

APPROVED BY THE GRADUATE SCHOOL

AN EVALUATION OF THE FOUR-DAY WORKWEEK
TO IMPROVE CONTINUITY OF STAFFING
WITHIN THE NURSING SERVICE
AT
LUTHERAN GENERAL HOSPITAL, SAN ANTONIO, TEXAS

APPROVED BY THE THESIS COMMITTEE:

Joseph D. Weiss
Chairman

A Problem Solving Thesis

Robert B. Conner

Submitted to the Faculty of

W. H. H. H. H.

Baylor University

In Partial Fulfillment of the

Requirements for the Degree

of

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Master of Hospital Administration

William A. Johnson
Dean of the Graduate School

By

Colonel Robert M. Cochran, DC

DATE August 18, 1973

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Chas. G. [unclear]
Director of the Program

APPROVED BY THE THESIS COMMITTEE:

Joseph D. Weiss
Chairman
Bobby B. Commons
Donald W. [unclear]

APPROVED BY THE GRADUATE COUNCIL:

William G. [unclear]
Dean of the Graduate School

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ABSTRACT

A STUDY ON THE USE OF THE FOUR-DAY WORKWEEK
TO IMPROVE CONTINUITY OF CARE AT LUTHERAN GENERAL HOSPITAL
SAN ANTONIO, TEXAS

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of Baylor University in Partial Fulfillment
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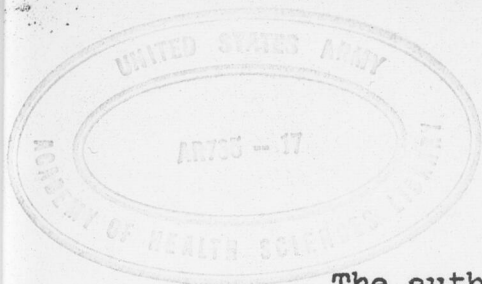
50 Pages

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The problem was to determine whether the four-day workweek could be utilized to improve continuity of nursing care at Lutheran General Hospital, San Antonio, Texas.

The research methods included a research of the literature, an opinion poll to determine employee reaction to the concept of the four-day, ten-hour day workweek, and initiation of a trial program on the Pediatric Ward. Hospital records on overtime payments, employee turnover, patient census and occupancy were reviewed for information, and were utilized for future comparison.

The study concluded that the four-day, ten-hour day workweek was a viable entity and added significantly to employee morale and inservice training programs which ultimately affected continuity of nursing care. Recommendations were made to continue the initial program on a trial basis for three months, at which time such factors as overtime costs, employee turnover and employee absenteeism could be assessed and compared with existing historical data.



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The author wishes to acknowledge the invaluable assistance of Mrs. Carolyn Baker, Assistant Administrator for Nursing Service, and Mrs. Sarah Johnson, Supervisor of the Pediatric Unit for their kindness and cooperation in the preparation of this paper.

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prevalent during the early twentieth century.

As the incidence of tuberculosis has declined, the need for the long term tuberculosis sanatorium has decreased. Through the intervening years, the direction of the institution has been altered towards the building of facilities which could accommodate all types of patients.

The year 1957 marked the beginning of a five phase program to construct a 400-bed medical center with construction of Phase I beginning at that time. The name of the institution was changed to Grace Lutheran Sanatorium and Hospital to indicate its broadened objectives.

By 1964, so few tuberculosis patients were located in the institution that the word "Sanatorium" was dropped

completely from the title. Further, new services were initiated, new facilities were constructed and major renovation and remodeling occurred.

CHAPTER I

INTRODUCTION

History of the Hospital

Lutheran General Hospital had its beginning on September 13, 1913, when it was officially opened as Grace Lutheran Sanatorium. The sanatorium, located on a ten acre tract on South Zarzamora Street in San Antonio, Texas, consisted of one main building and several tent structures. Its original objective was to provide long term care for patients with tuberculosis, a common and often fatal disease prevalent during the early twentieth century.

As the incidence of tuberculosis has declined, the need for the long term tuberculosis sanatorium has decreased. Through the intervening years, the direction of the institution has been altered towards the building of facilities which could accommodate all types of patients.

The year 1957 marked the beginning of a five phase program to construct a 400-bed medical center with construction of Phase I beginning at that time. The name of the institution was changed to Grace Lutheran Sanatorium and Hospital to indicate its broadened objectives.

By 1964, so few tuberculosis patients were located in the institution that the word "Sanatorium" was dropped

completely from the title. Further, new services were initiated, new facilities were constructed and major renovation and remodeling occurred.

By 1967, Grace Lutheran Hospital had developed to the point that it could provide care for its patients from the cradle to the grave. To indicate the expanded services, the hospital was renamed Lutheran General Hospital.

Today it is a modern progressive 200-bed, fully accredited general hospital and it is the only hospital of The American Lutheran Church in the southern half of the United States.

General Information

"Four day, 40 hours," known hereafter as "4 and 40," is an extremely simple innovation in work scheduling that has made a considerable impact on industry throughout the United States. U. S. News and World Report, Newsweek and Business Week magazines all have had articles on this innovative rearrangement of work hours in recent issues.^{1,2,3} Riva Poor has published a book entitled 4 Day, 40 Hours which serves as a reference book to those firms contemplating the use of 4 and 40.⁴ Another book published by the American Management Association titled The Four-Day Week also provides broad guidance to the establishment of 4 and 40.⁵

The key to the concept of 4 and 40 is the adjustment to the fact that the standard eight hour day, five day week is not a sacred immutable fact of life. Previously, managers

attempted to fit their work requirements into the eight hour workday pattern. Production schedules which required more or less than eight hours frequently resulted in overtime compensation or non-productive time. The 4 and 40 however, provided additional flexibility for those industries which had requirements which could not be fitted into the standard pattern. Small industries which worked only the one eight hour shift per day were quick to utilize the innovation to increase the flexibility in their operations.

The hospital, on first analysis, does not have a need for this additional flexibility. There is no production process involved but rather a service is provided. Further, the service is on a twenty-four hour basis which adapts readily to three eight hour shifts. Closer analysis of hospital requirements substantiates these findings with one notable exception. That exception is within the nursing service.

Both registered nurses and licensed vocational nurses must have overlapping of day, evening and night shifts to brief the oncoming staff on the status of the patients for whom they are responsible. This briefing customarily amounts to from one-half hour to one hour each eight hour shift.

There is also a recognized need for in-service training for the nursing staff. The time allotted for this activity usually ranges from one hour per week to one hour per month in most hospitals.

Thirdly, the pace of work within a hospital ward is

not consistent. Afternoons require increased staffing to handle the peak workload activity of the day.

For these reasons, many nursing services have turned to the 4 and 40 to solve these recurring requirements. Admittedly, the 4 and 40 is more difficult to schedule than the three eight hour shifts. It does, however, permit adequate scheduling to overcome these common problems within the nursing service.

The customary scheduling of the 4 and 40 on a twenty-four hour basis is one shift beginning at 7:00 a.m. to 5:00 p.m. and the other beginning at 9:00 p.m. to 7:00 a.m. The four hour shift from 5:00 p.m. to 9:00 p.m. is normally filled with part time staff, full time staff who wish to continue on the 3:00 p.m. to 11:00 p.m. shift or by ten hour staff working from 1:00 p.m. to 11:00 p.m. Depending upon the scheduling policy of the nursing service, there is usually considerable latitude for the establishment of necessary ten hour shifts. Overlapping of shifts does occur, however, the overlapping occurs at peak periods of activity and is therefore considered to be of benefit to the nursing service.

Statement of the Problem

The problem is to determine if the four-day work-week can be utilized to improve continuity of nursing care at Lutheran General Hospital, San Antonio, Texas.

Conditions Which Prompted the Study

Lutheran General Hospital, a 200-bed short term hospital has experienced a chronic shortage of registered nurses in all seven of the hospital wards which operate on a seven day, twenty-four hour a day basis. The shortage occurs primarily on the 11:00 p.m. to 7:00 a.m. shift during the weekdays and on all shifts during the weekends. During these periods, coverage is provided by the licensed vocational nurse (LVN) who, although considered adequately trained by state law, does not have the depth of training necessary to cope with many medical emergencies.

In addition, these shortages are compounded by the lack of inhouse physician coverage. Although the medical staff of the hospital rotate call, there is a frequent problem of being unable to obtain quick response of the doctor on call to emergency situations. Fortunately, the mutual cooperation of other physicians working rounds and the expertise of the available nursing staff has prevented any major problems.

The Assistant Administrator of the Nursing Service has determined this situation is not in the best interest of either the patients or of the hospital. She, therefore, has requested that the 4 and 40 concept be investigated to determine if it could be of use to improve the continuity of registered nurse coverage on the seven wards which should be covered twenty-four hours a day, seven days a week.

Another condition which prompted the investigation of

4 and 40 was the need for inservice training of the nursing personnel. On the eight hour shift there is neither sufficient overlapping of shifts nor available time to provide continuous on-the-job training, updating of nursing methods or familiarization of technique to the nursing staff. One of the major features of 4 and 40 is the overlapping of shifts especially from 3:00 p.m. to 5:00 p.m. at which time these necessary duties could be accomplished.

Lastly, the patient population at Lutheran General Hospital is, to a great extent, Spanish-American with many patients or parents of patients barely bilingual and completely uneducated to even basic hygiene, health care and diet requirements. It was hoped that the 4 and 40 would provide enough shift overlap for personnel of the nursing service to establish a program to provide guidance to these people while they or members of their families were patients within the hospital.

Criteria

The following criteria were provided by the Assistant Administrator for Nursing prior to commencement of the study:

1. Registered nurse coverage was desired on all seven wards which operate on a twenty-four hour day, seven days a week.
2. All personnel of the nursing service, including registered nurses, licensed vocational nurses, nurse's aides

and orderlies, were to have every other weekend off. The weekend being defined as both Saturday and Sunday.

Limitations

The following limitations were present at the beginning of the problem:

1. No minimum staffing requirements have been established for each of the hospital wards. Accurate figures on the actual need of registered nurses, licensed vocational nurses, nurse's aides and orderlies for minimal staffing have never been determined.

2. Actual budgets could not exceed programmed budgets by more than 5 per cent.

3. There is an alleged critical shortage of registered nurses, not only at this hospital but in hospitals throughout the city. Currently there are job openings at Lutheran General Hospital but there are no applicants.

4. Shift rotation of any type of nursing personnel was considered undesirable.

5. Movement of personnel from ward to ward was considered undesirable.

Factors Bearing on the Problem

The factors bearing on the problem are:

1. There are no state labor laws which prohibit the ten hour day for males.

2. There is a state law which prohibits females from working more than eight hours a day unless the individual

signs a release.

3. State law requires licensed nursing personnel on hospital wards on a twenty-four hour a day basis.

4. Turnover rate was considered below average by the Assistant Administrator for Nursing and the stipulation was that it remain that way (See Appendix D).

5. There were no unions represented in the hospital.

6. The hospital is located in a slum area. Safety for female personnel in the hours of darkness has been a factor in recruitment of additional staff.

Footnotes

¹"Latest on the 4-Day Workweek," U. S. News and World Report, LXXII (March 20, 1971), p. 82.

²"The Spreading Four-Day Week," Newsweek, LXXVIII (August 23, 1971), p. 63.

³Riva Poor, "Four Days, Forty Hours," Business Week, (November 14, 1970), p. 64.

⁴Riva Poor, 4 Days, 40 Hours (Cambridge, Mass: Bursk and Poor Publishing Co., 1970).

⁵Kenneth E. Wheeler, Richard Gurman, and Dale Farnowieski, The Four Day Week (American Management Association, 1972).

but had not made the information public. This represents approximately 5 per cent of the total American industry.⁴

When this growth is considered in view of labor's opposition,

its viability is further questioned. Labor's opposition

is typified by this statement from a recent article in *Newsweek*.

CHAPTER II

REVIEW OF THE LITERATURE

Most of labor's leadership, on the other hand, tends to take as fundamental a principle of the day: We believe it is the intention of the Great Creator to shorten the time of man's toil, and to extend his opportunities for moral, social and intellectual improvement . . . If it be God's will to abridge man's daily labor to eight, six, or even less numbers of hours, we ought cheerfully to submit and say - 'Thy will be done.'¹

This statement at the Ten Hour State Convention held in Boston in 1852, marked the beginning of a new era which was to take over one hundred years to come to fruition. In 1926 the National Association of Manufacturers published a Pocket Bulletin, "Will the 5-Day Week Become Universal? It Will Not!"² Today the five day, eight hour day is, if not universal, considered the American standard.

Why then has the innovation of the 4 and 40 workweek gained such favor among American businesses? Is it not a regressive step? Or perhaps it is just a fad. In 1970 there were twenty-seven firms with a little over 7,000 employees who had reported the use of the 4 and 40 workweek. These companies were typically small and non-unionized, ranging in size from 50 to 500 employees.³ In March 1972, there were over 1,300 firms reporting the use of this innovation and a survey done by the American Management Association indicated an additional 1,200 companies who were actually using it

but had not made the information public. This represents approximately 5 per cent of the total American industry.⁴ When this growth is considered in view of labor's opposition, its viability is further strengthened. Labor's opposition is typified by this excerpt from a recent article in Newsweek.

Most of labor's leadership, on the other hand, tends to take as jaundiced a view of the four-day week. AFL-CIO president George Meany is personally opposed to it, and Steelworkers' president I. W. Abel recently declared that the four-day 40 hour week 'was a step backward,' adding that 'our aim is a shorter workweek, not a return to a ten-hour day.' At last week's meeting of the AFL-CIO's executive council in San Francisco, according to chief economist Nat Goldfinger, the issue was briefly discussed but not given serious consideration. 'After all,' said Goldfinger, 'the eight-hour day standard was achieved after decades of trade-union efforts.' Labor's theory, in general, is that anything more than eight hours a day should be paid at time and a half, which would, of course, make a costly economic shambles of a four-day, 40-hour week.⁵

What then has been responsible for the phenomenal growth of this simple innovation?

Greater productivity and lower unit cost according to management. Higher output per man-hour is ascribed largely to improved morale that results in reduced absenteeism, tardiness, and turnover.⁶ Other factors which contribute to higher weekly output are the reduction of starting and close down time relative to operating time and the keeping of work schedules to processing time for a specific operation rather than to a standard workweek.⁷

Productivity gain is a persuasive argument on two counts. First, increases in productivity yield benefits that include potential increases in the standard of living

and reductions in worktime.⁸ Second, growth in productivity has lagged in recent years, with the annual rate of increase in output per man-hours averaging only 2.1 per cent from 1966 to 1970, in comparison with 3.0 per cent for the preceding twenty years.⁹

An increase in the "usable leisure" time sums up the major appeal of the 4 and 40 week to workers. Even though a reduction in workdays is not accompanied by a reduction in weekly hours, the compression of worktime into four days extends the weekend by 50 per cent.

A reduction in commuting time adds further appeal. Travel time between home and workplace - viewed as lost time by most commuters - has been increasing for city dwellers as well as for those who live in the suburbs.¹⁰ For the 4 and 40 workers, travel time is reduced by 20 per cent. Traffic congestion might be reduced as well, as the smaller trip total would be spread out over more than four days.

Working costs such as bus fares, lunches and child care are also reduced.

The picture to be complete, however, must include the arguments against the 4 and 40 workweek. The health and safety of workers has been a major rationale for the shortening of the workday from ten to eight hours or less. Improvements in technology have decreased the physical requirements of work, but in many situations mental and emotional strain have increased.¹¹ Federal and state statutes and many union contracts embody the concern that long days have a deleterious

effect on a worker's health and well-being. Most of these reflect this concern by providing for overtime pay at premium rates after eight hours of work. Collective bargaining agreements can, of course, be renegotiated and laws can be amended.¹² But, unless they are, workers covered by such provisions are unlikely to be put on 4 and 40 schedules, or on any four-day schedule that increases their employer's liability for overtime payments.

The largest group of workers covered by statutes providing for overtime pay in excess of an eight hour day are those directly employed by the Federal Government.¹³ An additional 3.7 million workers employed by government contractors have similar coverage under the Contract Work Hours and Safety Standards Act or the Walsh-Healey Act.¹⁴

A number of state wage and hour laws impede the adoption of the 4 and 40 week in one way or another. For example, state restrictions on maximum daily hours for women mean that a four-day week would necessitate a reduction in weekly hours. Restrictions on night work for women encumber the flexible scheduling that is vital to adapt the four-day week to round-the-clock operations. State restrictions pertaining to women workers are easing, however, in the wake of the Civil Rights Act of 1964 and subsequent court decisions.¹⁵ It is also apparent that short-term productivity gains experienced by the firms on the four-day week are not necessarily indicative of long term results on a large scale. For example, the increased productivity currently reported by

four-day firms is attributed in substantial part to their ability to hold experienced workers and recruit superior workers. Their advantage in these respects would, of course, be lost if the 4 and 40 week were adopted by other firms that compete for the same labor. Some of the improvements may be a short "Hawthorne effect." It is possible also that the low productivity now associated with the last day of the workweek would move in time to the fourth day of the 4 and 40 workweek or to the ninth or tenth hour of each work day.¹⁶

Companies with heavy investment in capital goods that must be used extensively to be profitable, also find the four-day week to be less profitable because the equipment is not used to its capacity.¹⁷ Other minor problems involve scheduling of management personnel and maintaining proper supervisory coverage, confusion on such items as sick leave, overtime, vacations and holidays, moonlighting by employees, spending increases by employees as a result of the extra day of leisure and all the many problems which the working mother must face.¹⁸

Of what significance is the use of 4 and 40 workweek to the hospital? Consider that today there are over three million workers in hospitals in the United States. This represents a 20 per cent increase over the past three years and makes the field of health care services the third largest employer in the country.¹⁹

Hospitals also face a major problem of rising costs. Cost-saving techniques which prove successful in industry are

adapted whenever possible but because they deal in human lives, hospitals cannot use some of these methods. Treating more patients requires a proportional increase in staff and services. Hospitals can, however, strive to increase productivity of their employees. One means of doing this is through rearranging the traditional work schedules. The use of the 4 and 40 workweek promises to be a productive method to accomplish this end.

In addition to the advantages listed in the preceding paragraphs, the hospital provides a unique situation for the utilization of the shift overlap, "to increase quality of care through cooperative (intershift) identification of a patient's physical, emotional and social needs and creation of a unified and consistent approach or plan of care."²⁰

Another plus is the potential for staff development. The opportunity to schedule inservice education without incurring overtime or compensatory time is facilitated during the double staffing periods.²¹

Does the 4 and 40 workweek actually reduce such factors as overtime and sick leave? A recent study by Linda Kent demonstrates that it does, at least in the initial four month period. Overtime was decreased from seven hours to 1.8 per nurse for the four month period. Similarly, sick leave was reduced from .96 to .34 sick days, per staff member, per month.²²

Another factor which further enhances this innovative work schedule is the part-time nurse. Shortages of nursing

personnel in many hospitals permit only a day and night shift which leaves the hours from 5:00 p.m. to 9:00 p.m. without adequate coverage. Nurses seeking part-time employment, especially those nurses seeking their masters degree and the licensed vocational nurses seeking their bachelors degree, can be utilized effectively during this period.²³

Fatigue, one of the most frequently mentioned negative factors is apparently not a major problem, at least not in the first analysis. In the cited study by Linda Kent, 26 per cent of the nursing staff experienced fatigue on the five-day week but the figure dropped to 10 per cent with the 4 and 40 workweek. The comment was made that the decrease was attributed to the extra day off which permitted the worker to recuperate.²⁴

Negative factors in reviewing the literature of the 4 and 40 workweek in the hospital environment are essentially the same as has been described for industry. One factor, however, does assume a great deal more significance; that of the working mother. The nursing staff of a hospital is usually predominately female. The eight hour day from 7:00 a.m. to 3:00 p.m. coincides roughly to the normal school day. The ten hour day from 7:00 a.m. to 5:00 p.m. unfortunately, leaves the school age child without supervision or creates a problem in arranging supervision.²⁵

Lastly, a negative factor which one would think would have little significance unfortunately assumed major proportions in a Providence, Rhode Island hospital. The factor was

that the medical staff did not readily accept the 4 and 40 workweek. The reason given was that the doctor wanted the same nurse with him every day on rounds and the three days off per week caused a break in the continuity of communication between doctor, nurse and patient.²⁶

Footnotes

¹Linda G. Sprague, "Fewer Days or Fewer Hours," in 4 Days, 40 Hours, ed. by Riva Poor (Cambridge, Mass.: Bursk and Poor Publishing Co., 1970), p. 54.

²Linda G. Sprague, "Breaking the 5-Day Mold: Scheduling Issues," in 4 Days, 40 Hours, ed. by Riva Poor (Cambridge, Mass.: Bursk and Poor Publishing Co., 1970), p. 71.

³James R. Kline and Anthony E. D. Guglielmo, "The Flexible Workweek," World, (Winter, 1972), p. 3.

⁴Poor's Workweek Letter. I, No. 7 (March 15, 1972) para 1 (a).

⁵"The Spreading Four-Day Week," Newsweek, LXXVIII (August 23, 1971), p. 63.

⁶Janice Neipert Hedges, "A Look at the 4-Day Workweek," Monthly Labor Review, XCIV (October, 1971), p. 34.

⁷Ibid.

⁸Geoffrey H. Moore and Janice N. Hedges, "Trends in Labor and Leisure," Monthly Labor Review, XCIII (February, 1971), p. 5.

⁹Productivity and the Economy (Bureau of Labor Statistics Bulletin 1710, 1971).

¹⁰Factors and Trends in Trip Lengths (Washington D.C., National Academy of Science, Highway Research Board, 1968), National Cooperative Highway Research Program Report 48.

¹¹Hedges, "A Look at the 4-Day Workweek," p. 34.

¹²Ibid.

¹³U. S. Code, Sec. 5542 and 5544 (1970 Edition).

¹⁴Hedges, "A Look at the 4-Day Workweek," p. 34.

¹⁵Ibid.

¹⁶Ibid., p. 35.

¹⁷Ibid.

¹⁸Kline and Gugliemo, "The Flexible Workweek," p. 5.

¹⁹Ray Richards, "Special Notes on Health Services," in 4 Days, 40 Hours, ed. by Riva Poor (Cambridge, Mass.: Bursk and Poor Publishing Co., 1970), p. 165.

²⁰Linda A. Kent, "The 4 and 40 Workweek on Trial," American Journal of Nursing, LXXII (April, 1972), p. 684.

²¹Ibid.

²²Ibid., p. 686.

²³Mary Ann Minor and Betty Heldstab, "Ten and Six Hour Nursing Shifts Solve Staffing Problems," Hospital Progress, LII (July, 1971), p. 62.

²⁴Kent, "The 4 and 40 Workweek on Trial," p. 686.

²⁵Press Release, United Services Automobile Association, San Antonio, Texas, February 23, 1972.

²⁶"Four-Day Workweek? Oh, Those Long Weekends!," Registered Nurse, XXXV (January, 1972), p. 44.

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CHAPTER III

DISCUSSION

Approach to the Problem

After the preliminary interview with the Hospital Administrator, the Assistant Administrator for Nursing, and other personnel of the Nursing Service, the problem was narrowed and defined consistent with desired objectives. To reiterate, the objective was to determine if the continuity of nursing care could be improved through the use of the 4 and 40 workweek.

The solution to the problem was approached through the following steps:

1. Review of the current literature on the 4 and 40 workweek to obtain understanding of positive and negative aspects, possible problem areas and workable time schedules.
2. Interviews at facilities using 4 and 40 workweek to substantiate and amplify material provided by review of the literature.
3. Survey nursing personnel at Lutheran General Hospital to ascertain the desirability of instituting a 4 and 40 workweek.
4. Establish a limited 4 and 40 program in the Pediatric Ward on a trial basis.

5. Cost analysis comparison based upon minimum requirements of registered nurses between the standard workweek and the 4 and 40 workweek.

The review of the literature on the 4 and 40 workweek has been discussed in the previous chapter and needs no further comment.

The interview at local institutions using the 4 and 40 workweek essentially confirmed the review of the literature. In addition, a more realistic picture of the utilization, especially in regard to work scheduling was obtained.

United Services Automobile Association was selected as representative of the industrial use of the 4 and 40 workweek. This company, San Antonio's largest private employer with over 3,000 personnel, initiated the 4 and 40 in November, 1971. Their objectives in changing were to increase the availability of service to their customers and to improve morale among their employees.

Their first objective was accomplished by allowing the majority of workers to work the ten-hour day on Monday, Tuesday, Wednesday and Thursday. The remainder of the staff worked the ten-hour day on Tuesday, Wednesday, Thursday and Friday. By this means they increased their availability to their customers by ten hours per week or 25 per cent.

Their second objective of improving morale was obtained by the employees having forty-five days of less work per year with the concomitant advantages of less travel time to and from work, less travel cost and lower child-care costs.

Opinion polls conducted at the end of the ninety day trial period indicated that personnel turnover was at an all time low, absenteeism was virtually non-existent and that 85 per cent of the employees strongly favored the 4 and 40 workweek. On the negative side, 7 per cent of the personnel indicated that the longer day was causing complications at home. This group was comprised largely of working mothers with school age children to accommodate. On the basis of these opinion polls plus the fact that policy holders were receiving more service by virtue of the increased hours of service, United Services Automobile Association permanently adopted the 4 and 40 workweek.¹

The Pediatric Ward, Bexar County Hospital, was selected as representative of the hospital use of the 4 and 40 workweek. Prior to the institution of the new workweek, the Intensive Care Unit on this ward was void of registered nurse coverage on the 11:00 p.m. to 7:00 a.m. shift. This placed an extremely heavy responsibility on two full time licensed vocational nurses. Many decisions concerning emergency nursing care were made by these individuals without the guidance of a registered nurse. Absences on both the 3:00 p.m. to 11:00 p.m. and the 11:00 p.m. to 7:00 a.m. shift were also considered high with large amounts of overtime payment as a result. Long periods of continuous shifts were common and overall morale was considered to be very low.

After the implementation of the 4 and 40 workweek on a four month trial basis, these results were noted. Continuous

coverage by registered nurses was obtained by requiring all registered nurses to rotate one week out of every four to the night shift from 9:00 p.m. to 7:00 a.m. Morale was greatly improved and scheduling was accomplished at least four weeks in advance, permitting personnel to plan ahead. Overtime was greatly reduced. Fatigue, which had been expected to cause a major problem, was not considered significant. In Figure 2

Considered as problems were factors such as the loss of differential pay, the rotation of nursing personnel to the night shift, the overstaffing which occurred on some days, days off were not always consecutive and the fact that holiday and vacation days were considered eight hour days instead of ten hour days. of school age. The long day shift until

When the final analysis of the four-day week was done, it was determined that its advantages sufficiently outweighed its disadvantages and it was therefore instituted on a permanent basis for the complete Pediatric Ward at Bexar County Hospital.²

The next step to the solution of the problem was to ascertain the preliminary employee reaction to the concept of the 4 and 40 workweek at Lutheran General Hospital. This was done through the use of informal interviews with 165 of the 199 full time employees of the Nursing Service (See Figure 1). The interview was conducted through the use of a questionnaire (See Appendix E). Items of principal interest were:

1. Did the employee like the idea of working the 4 and 40 workweek?

2. Could they actually work this schedule?
3. What were the principal reasons for not being able to work the 4 and 40 workweek?
4. What influence would shift rotation have on positive answers to the first question?

Analysis of the findings of the opinion poll reveal no unexpected results. The results tabulated in Figure 2 indicate the under twenty-five age group liked the concept of the new workweek by a ratio of three to one. The principal reason given was the long three day weekend. The nurses aides were the notable exception. The reason being that the majority of these aides were married and had young children of school age. The long day shift until 5:00 p.m. would result in either additional expense to provide babysitters or leaving the children unattended.

Figure 1

	RN	LVN	NA	ORDERLY	TOTAL
Number Interviewed	39	43	71	12	165

(Personnel of Pediatric Wards and Operating Rooms were not included in the survey).

Figure 2

Question: Do you like the idea of the 4 and 40 workweek?

	YES	NO
Registered Nurses	29	10
Under 25	6	0
Age 25-40	14	3
Over 40	8	8
Licensed Vocational Nurses	10	2
Under 25	10	1
Age 25-40	14	9
Over 40	6	3
Nurses Aides		
Under 25	9	8
Age 25-40	16	12
Over 40	17	9
Orderlies		
Under 25	7	1
Age 25-40	0	0
Over 40	2	2
Total	109	56

The results of the second item of interest are tabulated in Figures 3 and 4. The results indicate that there were 119 of the 165 interviewed who could actually work the 4 and 40 workweek. Again the major problem for negative answers was the children of the employees. When it is considered, however, that two-thirds of the nursing staff is under forty years of age, the finding is not unusual.

the 4 and 40 workweek was to function properly and divide up the undesirable night shift equitably. The

Figure 3

Question: Could you work the 4 and 40 workweek?

	YES	NO
Registered Nurses	29	10
Licensed Vocational Nurses	31	12
Nurses Aides	49	22
Orderlies	<u>10</u>	<u>2</u>
Total	119	46

Figure 4

Question: For what reason are you unable to work the 4 and 40 workweek?

REASON	REGISTERED NURSE	LVN	NA	ORDERLY
Children	7	7	14	0
Fatigue	1	2	2	0
Secondary Job	0	0	0	2
School	1	2	2	0
Other	1	1	4	0

The fourth question of interest and pertinent to the problem was with regard to the desirability of the 4 and 40 workweek if shift rotation was required. Experience at Bexar County Hospital had indicated the necessity of shift rotation one week out of a four week schedule for all personnel if the 4 and 40 workweek was to function properly and divide up the undesirable night shift equitably. The

results to this question are tabulated in Figure 5. They indicate a complete reversal of results obtained from question one.

Figure 5

Question: If shift rotation were part of the 4 and 40 work-week would this affect your answer? (Asked only to "Yes" answers to, "do you like the idea of the 4 and 40 workweek?")

	YES	NO
Registered Nurses	12	16
Licensed Vocational Nurses	14	16
Nurses Aides	19	23
Orderlies	5	4
Total	50	59

Figure 6

Tabulation of reasons for "yes" answers.

REASON	RN	LVN	NA	ORDERLY
Children	7	6	10	
School		2	1	1
Transportation	1	2	4	
Fatigue			2	
Dislike Rotation	3	2	2	2
Husband Objection	1	2		
Other				2

The fourth step to the determination if the 4 and 40 workweek could be used to improve continuity of care was the implementation of a trial program. The Pediatric Ward, because of an expressed desire of the personnel to try the new workweek, was chosen by the Assistant Administrator for Nursing to be the initiator. The program began on April 10, 1972, and the schedule depicted in Figure 7 typifies one of many possible arrangements which are available for the supervisor to accommodate the needs of her programs with the desires of her nursing staff.

Figure 7

1st Week	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Group A-1st Shift	7-5	7-5	0	7-5	0	0	0
Group B-1st Shift	0	0	7-5	7-5	7-5	7-5	7-5
Group A-2nd Shift	1-11	1-11	0	1-11	0	0	0
Group B-2nd Shift	0	0	1-11	1-11	1-11	1-11	1-11
Group A-3rd Shift	9-7	9-7	0	9-7	0	0	0
Group B-3rd Shift	0	0	9-7	9-7	9-7	9-7	9-7
<u>2nd Week</u>							
Group A-1st Shift	7-5	0	0	7-5	7-5	7-5	7-5
Group B-1st Shift	0	7-5	7-5	7-5	0	0	0
Group A-2nd Shift	1-11	0	0	1-11	1-11	1-11	1-11
Group B-2nd Shift	0	1-11	1-11	1-11	0	0	0
Group A-3rd Shift	9-7	0	0	9-7	9-7	9-7	9-7
Group B-3rd Shift	0	9-7	9-7	9-7	0	0	0

Problem areas which have occurred in the early stages of the trial program are as follows:

1. Initially the second shift was on a schedule from 11:00 a.m. to 9:00 p.m. Policy of the hospital was to pay full evening differential to personnel who worked more than

one-half of their time after 6:00 p.m. With the new schedule, since only three of ten hours worked were after 6:00 p.m., the employee lost the majority of the evening differential pay. For the registered nurse, this amounted to \$35.00 per month. The problem was overcome by moving the shift from 1:00 p.m. to 11:00 p.m.

2. All personnel could not work the 4 and 40 week and did not wish to move to another ward. They were permitted to remain on the standard eight hour shift, creating some problems in scheduling. Registered nurses were not involved in this problem.

The fifth and last step was to determine cost difference in wages paid to personnel working the standard workweek and the 4 and 40 workweek. This step proved to be not only fruitless but also illogical. If it is considered that a given minimum number of each category of personnel i.e., registered nurse, licensed vocational nurse, nurses aides and orderlies are needed to staff a ward, it makes no difference from a cost standpoint when they work so long as the work is adequately covered at all times and that personnel do not work over forty hours per week. Therefore, cost difference between the two systems is not a factor.

Cost does become a factor when employee absenteeism and turnover increases. When this occurs, overtime payments also increase. Appendix F provides this information for Lutheran General Hospital.

Footnotes

¹Interview with Mrs. B. Snirnow, Public Relations Department, United Services Automobile Association, San Antonio, Texas, April 11, 1972.

²Interview with Mrs. Ora Prattes, Clinician III, Pediatric Ward, Bexar County Hospital, San Antonio, Texas, March 1, 1972.

CHAPTER IV
Conclusions

The 4 and 40 workweek in the hospital environment is of considerable value in practically every aspect from which it is analyzed. The key to its value is the overlapping of personnel. Each day intershift communication of the full time staff is increased to six hours (overlap from 1:00 p.m. to 5:00 p.m. and 9:00 p.m. to 11:00 p.m.). This provides the opportunity for improving the continuity of care provided to the patients by virtue of the improved communication between the day, evening and night staffs.

The overlap also allows the supervisor of the ward to develop in-service training programs which ultimately must benefit the quality of patient care and contribute to the continuity of service which is the goal.

A third aspect of the shift overlap involved in the 4 and 40 workweek is the time of the day when the overlap occurs. At Lutheran General Hospital the heaviest work load is from 1:00 p.m. to 6:00 p.m. Reasons for this are that most admissions are done at this time, most surgery occurs in the afternoons (in the month of March, 150 out of 258 cases were done after 2:00 p.m.) and the doctors of the medical staff use their morning hours for office calls and their afternoons for hospital rounds and surgery. The shift

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overlap from 1:00 p.m. to 5:00 p.m. insures an adequate staff to handle this heavy work period.

Assessment of employee preferences indicate a desire by the majority of the nursing staff to try the 4 and 40 workweek. The conclusion is drawn that the personnel of the nursing service will be equally as positive in their reaction to the new workweek as both the review of the literature and the experience in the Pediatric Ward at Bexar County Hospital would indicate. Of added significance is the fact that the Pediatric Ward at Bexar County Hospital was also plagued by the chronic shortage of registered nurses. After the installment of the 4 and 40 workweek, the ward has had a waiting list of registered nurses wishing to work the new schedule. When this is considered in view of mandatory night shift rotation, one week out of every four weeks, the 4 and 40 workweek as a viable innovation is further enhanced. If the use of the 4 and 40 workweek is made public, a problem in recruitment at Lutheran General Hospital should be alleviated.

Lastly, the opinion poll has indicated a desire of the majority of the nursing staff to try the 4 and 40 workweek. Of major significance in the survey was the proportion of working mothers who must provide for child care. The conclusion is made that if Lutheran General Hospital were to establish a child care center for its employees it would greatly enhance its position in obtaining the necessary personnel to adequately staff its services.

Recommendations

It is recommended that Lutheran General Hospital:

1. Continue the trial program on the Pediatric Ward for a period of three months.
2. Avoid shift rotation with this program.
3. Increase the flexibility of the policy on differential pay.
4. Assess the results at the end of the trial period by comparison of statistics on overtime costs, employee turnover and employee absenteeism.
5. Assess the desires of the participating individuals by informal interviews. Of special interest in the survey would be schedule complaints.
6. Evaluate in-service training programs in progress.
7. Establish minimum staffing requirements for each of the hospital wards.
8. Reduce the number of nurses aides and increase the number of registered nurses/licensed vocational nurses to improve quality of staffing.
9. Investigate the possibility of establishing a nursery service for the working mothers.

Definitions

Assistant Administrator - Nursing Service - This position corresponds to that of Director of Nursing. Appendix B provides relative position in hierarchy of Lutheran General Hospital.

Supervisor - One who is responsible for the administration of an organizational element. This position at Lutheran General Hospital corresponds to that of Head Nurse and must be a registered nurse.

Staff Nurse - One who performs general nursing activities and gives direct patient care. Must be a registered nurse.

Licensed Vocational Nurse - A person trained in an approved school for practical nurses and who works under the direction of a professional nurse and is licensed by the state in which employed as a licensed vocational or practical nurse.

APPENDIX A

DEFINITION OF TERMS

Nurse's Aide - A lay worker who has been trained through an in-service program to perform certain nursing activities under the supervision of a professional nurse.

Average Patient Census - The average number of patients on a nursing unit for a twenty-four hour period. Calculated by dividing the number of patient days by the days in the period (See Appendix C).

Bed Occupancy Rate - The percentage of beds occupied in a nursing unit. Calculated by dividing the average patient census of the unit by the number of beds on the unit times

one hundred (See Appendix Definitions

Assistant Administrator - Nursing Service - This position corresponds to that of Director of Nursing. Appendix B provides relative position in hierarchy of Lutheran General Hospital.

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one hundred (See Appendix C).

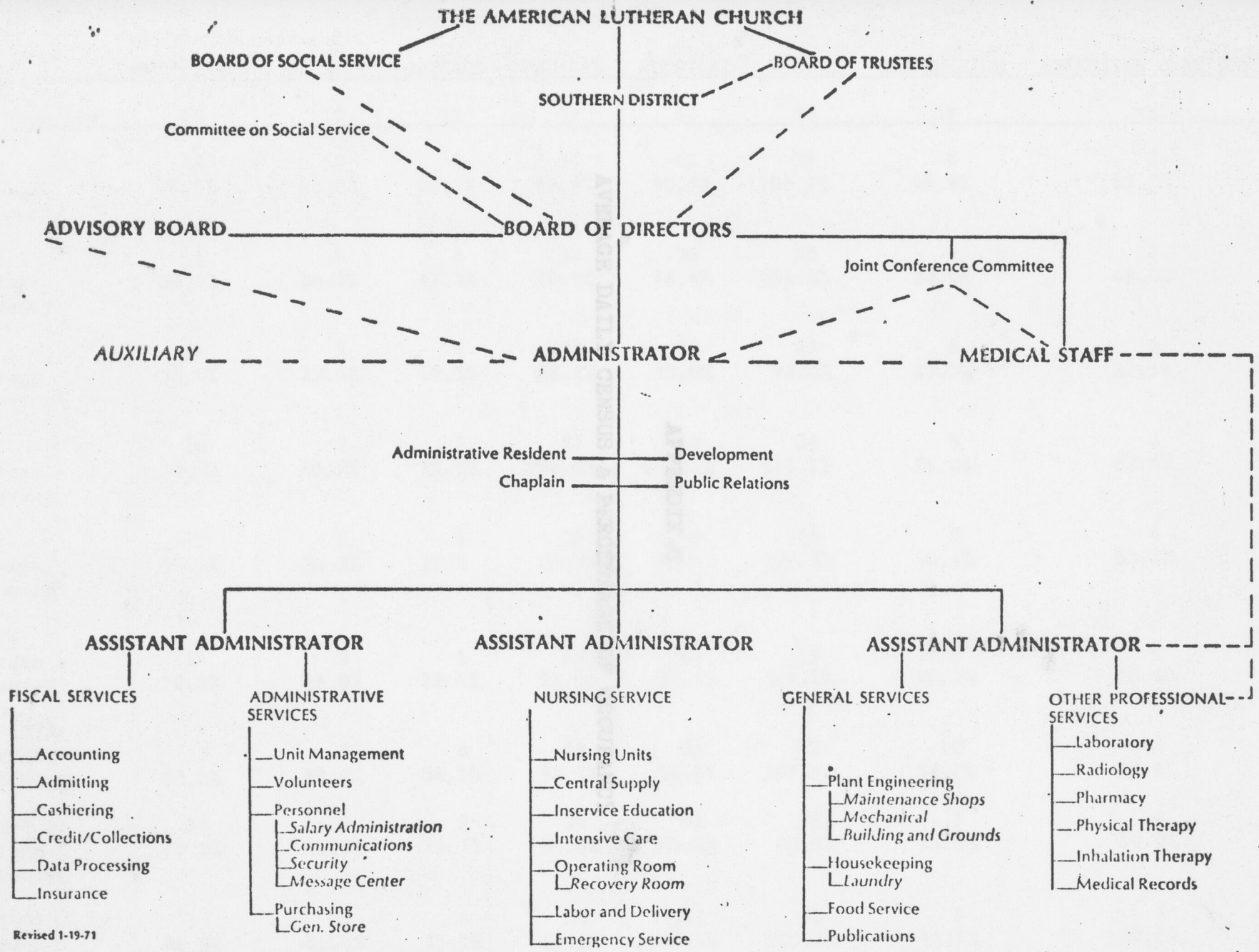
Turnover Rate - The number of terminations in a given month divided by the total number of employees times one hundred (See Appendix C).

Differential Pay - Additional pay above normal salary for working the less desirable duty shifts usually from 3:00 p.m. to 11:00 p.m. and 11:00 p.m. to 7:00 a.m.

Professional Exempt Personnel - Term applied to all professionally trained personnel whose average monthly salary was above \$606.66. Registered nurses who worked full time made up the bulk of this category of people. This category is significant because no overtime was paid to them regardless of hours worked.

Inservice Training - As it is used here, it means on-the-job training to all categories of nursing personnel i.e., registered nurses, licensed vocational nurses, nurses aides and orderlies.

Continuity of Nursing Care - This term, as it is used here implies not only continuous, but also optimum nursing care on the twenty-four hour, seven day week basis.



Revised 1-19-71

————— LINE OF AUTHORITY
- - - - - LINE OF COMMUNICATION

March 1971 - March 1972

MONTH	PEDIATRICS	NURSERY	COTTAGE	MEDICAL	SURGICAL	GROUND	OBSTETRICS	INTENSIVE CARE UNIT
	20	17	22	37	42	30	18	8
MARCH 1971	14	7	5	36	45	32	8	5
Daily Average	70.0%	41.2%	22.7%	97.3%	93.8%	106.7%	44.4%	62.5%
% of Occupancy								
APRIL 1971	16	6	4	24	38	30	7	4
Daily Average	80.0%	24.5%	17.9%	90.9%	78.4%	101.3%	38.0%	45.0%
% of Occupancy								
MAY 1971	10	5	4	33	36	27	6	3
Daily Average	50.0%	29.4%	18.2%	89.2%	75.0%	90.0%	33.3%	37.5%
% of Occupancy								
JUNE 1971	14	7	7	37	39	34	9	3
Daily Average	70.0%	41.2%	21.8%	100.0%	100.1%	113.3%	50.0%	37.5%
% of Occupancy								
JULY 1971	12	6	4	34	39	31	8	4
Daily Average	59.6%	36.6%	17.9%	93.0%	92.3%	102.7%	46.1%	53.6%
% of Occupancy								
AUGUST 1971	14	8	5	35	45	33	9	4
Daily Average	70.8%	45.0%	22.4%	95.0%	94.6%	109.1%	47.7%	50.8%
% of Occupancy								
SEPTEMBER 1971	13	7	8	36	46	32	10	4
Daily Average	69.3%	42.2%	34.1%	97.7%	96.8%	107.8%	53.1%	47.9%
% of Occupancy								
OCTOBER 1971	14	7	5	35	41	28	8	4
Daily Average	70.0%	41.2%	22.7%	94.6%	85.4%	93.3%	44.4%	50.0%
% of Occupancy								
NOVEMBER 1971	17	7	6	35	41	32	8	3
Daily Average	86.8%	41.4%	25.2%	93.5%	84.6%	108.1%	45.7%	39.6%
% of Occupancy								

APPENDIX C

AVERAGE DAILY CENSUS & PERCENTAGE OF OCCUPANCY

AVERAGE DAILY CENSUS & PERCENTAGE OF OCCUPANCY

March 1971 - March 1972

MONTH	PEDIATRICS	NURSERY	COTTAGE	MEDICAL	SURGICAL	GROUND	OBSTRETRICS	INTENSIVE CARE UNIT
Capacity	20	17	22	37	42	30	18	8
MARCH 1971	14	7	5	36	45	32	8	5
Daily Average & of Occupancy	70.0%	41.2%	22.7%	97.3%	93.8%	106.7%	44.4%	62.5%
APRIL 1971	16	6	4	34	38	30	7	4
Daily Average % of Occupancy	80.0%	34.3%	17.9%	90.9%	78.4%	101.3%	38.0%	45.0%
MAY 1971	10	5	4	33	36	27	6	3
Daily Average % of Occupancy	50.0%	29.4%	18.2%	89.2%	75.0%	90.0%	33.3%	37.5%
JUNE 1971	14	7	7	37	49	34	9	3
Daily Average % of Occupancy	70.0%	41.2%	31.8%	100.0%	102.1%	113.3%	50.0%	37.5%
JULY 1971	12	6	4	34	45	31	8	4
Daily Average % of Occupancy	59.4%	36.6%	17.9	93.0%	94.1%	102.7%	46.1%	53.6%
AUGUST 1971	14	8	5	35	45	33	9	4
Daily Average % of Occupancy	70.8%	45.0%	22.4%	95.0%	94.4%	109.1%	47.7%	50.8%
SEPTEMBER 1971	13	7	8	36	46	32	10	4
Daily Average % of Occupancy	63.3%	42.2%	34.1%	97.7%	96.8%	107.8%	53.1%	47.9%
OCTOBER 1971	14	7	5	35	41	28	8	4
Daily Average % of Occupancy	70.0%	41.2%	22.7%	94.6%	85.4%	93.3%	44.4%	50.0%
NOVEMBER 1971	17	7	6	35	41	32	8	3
Daily Average % of Occupancy	86.8%	41.4%	25.2%	93.5%	84.6%	108.1%	45.7%	39.6%

MONTH	PEDIATRICS	NURSERY	COTTAGE	MEDICAL	SURGICAL	GROUND	OBSTRETRICS	INTENSIVE CARE UNIT
DECEMBER 1971	16	7	3	30	31	21	8	4
Daily Average	79.7%	41.0%	15.1%	80.3%	65.4%	69.8%	45.9%	49.2%
% of Occupancy								
JANUARY 1972	16	7	8	36	42	32	10	4
Daily Average	78.9%	41.7%	35.9%	98.3%	88.0%	105.5%	55.4%	44.0%
% of Occupancy								
FEBRUARY 1972	20	6	12	38	47	39	8	4
Daily Average	101.0%	36.1%	52.5%	103.1%	98.2%	129.3%	46.4%	48.3%
% of Occupancy								
MARCH 1972	18	6	11	37	52	34	9	3
Daily Average	91.5%	36.4%	50.1%	100.2%	108.8%	114.4%	50.0%	39.1%
% of Occupancy								

MONTH	REGISTERED NURSE		LICENSED VOC NURSE		NURSES AIDES		ORDERLIES		TURNOVER RATE Percentage
	Emp	Ter	Emp	Ter	Emp	Ter	Emp	Ter	
March 1971	63	2	63	0	82	1	18	2	3.2
April	63	0	69	2	81	1	17	1	1.7
May	70	1	72	6	81	2	19	1	4.1
June	70	4	66	1	80	1	18	0	2.4
July	67	7	63	1	60	3	17	0	4.9
August	61	7	65	1	76	3	17	0	5.0
September	54	1	65	3	74	3	17	1	3.0
October	56	4	70	4	75	1	17	0	5.9
November	37	1	63	1	76	3	15	1	3.3
December	50	4	65	4	77	2	16	1	3.7
January 1972	56	5	64	5	77	2	16	0	6.6
February	56	2	62	1	76	4	15	1	3.8
March	54	3	67	3	77	1	16	0	2.8

APPENDIX D

TURNOVER RATE

*Emp - Employed
*Ter - Terminated

MONTH	REGISTERED NURSE		LICENSED VOC NURSE		NURSES AIDES		ORDERLIES		TURNOVER RATE Percentage
	Emp	Ter	Emp	Ter	Emp	Ter	Emp	Ter	
March 1971	63	2	63	0	82	1	18	2	3.2
April	63	0	69	2	81	1	17	1	1.7
May	70	1	72	6	81	2	19	1	4.1
June	70	4	66	1	80	1	18	0	2.4
July	67	7	65	1	80	3	17	0	4.9
August	61	7	65	1	76	3	17	0	5.0
September	54	1	65	3	74	3	17	1	3.8
October	58	4	70	7	75	1	17	0	5.9
November	57	1	65	2	76	3	15	1	3.3
December	58	4	65	1	77	2	16	1	3.7
January 1972	56	5	64	6	77	2	16	0	6.6
February	56	2	62	1	76	4	15	1	3.8
March	54	3	67	2	77	1	16	0	2.8

*Emp - Employed
*Ter - Terminated

Survey

1. Category: RN () LVN () Aide () Orderly ()
2. Sex: Male () Female ()
3. Age Group: Under 25 () 25-40 () Over 40 ()
4. Marital Status: Single () Married () Number of children _____
5. Job Necessity: Primary Wage Earner () Secondary Wage Earner () Part-time ()
- 5a. How long have you worked at Lutheran General Hospital? _____
6. Do you like the idea of the four day workweek? Yes () No ()
7. Could you work the four day workweek? Yes () No ()
8. If no, why not? _____

APPENDIX E

-
9. If shift rotation **SURVEY SAMPLE** of this schedule, would this make a difference? Yes () No () Explain "Yes" answer _____

 10. If it is impossible for you to work a ten hour shift would you object to working on another ward? Yes () No ()
 11. What problems can you anticipate/have you encountered with the four day workweek?
 - a. Fatigue ()
 - b. Spouse objects ()
 - c. Inconvenience ()
 - d. School ()
 - e. Transportation ()
 - f. Other _____

Survey

1. Category: RN () LVN () Aide () Orderly ()
2. Sex: Male () Female ()
3. Age Group: Under 25 () 25-40 () Over 40 ()
4. Marital Status: Single () Married () Number of children _____
5. Job Necessity: Primary Wage Earner () Secondary Wage Earner () Part-time ()
- 5a. How long have you worked at Lutheran General Hospital? _____
6. Do you like the idea of the four day workweek? Yes () No ()
7. Could you work the four day workweek? Yes () No ()
8. If no, why not? _____

9. If shift rotation must be part of this schedule, would this make a difference? Yes () No () Explain "Yes" answer _____

10. If it is impossible for you to work a ten hour shift would you object to working on another ward? Yes () No ()
11. What problems can you anticipate/have you encountered with the four day workweek?
 - a. Fatigue ()
 - b. Spouse objects ()
 - c. Inconvenience ()
 - d. School ()
 - e. Transportation ()
 - f. Other _____

OVERTIME SERVICE

MONTH	OVERTIME HOURS WORKED	COST
June 1971	391.	1,232.26
July	631.50	2,428.07
August	396.	* -
September	440.	* -
October	315.	1,057.53
November	337.75	1,159.34
December	811.	X -
January 1972	475.	X -
February	554.	X -
March		X -

APPENDIX F

* - Cost info OVERTIME HOURS AND COSTS

X - Cost has not been figured as of April 10, 1972

These figures include all full time registered nurses. They are classified as exempt personnel and are not paid overtime.

NURSING SERVICE

MONTH	OVERTIME HOURS WORKED	COST
June 1971	321.	1,232.26
July	653.50	2,428.07
August	596.	* -
September	410.	* -
October	315.	1,057.53
November	337.75	1,159.34
December	811.	X -
January 1972	475.	X -
February	554.	X -
March	415.	X -

* - Cost information not available

X - Cost has not been figured as of April 10, 1972

These figures exclude all full time registered nurses. They are classified as exempt personnel and are not paid overtime.

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BIOGRAPHICAL SKETCH

Colonel Robert M. Cochran [REDACTED]

[REDACTED]. He attended and graduated from Linden McKinley High School in 1950. Following three years of the Arts-Dentistry Curriculum in the College of Arts and Sciences at Ohio State University, he was accepted and attended four years at the College of Dentistry, Ohio State University, graduating in 1957 with a Doctor of Dental Surgery degree.

Active duty for Colonel Cochran commenced in the Senior Dental Program in September 1956 at which time he was commissioned a second Lieutenant in the Medical Service Corps. Upon graduation from dental school he was commissioned as a first lieutenant, Dental Corps and was selected to attend the Army Dental Intern Program at Walter Reed Army Medical Center, Washington, D. C.

His next assignment was the 122nd Medical Detachment in Frankfurt, Germany. On his return to the United States in 1961, he was assigned to Fort Sheridan, Illinois as a general dental officer. In 1963 he was assigned to the 101st Airborne Division, Fort Campbell, Kentucky as Division Dental Surgeon.

In 1965 he attended the Army General Dentistry Program at Fort Dix, New Jersey. Following this assignment, he became the Commanding Officer, 56th Medical Detachment (KJ) in AnKhe, Vietnam. His next tour was for three years at Fort Ord, California where in December 1971 he was selected to attend the Health Care Administration Course at Fort Sam Houston, Texas.

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