.	Treatments	9%
6.	Confused	34%

Recommendations

1. That similar studies be collated or repeated, if necessary, in order that the National League for Nursing and the American Nurses Association may jointly recommend minimum staffing patterns and hours of nursing service per patient day for nursing homes.
2. That the government of each State incorporate the recommendations of the nursing profession into its regulations and freely utilize qualified nursing consultation in elevating and maintaining desirable standards of nursing care in nursing homes.

3. That the nursing profession recruit and prepare sufficient qualified nursing personnel to provide safe, therapeutically effective and efficient nursing service to all patients including those in nursing homes.
4. That licensees and administrators of nursing homes be assisted to analyze the nursing needs of patients and urged and encouraged to provide appropriate nursing and rehabilitative services.

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APPENDIX A

NURSING PERSONNEL

	Name
	Degree-RN
	Diploma-RN
	LPN-examination
	LPN-waiver
	60 hrs. class minimum
	20 hrs. in-service minimum
	No instruction
	Information not available
	Supervisor
	Regular charge 1 shift
	Occasional charge 1 shift
	Works under supervision
	1-4 hrs. daily
	4-8 hrs. daily
	Indefinite
	Sunday
	Monday
	Tuesday
	Wednesday
	Thursday
	Friday
	Saturday
	Hrs. lunch or rest periods
	Total hours worked

Licensure and Education

Nursing
Duties Non-Nurs-
ing Duties

Work Schedule

APPENDIX B

APPENDIX C

APPENDIX D

DATA ON PATIENTS

	<u>Name</u>									
	<u>Age</u>									
	<u>Sex</u> M F									
	<u>Diagnosis</u>									
	<table border="1"> <tr> <td rowspan="3" style="writing-mode: vertical-rl; transform: rotate(180deg);"><u>Mobility</u></td> <td>Bed</td> </tr> <tr> <td>Wheelchair or Stretcher</td> </tr> <tr> <td>Ambulatory</td> </tr> </table>	<u>Mobility</u>	Bed	Wheelchair or Stretcher	Ambulatory					
<u>Mobility</u>	Bed									
	Wheelchair or Stretcher									
	Ambulatory									
	Medications other than vitamins									
	<table border="1"> <tr> <td rowspan="2" style="writing-mode: vertical-rl; transform: rotate(180deg);"><u>Incontinence</u></td> <td>Regu- larly</td> <td rowspan="2" style="writing-mode: vertical-rl; transform: rotate(180deg);"><u>Bladder</u></td> </tr> <tr> <td>Occa- sionally</td> </tr> <tr> <td rowspan="2" style="writing-mode: vertical-rl; transform: rotate(180deg);"><u>Bowels</u></td> <td>Catheter</td> </tr> <tr> <td>Regu- larly</td> </tr> <tr> <td></td> <td>Occa- sionally</td> </tr> </table>	<u>Incontinence</u>	Regu- larly	<u>Bladder</u>	Occa- sionally	<u>Bowels</u>	Catheter	Regu- larly		Occa- sionally
<u>Incontinence</u>	Regu- larly		<u>Bladder</u>							
	Occa- sionally									
<u>Bowels</u>	Catheter									
	Regu- larly									
	Occa- sionally									
	Decubitus									
	Other dressings									
	Treatments									
	Confused									
	Patient Census									

APPENDIX E



Boston University

CHARLES RIVER CAMPUS • 264 BAY STATE ROAD • BOSTON 15, MASSACHUSETTS

SCHOOL OF NURSING
Office of the Dean

April 4, 1963

To Whom It May Concern:

Helen M. Shannon, R.N., a student in the master's program at Boston University School of Nursing, as a part of her field work is interested in collecting data on staffing patterns of nursing homes. The University will appreciate any help which you may give. The material will be held confidential as to names of homes, personnel, patients or other identifying material.

Marie Farrell

Marie Farrell
Dean