

**CSF**

NURSE UTILIZATION STUDY

# 403 - 68

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FORWARD

This information brochure discusses the methodology and utilization of C.S.F.'s Nurse Utilization Study. If you have any questions pertaining to the study, or if you are interested in having this study applied at your hospital, please address your correspondence to:

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## I. BACKGROUND

A method for increasing the effective and efficient utilization of nursing personnel has long been an important objective in progressive hospital management.

In this respect, the information presented in this report has been designed to provide hospitals with the necessary data and decision making tools to achieve this objective.

The major aims of this study are as follows:

- A. To provide a staffing guide for determining the daily manpower requirements for each medical/surgical unit. Manpower requirements are a function of patient care needs and vary by shift and census.
- B. To provide an objective means of analyzing nursing activities in each hospital, so that the workload can be adjusted during high and low activity hours, to increase the utilization of nursing personnel and to reduce costs of operation.
- C. To document the hospital's philosophy of nursing and to provide goals toward which administration can strive.
- D. To provide a continuous information feedback system for determining the performance of each nursing unit.

Although the above objectives are broad in scope, the nature of the study and the methods employed result in the following study limitations:

- A. The study is limited to typical medical-surgical units.

- B. The study excludes ward clerk activities, except those directed toward a patient which are normally accomplished by nursing personnel.
- C. The staffing requirements allow for personal, fatigue, and delay time but do not allow for sick leave, vacations, holidays, meal time, or any other time spent accomplishing non-patient related activities.
- D. The staffing requirements are based on the premise that the time required per shift is equally distributed over each hour of the shift.
- E. The study assumes that the chosen study unit is effectively managed and reflects the highest caliber of nursing care offered by the hospital.
- F. The staffing guide personnel classifications (skill levels) are restricted to registered nurses, licensed practical nurses, and auxiliary personnel, i.e., aides, orderlies, etc. Nursing activities performed by private duty personnel and students are segregated and allocated to regular personnel in the development of the required staffing patterns.
- G. The study requires employee participation in the data collection process and, although several quality control variables can be examined, the study results are a function of the degree of employee cooperation and participation.

## II. METHODS AND PROCEDURES

Basically the methods and procedures for conducting the study can be considered in four steps. Each is briefly explained below:

- A. Initial orientation and planning is accomplished in a meeting among representatives of hospital administration, nursing service administration, and CSF. At this time, the hospital is asked to select a Nurse Utilization Program Committee. This committee is chaired by a nursing service representative referred to as the "Hospital Coordinator" and who acts as a liaison between the hospital and CSF. The first major function of the committee is the selection of the study unit(s).
  
- B. The Development of The Indirect Care and Direct Care Report Forms is also a function of the Nurse Utilization Program Committee. These forms are designed to reflect each hospital's nursing procedures and philosophy by identifying and classifying all nursing tasks performed in the hospital.
  
- C. The Employee Orientation and the One-Day Trial Run normally take place two or three weeks after the initial orientation and planning session. Several orientation sessions are conducted by the Hospital Coordinator and CSF representatives to acquaint all personnel with the mechanics of the study. The trial run provides valuable information in determining potential trouble spots. In addition, adjustments in the report forms and in data collection procedures can be made at this time.

D. The Ten-Day Survey begins after the trial run adjustments have been made. Throughout the study, the Hospital Coordinator and the head nurse on the study unit randomly check the report forms to insure accuracy of recording and degree of employee cooperation and participation. CSF representatives also are "on-site" for three of the ten days for checking and consultation purposes.

### III. CARE ACTIVITIES

A major responsibility of the Nurse Utilization Program Committee is the identification and classification of all nursing tasks performed in the individual hospital.

The identification of nursing tasks is accomplished with the aid of a standard list of nursing tasks supplied by CSF. Each hospital supplements the standard list with those nursing tasks performed in their hospital.

The nursing tasks are then classified as "Indirect Care" or "Direct Care" Activities. The primary purpose of the activity classification is to simplify the data collection phase of the study.

"Indirect Care" activities are those nursing tasks performed for all patients regardless of condition, and assumes an "average" patient on a medical-surgical unit. Examples include linen distribution, census counts and other paperwork.

"Direct Care" activities are those nursing tasks which apply to a specific patient and vary as a function of his condition.

#### IV. REPORT FORMS

The Indirect Care Report form (Appendix A) is designed to determine three factors:

- A. Enumeration of the nursing activities which are performed daily for each patient.
- B. Classification (skill level) of the nursing personnel who normally perform the activities.
- C. Frequency (per day) of task performance.

The Indirect Care Report shown in Appendix A lists activities in alphabetical order. Each is followed by a time standard representing the time it takes an average, experienced employee using an acceptable method, to perform the activity. The time standard allows for personal, fatigue and delay time. This report also reflects the shift and skill level (RN, LPN, Auxiliary) of the employee performing the activity.

Using this report, the total amount of indirect care rendered will be computed. In addition, this report is a valuable means of communicating to CSF personnel a familiarity and awareness with each hospital's nursing procedures and philosophy.

The Direct Care Report form (Appendix B) is also designed to determine three factors:

- A. The direct care activities actually performed.
- B. The classification (skill level) of the personnel performing the activity.



C. The frequency (per day) of activity performance for various categories of patients.

This report form is the second and most important data collection tool. A separate form is used for each patient on the study unit.

## V. CLASSIFICATION OF PATIENTS

Because the Direct Care Report involves the analysis of patient care as a function of patient condition, a formal system of patient classification is necessary. Appendix C presents the formal system used during the study.

Patient classification is accomplished by determining the characteristics applicable to each patient from the criteria indicated in the table of Appendix C. The characteristic regarded as "most serious" determines the patient's classification. For example, if a patient had marked emotional needs but would otherwise be considered a self-care patient (I), he would still be classified as a complete care patient (III) because the "marked emotional needs" characteristic is regarded as "the most serious."

Before the advent of the study, it is recommended that the hospital limit the number of personnel assigning patient classifications to insure consistency and objectivity in the decision making.

## VI. STUDY RESULTS

Analysis of the data recorded on the various report forms is used in the development of staffing guides and other management tools. The following is a short description of the various outputs of the study.

## VIII. STAFFING GUIDES

The Observed Staffing Guide depicts the nursing man-hours used on the study unit. The Guide is derived by multiplying the frequencies of nursing care activities by the time standards corresponding to each activity.

The Guide is subdivided by shift, patient category and skill level.

An example of an Observed Staffing Guide for the day shift is shown below:

| Patient Category | Number of Patients | --Hours by skill level-- |          |           |
|------------------|--------------------|--------------------------|----------|-----------|
|                  |                    | RN                       | LPN      | Aux.      |
| I                | 5                  | 4                        | 1        | 7         |
| II               | 7                  | 7                        | 2        | 13        |
| III              | 10                 | <u>12</u>                | <u>5</u> | <u>20</u> |
|                  |                    | 23                       | 8        | 40        |

From these figures, it is evident that the observed day shift staff was 3 RN's, 1 LPN, and 5 Auxiliaries.

The name Staffing Guide was not selected accidentally for it is exactly as the name implies: A guide for nursing administration to use in a consistent and objective manner to determine staffing requirements. The Guide does not replace judgment, experience, and common sense, since exceptions to the routine will always occur in the day-to-day scheduling of nursing personnel.

The Potential Staffing Guide is another product of the study. This guide is similar to the Observed Staffing Guide in use. The major difference in the two is that the Potential Staffing Guide is based on the desired skill level assignments. These desired skill level assignments are obtained during the planning sessions with the Hospital Coordinator. For example,

a hospital's nursing philosophy may indicate that auxiliary personnel can perform back-rubs on Category I patients, but that an RN must do the back-rubs on all Category III patients. The Potential Staffing Guide will reflect this desired skill level assignment.

The total required nursing hours (per shift) do not vary between the Observed and Potential Staffing Guide. The difference, if any, will appear in the skill level assignments. This difference can be best demonstrated by comparing the following Potential Staffing Guide with the previous Observed Staffing Guide.

| Patient Category | Number of Patients | --Hours by skill level-- |          |           |
|------------------|--------------------|--------------------------|----------|-----------|
|                  |                    | RN                       | LPN      | Aux.      |
| I                | 5                  | 2                        | 2        | 8         |
| II               | 7                  | 4                        | 3        | 14        |
| III              | 10                 | <u>11</u>                | <u>8</u> | <u>18</u> |
|                  |                    | 17                       | 13       | 40        |

This Guide shows a decrease in the required RN hours, an increase in the required LPN hours; the Auxiliary hours remain constant.

The Potential Staffing Guide represents the hospital's nursing philosophy of shifting the responsibility for certain Direct Care activities from one skill level to another.

#### VIII. ACCUMULATED HOURS

Another product of the study is an accumulation of all the nursing hours used in performing the Direct Care activities. For the ten-day study

period these accumulated hours are expressed by skill level (Observed and Potential) and by hour of the day.

## IX WORK DISTRIBUTION

Data on work distributions is useful in analyzing workload distribution throughout each shift. This distribution has two parts.

- A. Observed Work Distribution - This result (Appendix F) represents the total man-hours by Observed skill levels utilized at any one hour in performing Direct Care activities.
- B. Potential Work Distribution - This result (Appendix G) represents the total man-hours by desired skill level utilized at any one hour in performing the Direct Care activities.

The difference between Observed and Potential Work Distributions appear in the skill level totals only.

## X. UTILIZATION OF STUDY RESULTS

The best way to measure the value of any study is to examine the plan for the application of the results.

The Nurse Utilization Study results have immediate application as well as an ongoing mechanism for the appraisal of nursing utilization.

In addition, interhospital comparative reports are possible through the coordination provided by CSF.

The Staffing Guide Requirement Report (Appendix H) is an example of immediate application of the results. This report is prepared using the information supplied in the Observed Staffing Guide. This report should be prepared whenever the patient census and/or mix varies significantly from that reported during the ten-day study.

The recommended procedure for the use of the Staffing Guide Requirement Report would be as follows:

- A. Room and bed numbers should be preprinted on the form.
- B. The day shift head nurse, before the end of the shift, should prepare the report for the following day.
- C. The head nurse should predict the category of each patient for the following day and also estimate possible discharges and the number of admissions.
- D. The ward clerk should total the number of patients in each category and forward the report to the Nursing Service office.
- E. Nursing Service personnel should record the staff hours for each category and each skill level and total for each shift of operation by reference to the staffing guide provided. The staff requirements for the next day should then be determined.
- F. Nursing Service should update the report just prior to the start of the shift the next day based upon changing patient condition and additional information regarding admissions, expirations, and discharges.
- G. Adjustments should be made if necessary.

The Weekly Nursing Utilization Report (Appendix I) is designed to provide a weekly management control mechanism for each medical-surgical nursing unit. The report assists nursing supervision in judging how well and if their units are staffed in accordance to patient needs. The report compares the required daily nursing hours by shift with the actual hours worked. This comparison is expressed in terms of daily and weekly utilization indices.

The Weekly Performance Report (Appendix J) is a visual plot of the weekly utilization indices for a six-month period, and indicates whether these indices are within the limits established by the hospital. When the index (vertical axis) exceeds 100 percent, the unit is understaffed; an index of less than 100 percent is indicative of overstaffing and/or a poor workload distribution.

The Monthly Personnel Proficiency Report (Appendix K) is prepared and distributed by CSF. The report allows each hospital to compare its performance in terms of utilization indices with indices from other "similar" hospitals.

## XI. CONCLUSIONS

The Nurse Utilization Study has now accomplished the first of four major objectives--the development of a staffing guide for a typical medical-surgical unit in your hospital.

Whether or not the remaining three objectives are met will depend in large upon the following factors:

- A. The implementation of the staffing guide as a management

tool and the expansion of the guide to eventually include all types of nursing units.

- B. A thorough analysis of the guide during the implementation stage to determine staffing standards and to make any necessary adjustments.
- C. The development of a Staff Utilization and Control Program as outlined in the previous section.
- D. An analysis of the work distribution chart with an ultimate goal of reducing "peaks and valleys" in work distribution.

With the implementation of the management tools developed through this study, nursing administration might expect the following events to occur:

- A. An improvement in communication and cooperation between shifts.
- B. Improved daily planning and scheduling leading to a reduction in the work "peaks and valleys" within each shift and throughout the 24 hours.
- C. An improvement in staff balance by increasing the proportion of registered nurses in relation to total nursing staff. This should also lead to an increase in patient contact by registered nurses.
- D. A simplification and standardization of major nursing procedures, resulting in improved organization of daily work and a reduction in error possibilities.
- E. The development of valuable data to assist in budget planning and future expansion plans.

The major advantages of the proposed program are:

- A. The determination of required nursing man-time at a relatively small cost;
- B. The ability of hospitals to compare their own experience with that of other hospitals taking part in the program;
- C. Hospital staff involvement which contributes to their awareness of the staffing situation;
- D. The establishment of management control procedures to effectively evaluate and monitor the nurse staffing situation.



INDIRECT CARE REPORT

Date \_\_\_\_\_

Hospital \_\_\_\_\_

By \_\_\_\_\_

| DESCRIPTION                      | PER PT STANDARD            | ENTER FREQUENCIES BELOW |     |     |               |     |     |             |     |     |
|----------------------------------|----------------------------|-------------------------|-----|-----|---------------|-----|-----|-------------|-----|-----|
|                                  |                            | DAY SHIFT               |     |     | EVENING SHIFT |     |     | NIGHT SHIFT |     |     |
|                                  |                            | RN                      | LPN | AUX | RN            | LPN | AUX | RN          | LPN | AUX |
| 1. CENSUS COUNT                  | .006                       |                         |     |     |               |     |     | 1           |     |     |
| 2. NARCOTICS COUNT AND REORDER   | .008                       | 1                       |     |     | 1             |     |     | 1           |     |     |
| 3. PAPERWORK, INCLUDING CHARTING | .482                       |                         |     |     |               |     |     |             |     |     |
| 4. REPORT-PERSONNEL              | D .016<br>E .012<br>N .006 | 1                       | 1   | 1   | 1             | 1   | 1   | 1           | 1   | 1   |
| 5. REPORT-SUPERVISORY            | .013                       |                         |     |     |               |     |     |             |     |     |
| 6.                               |                            |                         |     |     |               |     |     |             |     |     |
| 7.                               |                            |                         |     |     |               |     |     |             |     |     |
| TOTAL                            |                            |                         |     |     |               |     |     |             |     |     |



