

# Hospital Occupational Health Services Study

## III. Organization and Administration of Hospital Employee Health Services

## IV. Staffing of the Hospital Occupational Health Unit

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III. Organization and Administration of Hospital  
Employee Health Services

and

IV. Staffing of the Hospital Occupational Health Unit

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service  
Center for Disease Control

National Institute for Occupational Safety and Health  
Cincinnati, Ohio 45202

August 1975

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This is the sixth of a series of reports of a national survey of hospitals. Preparation, distribution and statistical analyses of this study were performed under NIOSH Contract HSM-099-71-050 by Computer Sciences Corporation, and further analyzed and edited by Applied Health Physics, Inc. The purpose of this study is to provide NIOSH with resource information on existing employee health services in hospitals and to develop an acceptable action program to protect and promote the health of hospital employees in the United States.

The following publications in this series are available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402: Hospital Occupational Health Services Study.

1. Environmental Health and Safety Control. HEW Publication No. (NIOSH) 75—101. Price Per Copy \$1.75. Stock No. 1733-00033.

## FOREWORD

As the nation's hospitals respond to the growing needs of all phases of health care delivery, these institutions have grown rapidly in size, number and complexity. Hospitals are now the third largest employer in the United States, with approximately three million employees working full and part time.

Occupational health and safety services should become an integral part of health services and should be available to all groups of workers, including hospital employees. Yet, data from reliable sources during the past 10 years indicate that the accident frequency rate for hospitals has increased alarmingly.

Clearly, positive action is called for. As a consequence, the National Institute for Occupational Safety and Health conceived and implemented The Hospital Occupational Health Services Study — the first such major study ever conducted.

The initial step was to develop practical criteria for effective occupational health and safety programs for hospital personnel. The next step was to determine, through a comprehensive survey of American Hospital Association members, the extent to which these criteria could be or were being applied.

The final step will be the development of a workable action program to protect and promote the health of three million hospital employees, and indirectly, to safeguard millions of hospital patients serviced by these workers.

This series of seven reports on the study is disseminated by NIOSH — in the hope and belief that you, the reader, will find The Hospital Occupational Services Study not only enlightening, but eminently usable.



## ACKNOWLEDGMENTS

The National Institute for Occupational Safety and Health wishes to express its appreciation to the many individuals whose cooperation made this study possible and especially to the hospital administrators who supplied data on which this and future reports are based.

The design, distribution, and computerized analyses of the survey were performed by the Computer Sciences Corporation.

Mr. John H. Morrison, Jr. assisted in the final preparation of the statistical information. Dr. Mildred Kendrick, formerly with the United States Public Health Service, Center for Disease Control, provided valuable statistical assistance.

Mr. Marshall E. LaNier, M.S., Jane A. Lee, R.N., B.S., and Ruth Reifschneider, R.N., M.P.H. contributed substantially to the project. Acknowledgment is also given to Warren Smith, M.D., George W. McCarl, M.D. and Bruce Margolis, Ph.D. who assisted in developing the original criteria to plan an effective occupational health and safety program for hospital employees.



# CONTENTS

	PAGE
Foreword .....	iii
Acknowledgments .....	v
Contents .....	vii
Key to figures and tables	
Part III .....	ix
Part IV .....	x
<b>III. Organization and administration of hospital employee health services</b> ..	<b>1</b>
Introduction .....	3
Summary .....	4
Organization and administration of employee health services —	
responses to questions in section B .....	5
Question 1 .....	5
Question 3 .....	9
Question 4 .....	9
Question 5 .....	11
Question 6a .....	14
Question 6b .....	14
Response cross comparisons .....	14
Appendix A — Statistical tables for questions 1 and 3 through 6 .....	17
Appendix B — Technical notes .....	29
Method used in selecting and contacting survey respondents .....	31
Method used for analyzing and interpreting responses .....	32
Regional distribution of hospitals .....	33
<b>IV. Staffing of the hospital occupational health unit</b> .....	<b>35</b>
Introduction .....	37
Summary .....	39
Staffing of the occupational health unit — responses	
to question in section B .....	40
Question 2 .....	40
Question 8 .....	41
Question 9 .....	45
Question 10 .....	45
Question 10a .....	47
Question 10b .....	47
Question 10c .....	48
Response cross comparison .....	51
Appendix A — Statistical tables for questions 2, 8, 9, 10a–c. ....	53
Appendix B — Technical Notes .....	64
Method used in selecting and contacting survey respondents ....	64
Method used for analyzing and interpreting responses .....	65
Regional distribution of hospitals .....	66



## KEY TO FIGURES AND TABLES — Part III

Question Number	FIGURE		TABLE		Title
	Number	Page	Number	Page	
1	1	7	1-2	19	Analysis of hospitals which reported a formal employee health care program, by hospital size and geographic region.
1	2	8	3	20-21	Hospitals which reported a formal employee health care program, by state.
3	3	10	4-5	21-22	Analysis of hospitals which reported the location of treatment for an injury or illness on the job, by hospital size and geographic region.
4	4	12	6-7	22-23	Analysis of hospitals which reported using a separate room or facility exclusively for the health care of hospital employees, by hospital size and geographic region.
4a	5	13	8	23	Analysis of hospitals which reported that a room or facility used exclusively for the health care of hospital employees was staffed by regularly assigned personnel, by hospital size.
4b			9	24	Daily accessibility of employee health units, by hospital size.
5			10-11	25	Analysis of hospitals which reported that employees received in-house care if there was no separate facility, or when the facility was not open, by hospital size and geographic region.
62			12-13	26	Analysis of hospitals which reported that employees were normally seen by a physician or nurse before going home due to illness or injury, by hospital size and geographic region.
6b	6	15	14-15	27	Analysis of hospitals which reported that employees were normally seen by a physician or nurse upon return to work after illness or injury, by hospital size and geographic region.
1-3			16	28	Analysis of hospitals which reported a formal employee health care program, and the location where workers usually obtain treatment for an injury or illness on the job.
3-4			17	28	Analysis of hospitals which reported the location of treatment for an injury or illness on the job, and whether there is a separate employee health care unit.
	7	33	18	32	Regional distribution of the 5,298 hospitals included in this study (U. S. Bureau of Census Divisions).

## KEY TO FIGURES AND TABLES — Part IV

Question Number	FIGURE		TABLE		Title
	Number	Page	Number	Page	
2	1	42	1	55	Estimated number and percent of various size hospitals which reported primary source for day-to-day employee health care services.
2			2	55	Estimated number of hospitals and percent of all hospitals which checked "other" and specified certain other primary sources for day-to-day employee health care services.
2	2	43	3	56	Geographic regional distribution of estimated number and percent of all hospitals which reported primary sources for day-to-day employee health care services.
8	3	44	4	57	Estimated number and percent of hospitals that identified which physician (or physicians) had responsibility for medical treatment of job-related health problems.
8			5	57	Estimated number and percent of hospitals which checked "other" and specified certain other physicians as responsible for medical treatment of job-related health problems.
9			6	58	Estimated number and percent of hospitals which indicated hours per week the physician named in question 8 spends treating job-related health problems of hospital employees.
10	4	46	7-8	58-59	Estimated number and percent of hospitals which indicated whether or not a registered nurse had primary responsibility for providing employee health services, by size of hospital and geographic region.
10a			9	59	Estimated number and percent of hospitals which specified the number of hours per week the employee health nurse spends on hospital employee health care.
10b	5	49	10	60	Estimated number and percent of hospitals which identified the hospital official to whom the employee health nurse is administratively responsible.
10b			11	61	Hospital official administratively responsible for employee health nurse, by geographic region.

## KEY TO FIGURES AND TABLES — Part IV — Continued

10c	6	50	12	62	Estimated number and percent of hospitals, by size, which specified how the employee health nurse usually received medical direction to provide employee health care.
10c			13	63	Geographic regional distribution of the estimated number and percent of responses which specified how the employee health nurse usually received medical direction to provide employee health care.
2-1			14	63	Comparison of estimated number and percent of responses specifying the primary source of employee health care from hospitals with versus those without a formal program.
	7	66			Regional distribution of the 5,298 hospitals included in the study population (U.S. Bureau of the Census Divisions).
			15	65	Hospital population from which sample was selected, by U.S. Bureau of the Census Division, and by size of hospital.

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### **III. Organization and Administration of Hospital Employee Health Services**



# Hospital Occupational Health Services Study

## III. Organization and Administration of Hospital Employee Health Services

### INTRODUCTION

The first in the series of seven reports comprising the Hospital Occupational Health Services Study, dealt with various aspects of Environmental Health and Safety Control. The second report covered Hospital Employee Health and Safety Statistics and Records.

This third report presents statistical information related to the Organization and Administration of Employee Health Services. Specifically, it deals with the prevalence of formal employee health care programs; the primary source for day-to-day employee health care services; the locations used for employee health treatment; and availability of employee health care units; and the extent to which employees were seen by a physician or nurse, both before going home due to illness or injury, and upon returning to work.

This series of reports is based on responses to a questionnaire sent to 3,686 U.S. hospitals in 1972. The part of the questionnaire discussed in this report is reproduced below. A detailed analysis and cross comparisons of the responses to these questions follows. The data are presented in tabular form in Appendix A.

#### SECTION B. ORGANIZATION AND ADMINISTRATION OF EMPLOYEE HEALTH SERVICES

##### I. Policies and Practices

1. Has your hospital established a formal program (i.e., based on written guidelines or directives) for the provision of occupational health care to employees?
 

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>
  
3. If a worker requires treatment for an injury or illness on the job, where is the treatment usually obtained? (Check one)
 

Emergency Room .....	<input type="checkbox"/>
Outpatient Clinic .....	<input type="checkbox"/>
Employee Health Unit .....	<input type="checkbox"/>
Other (specify) _____	<input type="checkbox"/>
None of the above .....	<input type="checkbox"/>
  
4. Do you have a separate room or facility exclusively for the health care of hospital employees?
 

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

 If the answer to question 4 is yes, please answer the following.
  - a. Is the facility staffed by regularly assigned personnel?
 

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

- b. When is the facility open or accessible to employees?  
(Check all applicable boxes)

	Day Shift	Evening Shift	Night Shift
Monday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tuesday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wednesday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thursday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Friday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Saturday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sunday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. If there is no separate facility, or when this facility is not open, do employees receive care within your hospital?
 

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>
  
6. Is an employee normally seen by a physician or nurse who provides occupational health care:
 

Before going home due to illness or injury?	Yes	No
	<input type="checkbox"/>	<input type="checkbox"/>
Upon return to work after illness or injury?	Yes	No
	<input type="checkbox"/>	<input type="checkbox"/>

## SUMMARY

This is the third of seven reports describing significant findings resulting from the first national survey of occupational safety and health in U.S. hospitals. This report is confined to information secured in response to Section B, "Organization and Administration of Employee Health Services", of a questionnaire which NIOSH sent to 3,686 hospitals, in 48 states, in 1972.

Over 30 percent of the hospitals reported they did not have a formal program that provided occupational health care for their employees. Hospital size, accreditation and geographic location appeared to have some bearing upon the availability of health care for hospital employees. Only 60 percent of all small hospitals (25-99 beds) reported such a program, as compared to 75 percent of all medium-sized hospitals (100-299 beds), and 85 percent of all large hospitals (300+ beds). In each state, the variation among hospitals that did not have formal employee health care programs ranged from zero to 63 percent. Eight states (Maine, Vermont, North Carolina, South Carolina, Georgia, Tennessee, Mississippi, and West Virginia) were noticeably below the other 40 states included in this study in providing health care to hospital employees.

In 80 percent of the hospitals, injuries and illnesses of employees on the job were treated in the Emergency Room. About 10 percent of all hospitals reported using an Employee Health Unit, and these were predominantly among large hospitals. Only a third of those hospitals which had separate facilities for employee health care reported use of the Emergency Room in addition to an employee health unit for treatment of employee illness or injury. New England hospitals reported use of the Emergency Room for treatment of employees less often than any other region; but about one-fourth of all hospitals in this region specified use of the Employee Health Unit. The Mid-Atlantic and East North Central regions were also above average in use of a separate Employee Health Unit. Overall results indicated slightly less than 15 percent of all hospitals reported the existence of facilities exclusively for employee health care. Most hospitals with such facilities kept them open for employee use during normal business hours, Monday through Friday. When closed, employees were treated elsewhere within the hospital, usually the Emergency Room.

Most hospitals reported that employees were required to see a physician or nurse before leaving the hospital because of an illness or injury. However, less than 60 percent of all hospitals required employees to see a physician (M.D.) or nurse (R.N.) upon return to work after an illness or injury.

## ORGANIZATION AND ADMINISTRATION

### OF EMPLOYEE HEALTH SERVICES

#### Responses to Questions in Section B

The following is a report on responses to Questions 1, 3, 4, 5 and 6, Section B, of the Survey Questionnaire. The objective of these questions was to determine:

- A. Do hospitals have formal employee health care programs based on written guidelines or directives?
- B. When an employee requires treatment for an injury or illness on the job, in what location is the treatment usually obtained?
- C. Is a separate room or facility devoted exclusively to employee health care?
- D. Is this employee health unit staffed by regularly assigned personnel?
- E. When is this facility available to employees?
- F. If there is no separate facility, or when it is not open, do employees receive health care within the hospital?
- G. Does a physician or nurse usually see an employee before going home due to injury or illness, and upon return to work after injury or illness?

The responses to the questions in Section B are analyzed below to emphasize significant findings or interpretations. Meaningful interrelationships between responses to several of the questions are also presented.

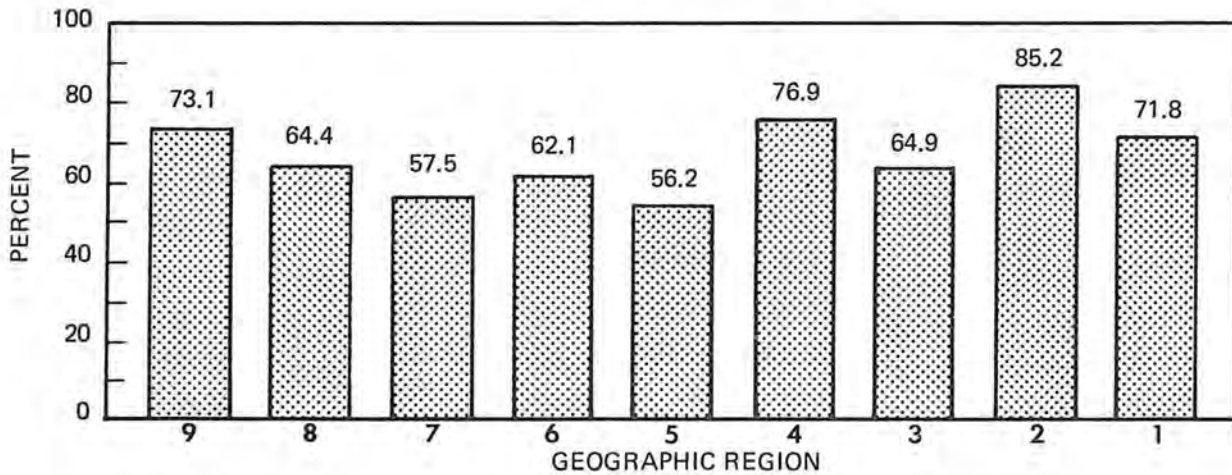
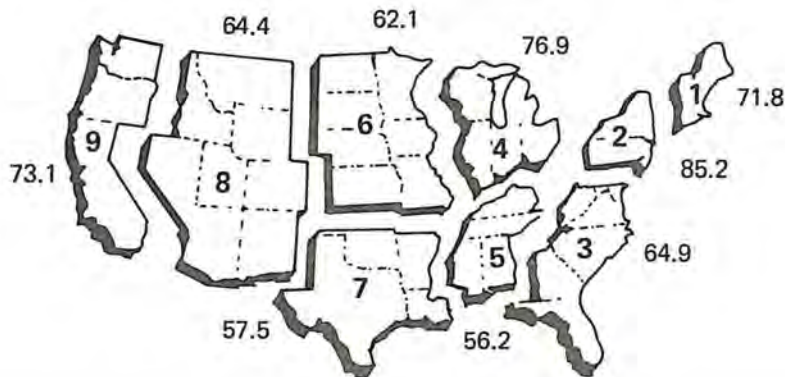
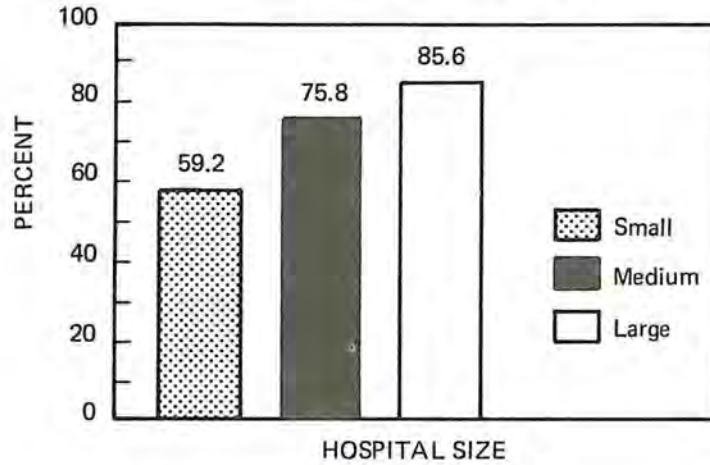
**Question 1.** Has your hospital established a formal program (i.e., based on written guidelines or directives) for the provision of occupational health care to employees?

**Results:** Almost seventy percent of all hospitals (68.7%) indicated they had a formal program which provided occupational health care for their employees. These programs were based upon written guidelines or directives. The size of the hospital and its geographic location appeared to have a bearing on whether a hospital had a formal health care program for its employees. As shown in Figure 1, only about 60 percent of the small hospitals (25–99 beds) indicated that they had a formal program; while about 75 percent of the medium-sized hospitals (100–299 beds) and about 85 percent of the large hospitals (300+ beds) indicated formal health care programs were in existence at the time of the survey. These results are presented in Appendix A, Table 1.

Considerable variation was found in percentages of hospitals which reported formal programs for employee health care when the results were analyzed by geographical regions. Variations among individual states ranged from 0 to 62.8 percent of the hospitals in a state that did not have formal employee health care programs. As illustrated in Figure 2, results appeared to favor the more industrialized regions of the United States, where 70 to 85 percent of all hospitals included in this study had formal programs. (See Appendix A, Table 2.) When these results were analyzed by individual states, Delaware and the District of Columbia reported that all hospitals included in this study had formal health care programs. Figure 2 shows these data graphically and highlights the fact that those states with the lowest percentages are located in the East South Central, West South Central, West North Central, and South Atlantic geographic regions.



**FIGURE 1**  
**PERCENTAGE OF HOSPITALS WHICH REPORTED A FORMAL EMPLOYEE**  
**HEALTH CARE PROGRAM, BY HOSPITAL SIZE,<sup>1</sup>**  
**AND BY GEOGRAPHIC REGION**  
**(RESPONSE TO QUESTION 1)<sup>2</sup>**

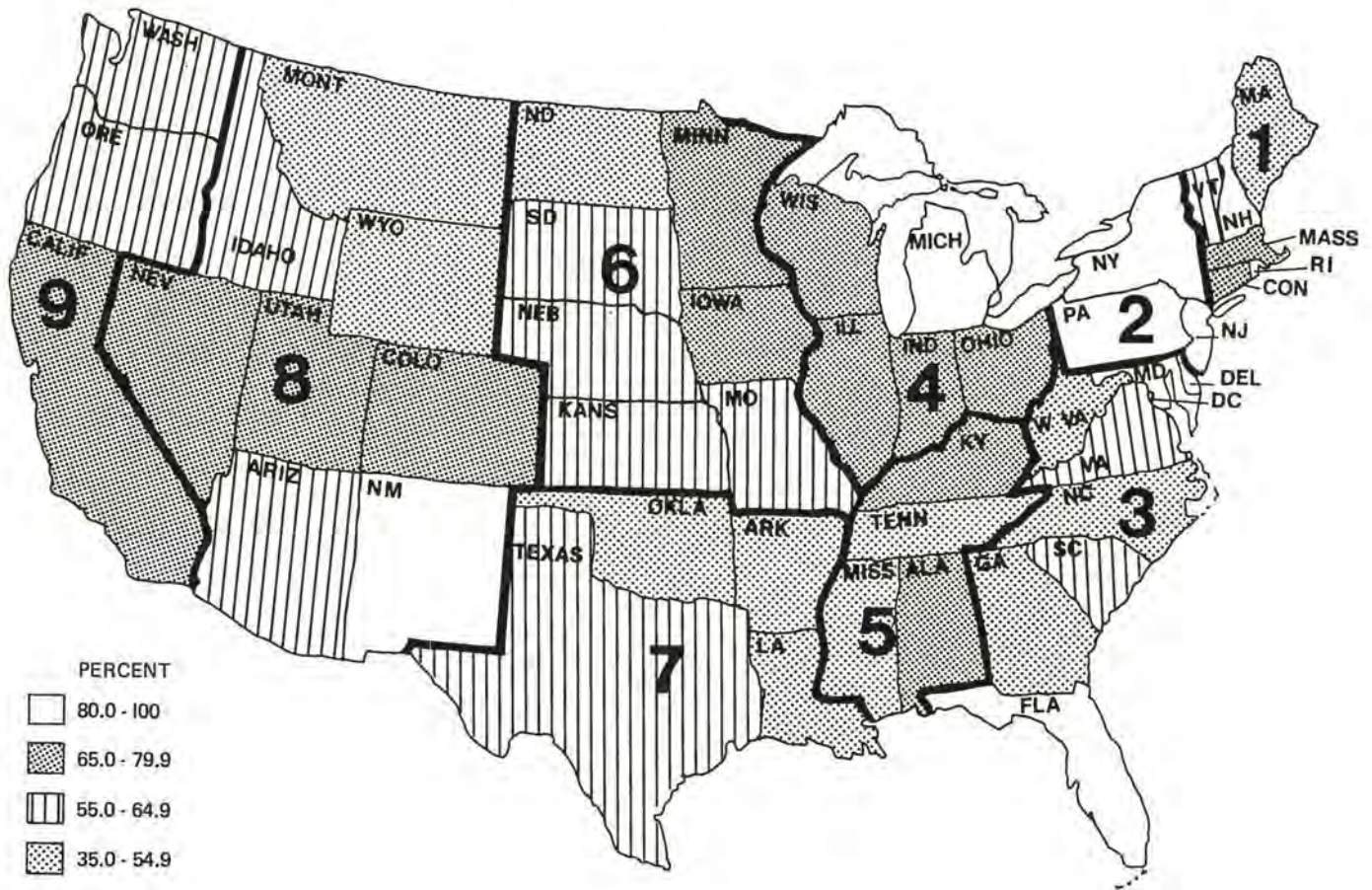


<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)

<sup>2</sup>These data are presented in tabular form in Appendix A, Tables 1 and 2.

Source of Data: NIOSH Hospital Occupational Health Services Survey, U.S., 1972.

**FIGURE 2**  
**PERCENTAGE OF HOSPITALS WHICH REPORTED A FORMAL EMPLOYEE**  
**HEALTH CARE PROGRAM, BY STATE**  
**(RESPONSE TO QUESTION 1)<sup>1</sup>**



<sup>1</sup>These data are presented in tabular form in Appendix A, Table 3.  
**Source of Data:** NIOSH Hospital Occupational Health Services Survey, U.S., 1972.

**Question 3.** If a worker requires treatment for an injury or illness on the job, where is the treatment usually obtained?

(Check one)

- Emergency Room .....
- Outpatient Clinic .....
- Employee Health Unit .....
- Other (specify) \_\_\_\_\_ .....
- None of the above .....

**Results:** The location within the hospital where employees usually are treated for injury or illness can be one of several places depending upon the size of the hospital. This question, as well as the next few questions in this section of the NIOSH questionnaire, attempted to determine certain essential facts concerning the location, use and staffing of facilities normally used as part of the hospital's employee health care services.

The Emergency Room was the location indicated by over 80 percent (81.4%) of all hospitals that answered this question. About 10 percent (9.2%) used the Employee Health Unit, while five percent (5.2%) treated employees in the Outpatient Clinic. Very few (3.4%) of the hospitals indicated "Other" locations. Less than 1 percent of the hospitals checked "None of the Above" on the questionnaire. Figure 3 illustrates the percentages of each size hospital which normally utilize the various treatment locations specified in Question 3. These data are also contained in Appendix A, Table 4.

The use of an Employee Health Unit was far more prevalent among large-sized hospitals (40.8%) as an employee treatment center. Only nine percent (9.3%) of the medium-sized hospitals indicated existence or use of an employee health unit, but showed a preference for use of the Emergency Room in 84 percent of the responses. Almost 90 percent (87.1%) of the small hospitals used the Emergency Room for employee health care; seven percent used the Outpatient Clinic; while five percent sent employees to "Other" facilities.

Responses were analyzed by geographic regions (U.S. Census Bureau Divisions) and appeared to follow the distribution previously mentioned for the total of all hospitals included in this study. However, there were some notable exceptions. Although the New England region had the lowest percentage (66.8%) of all hospitals which used the Emergency Room, results indicated the Employee Health Unit was used in almost one-fourth (22.4%) of all hospitals in that region included in the study. The Mid-Atlantic and East North Central regions also indicated well over 15 percent use of the Employee Health Unit. See Appendix A, Table 5, for specific data.

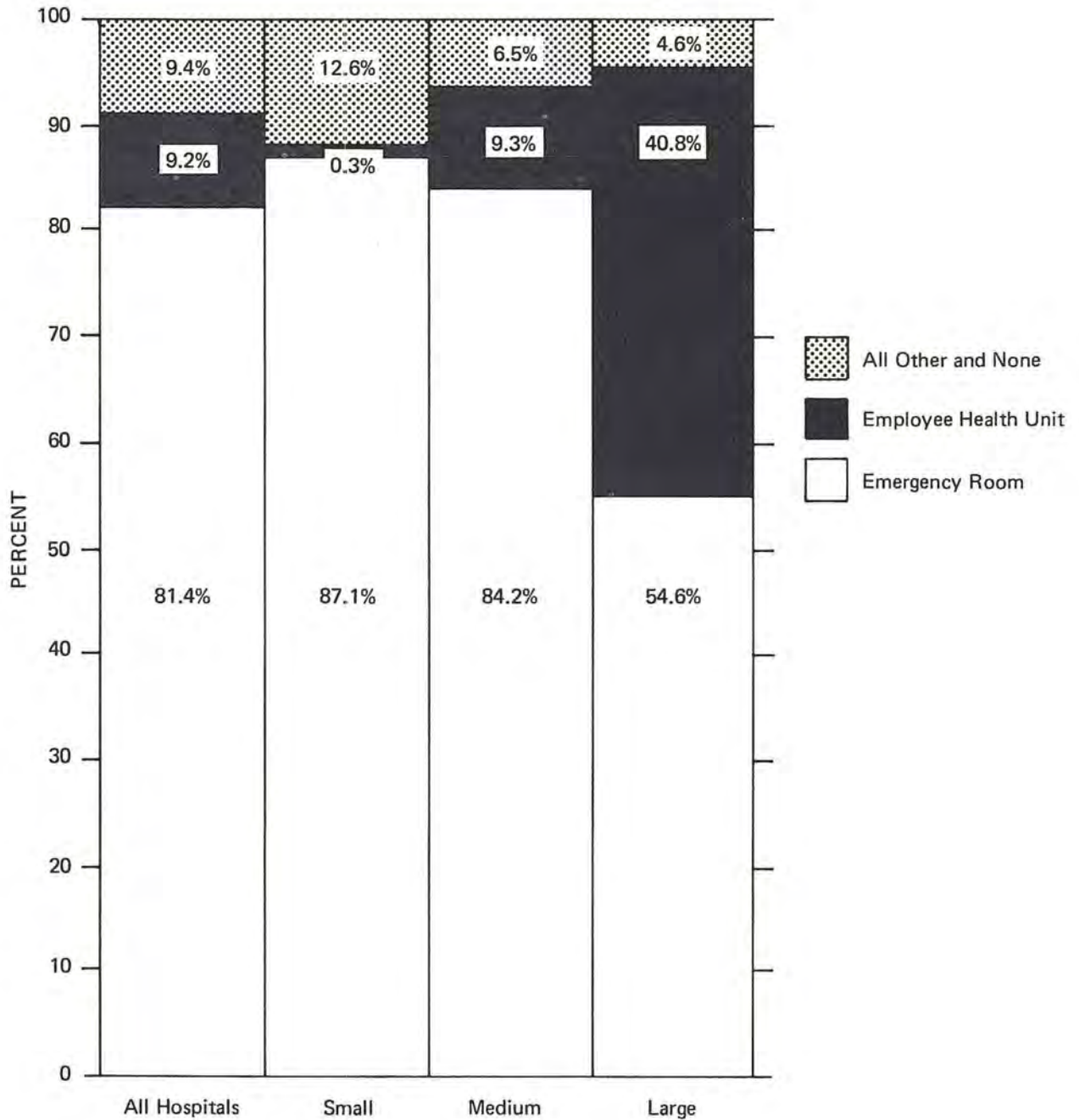
**Question 4.** Do you have a separate room or facility exclusively for the health care of hospital employees? Yes  No

If the answer to question 4 is yes, please answer the following.

- a. Is the facility staffed by regularly assigned personnel? Yes  No
- b. When is the facility open or accessible to employees?  
(Check all applicable boxes)

	Day Shift	Evening Shift	Night Shift
Monday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tuesday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wednesday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thursday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Friday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Saturday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sunday .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**FIGURE 3**  
**PERCENTAGE OF HOSPITALS WHICH REPORTED THE LOCATION OF**  
**TREATMENT FOR AN INJURY OR ILLNESS ON THE JOB,**  
**BY HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 3)<sup>2</sup>**



<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)

<sup>2</sup>These data are presented in tabular form in Appendix A, Table 4.

Source of Data: NIOSH Hospital Occupational Health Services Survey, U.S., 1972.

**Results:** Question 4 attempted to determine specifics concerning the number of such facilities exclusively for treatment of hospital employees, plus staffing and accessibility.

Only about 15 percent (14.6%) of all hospitals indicated the existence of facilities exclusively for health care of employees. As in responses to previous questions, there were considerable differences in response, depending upon hospital size. As the size of the hospital increased, the percentage of those having separate facilities also increased. Figure 4 shows that the percentages ranged from two percent of small, 15 percent of medium-sized (15.3%) and nearly 60 percent (57.7%) of large hospitals that indicated they had separate facilities for employee health care.

Three geographic regions had considerably higher percentages of hospitals with exclusive employee health care facilities. These were the Mid-Atlantic (31.1%), New England (28.2%) and East North Central (23.0%) regions. The other six geographic regions indicated percentages which ranged from about six percent (5.9%) to almost 12 percent (11.9%). See Figure 4, and Table 7 of Appendix A.

If Question 4 was answered affirmatively, then Part 4a attempted to determine whether or not the facility was staffed by personnel who were routinely assigned to it. As shown in Figure 6, the response to this part of the question varied greatly according to hospital size, ranging from 56.4 percent of small; 96.1 percent of medium-sized; and 100 percent of all large hospitals. See Appendix A, Table 8.

Accessibility to the Employee Health Unit was evaluated by responses to Question 4b, as to the day of the week and work shift when the health unit was open to employees. It should be noted, that the minor difference in percents among some of the days of the week are not significant. Most (91.3% to 92.6%) of the 773 hospitals, which were estimated to have exclusive facilities for treatment of employees, had these units open Monday through Friday during the day shift. Again, the accessibility varied in accordance with the size of the hospital, ranging from almost 70 percent of the small hospitals to about 90 percent of the medium-sized hospitals and nearly all of the large hospitals.

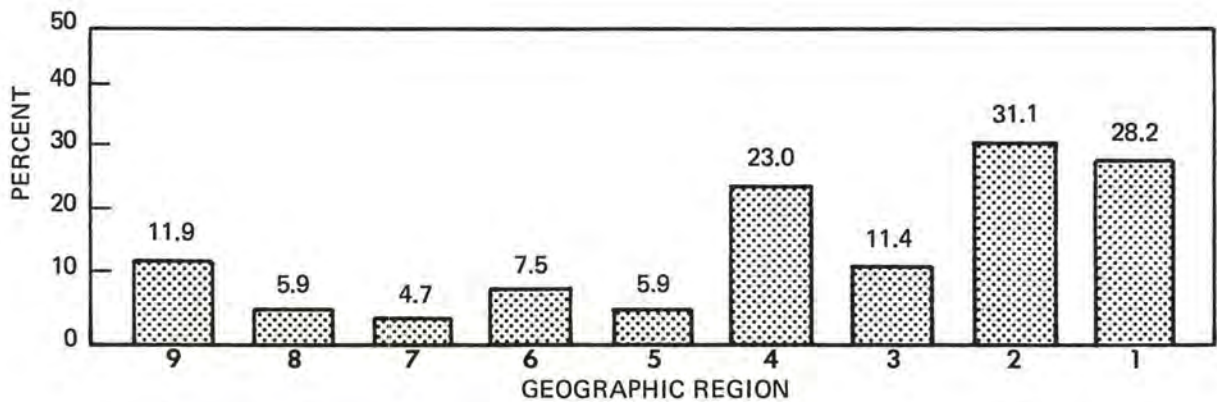
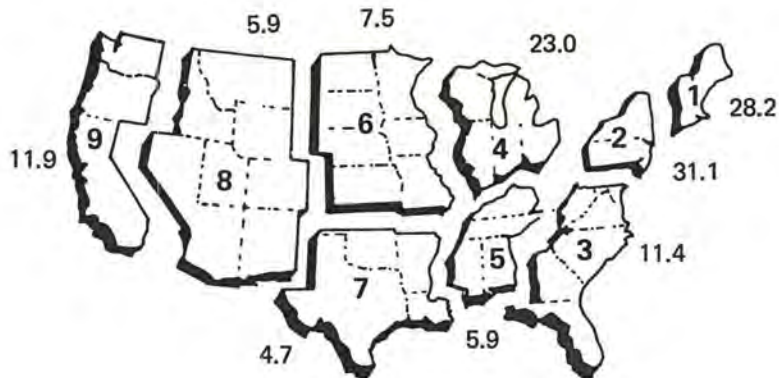
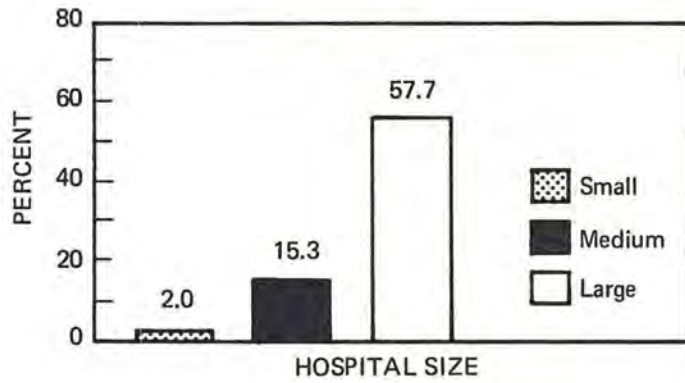
Between 15 and 20 percent of the hospitals indicated that their employee health care units were open on weekends and during the second (evening) and third (night) shifts. Apparently, small hospitals kept their employee health facilities open to a greater degree than medium-sized and large hospitals during this time. These facilities remain open in 40 percent-50 percent of the small hospitals (43.4% to 47.2%) and about 15 percent of the medium-sized hospitals (14.0% to 17.6%). Large hospitals have two distinct periods: Monday through Friday nights the units are open in 20 percent of the hospitals (about 17 percent on second shift, 12 percent on third shift), but only about 10 percent of the hospitals have them open during weekends. Specific details are contained in Table 9, Appendix A.

**Question 5.** If there is no separate facility, or when this facility is not open, do employees receive care within your hospital?

	Yes	No
	<input type="checkbox"/>	<input type="checkbox"/>

**Results:** Almost all hospitals (94.9%) indicated that hospital employees were treated within the hospital if there was no separate facility for employee health care, or the facility was not open at the time the employee was ill or injured. Little difference was seen in the data tabulated in Tables 10 and 11 as to hospital size or regional distribution of responses. In those cases where a hospital did not answer this question, it was assumed that their hospital employees received care by some other arrangement, not necessarily within the hospital. Only five percent of all hospitals indicated employees were not treated within the hospital when employee health care facilities were closed, or when no separate facility was provided.

**FIGURE 4**  
**PERCENTAGE OF HOSPITALS WHICH REPORTED USING A SEPARATE**  
**ROOM OR FACILITY EXCLUSIVELY FOR THE HEALTH CARE OF**  
**HOSPITAL EMPLOYEES, BY HOSPITAL SIZE,<sup>1</sup>**  
**AND BY GEOGRAPHIC REGION**  
**(RESPONSE TO QUESTION 4)<sup>2</sup>**

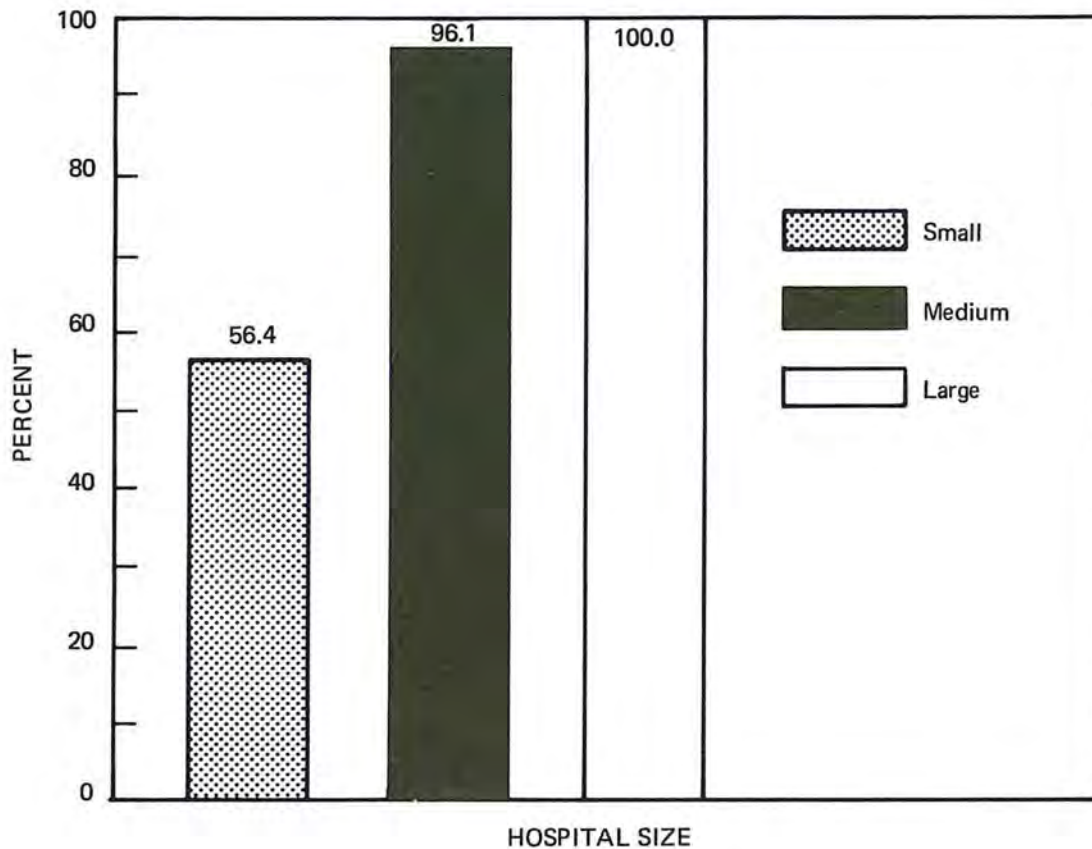


<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)

<sup>2</sup>These data are presented in tabular form in Appendix A, Tables 6 and 7.

Source of Data: NIOSH Hospital Occupational Health Services Survey, U.S., 1972.

**FIGURE 5**  
**PERCENTAGE OF HOSPITALS WHICH REPORTED THAT A ROOM**  
**OR FACILITY USED EXCLUSIVELY FOR THE HEALTH CARE**  
**OF HOSPITAL EMPLOYEES WAS STAFFED BY REGULARLY**  
**ASSIGNED PERSONNEL, BY HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 4a)<sup>2</sup>**



<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)

<sup>2</sup>These data are presented in tabular form in Appendix A, Table 8.

Source of Data: NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**Question 6a.** Is an employee normally seen by a physician or nurse who provides occupational health care: Yes      No  
 Before going home due to illness or injury?      

**Results:** Absenteeism is a critical problem in health care institutions. One method of absentee control very frequently used by hospitals of all sizes and in all geographic regions, is the checking of employees by a physician or nurse before they are sent home.

Almost 95 percent of all hospitals (93.5%) reported that a physician or nurse, who provides occupational health care, normally sees the employee before he goes home due to an illness or an injury. Small hospitals (25–99 beds) have a percentage below 95 (92.8%), as do medium-sized hospitals (100–299 beds), where 93.6% follow this practice. Large hospitals (300+ beds) have slightly above 95 percent (95.8%).

In almost all geographic regions, between 90 and 95 percent of the hospitals reported that employees are seen before going home because of illness or injury. The Mid-Atlantic region reported a slightly higher percentage (98.0%), while the Mountain region had a much lower one (82.7%). For specific percentages, see Table 13, Appendix A.

**Question 6b.** Is an employee normally seen by a physician or nurse who provides occupational health care: Yes      No  
 Upon return to work after illness or injury?      

**Results:** Less than 60 percent of all hospitals (59.5%) required the employee to see a physician or nurse upon return to work. About the same percentage (59.8%) of small hospitals (25–99 beds) followed this practice, and a slightly lower percentage (55.4%) of medium-sized hospitals (100–299 beds). However, in large hospitals (300+ beds), the figure increased to nearly 70 percent (68.1%). See Figure 6, and Table 14 of Appendix A.

Most geographical regions reported that between 55 and 65 percent of their hospitals required the employee to see a physician or nurse upon return to work. The South Atlantic region had the lowest percentage (47.2%), while the East North Central region had over 70 percent (71.4%). These data are shown in Figure 6, and in Table 15 of Appendix A.

## RESPONSE CROSS COMPARISONS

The following section presents and discusses important relationships between the responses to Questions 1 and 3, and Questions 3 and 4, and the significance of these relationships in the organization and administration of hospital employee health services.

Important relationships between the responses to different questions in Section B have been established and are presented below.

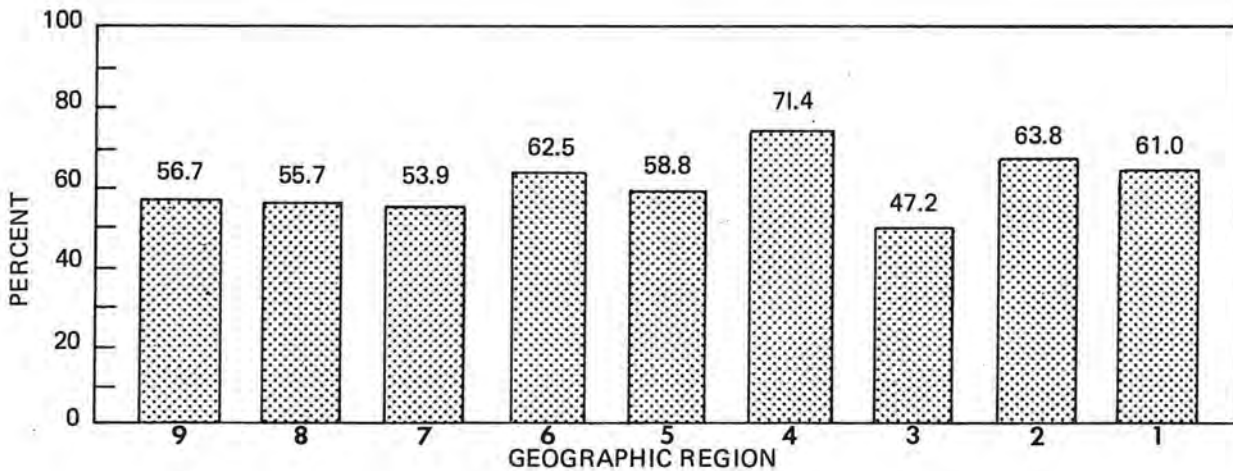
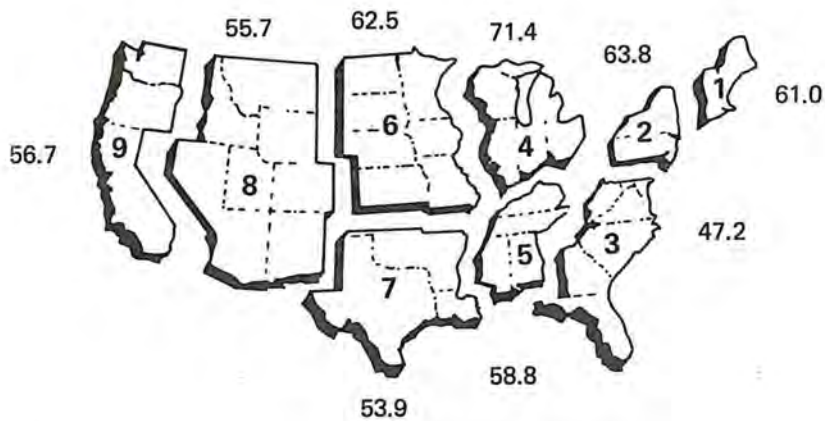
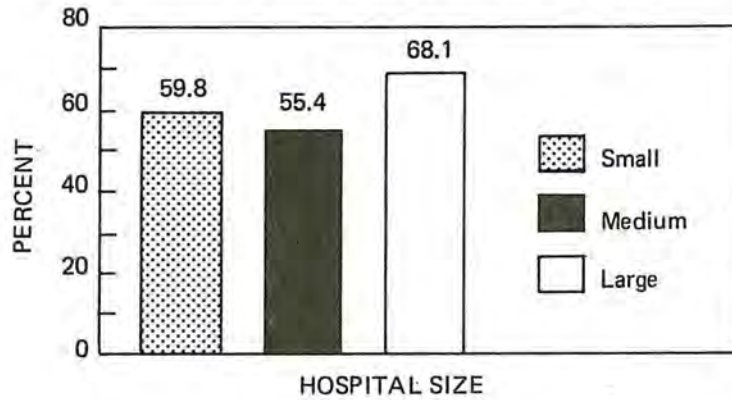
### Comparison of Questions 1 and 3

Question 1 determined whether or not hospitals had a formal program (based on written guidelines or directives) for the provision of occupational health care for employees. Question 3 asked for the location in the hospital where treatment for an injury or illness on the job was usually obtained. Table 16, Appendix A, shows in detail cross tabulations between responses to these two questions.

The Emergency Room was the location for a larger percentage of those hospitals with no formal program than for those with a formal program (86.7% versus 79.0%). Less than one percent of the hospitals with no formal program used an employee health unit as the location (0.9%) while for a formal program the percentage was almost 15 percent (13.0%). There were slightly higher percentages of hospitals with no formal program in the "other" category (5.1%

**FIGURE 6**

**PERCENTAGE OF HOSPITALS WHICH REPORTED THAT EMPLOYEES WERE NORMALLY SEEN BY A PHYSICIAN OR NURSE UPON RETURN TO WORK AFTER ILLNESS OR INJURY, BY HOSPITAL SIZE<sup>1</sup> AND BY GEOGRAPHIC REGION (RESPONSE TO QUESTION 6b)<sup>2</sup>**



<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)

<sup>2</sup>These data are presented in tabular form in Appendix A, Tables 14 and 15.

Source of Data: NIOSH Hospital Occupational Health Services Survey, U.S., 1972.

versus 2.6%) and in the "no location" category (1.6% versus 0.3%). The percentage was about the same, 5 percent, for both hospitals without and with a formal program which use the outpatient clinic (5.7% versus 5.0%).

#### Comparison of Questions 3 and 4

Question 3 asked for the location where employees were usually treated for injury or illness on the job. Question 4 determined whether hospitals had a separate room or facility for employee health care. The cross tabulation between these questions is shown in Table 17, Appendix A.

The Emergency Room was reported as the treatment location by almost 90 percent (89.5%) of hospitals without a separate room or facility, but by only one-third (34.3%) of hospitals with such a facility.

The Employee Health Unit was reported as the treatment location by over 60 percent (61.4%) of hospitals with a separate facility, but as would be expected by less than one percent (0.3%) of hospitals without a separate facility.

Those hospitals without a separate facility have a higher percentage of their hospitals using the outpatient clinic as the location for treatment (5.7% versus 2.3%), using other locations (3.7% versus 1.9%), or indicate no location for treatment (0.8% versus 0.1%) than those hospitals with a separate facility.

## **APPENDIX A — STATISTICAL TABLES**



**TABLE 1**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY PRESENCE**  
**OF A REPORTED FORMAL EMPLOYEE HEALTH CARE PROGRAM**  
**AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 1)**

Formal program	Number	Percent							
		Total	Hospital size <sup>1</sup>			All hos- pitals	Hospital size <sup>1</sup>		
			Small	Medium	Large		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	100.0	100.0	100.0	100.0	
Yes .....	3,641	1,604	1,383	654	68.7	59.2	75.8	85.6	
No .....	1,657	1,106	441	110	31.3	40.8	24.2	14.4	

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)  
**Source of Data:** NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 2**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY PRESENCE**  
**OF A FORMAL EMPLOYEE HEALTH CARE PROGRAM**  
**AND GEOGRAPHIC REGION<sup>1</sup>**  
**(RESPONSE TO QUESTION 1)**

Geographic Region <sup>1</sup>	Formal program					
	Total	Percent		Number		
		Yes	No	Total	Yes	No
Total .....	5,298	3,641	1,657	100.0	68.7	31.3
New England .....	277	199	78	100.0	71.8	28.2
Mid-Atlantic .....	663	565	98	100.0	85.2	14.8
South Atlantic .....	718	466	252	100.0	64.9	35.1
E. North Central .....	878	675	203	100.0	76.9	23.1
E. South Central .....	422	237	185	100.0	56.2	43.8
W. North Central .....	684	431	263	100.0	62.1	37.9
W. South Central .....	703	404	299	100.0	57.5	42.5
Mountain .....	289	186	103	100.0	64.4	35.6
Pacific .....	654	478	176	100.0	73.1	26.9

<sup>1</sup>Based upon U.S. Bureau of Census Divisions, and selective criteria specified in Appendix B.  
**Source of Data:** NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 3**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY PRESENCE**  
**OF A FORMAL EMPLOYEE HEALTH CARE PROGRAM,**  
**GEOGRAPHIC REGION<sup>1</sup> AND STATE**  
**(RESPONSE TO QUESTION 1)**

Geographic region <sup>1</sup>	Total	Formal Program		Yes, percent
		Yes	No	
		Number		
U.S. <sup>2</sup> .....	5,298	3,639	1,659	68.7
New England: .....	277	199	78	71.8
Maine .....	42	18	24	42.9
New Hampshire .....	31	25	6	80.6
Vermont .....	17	10	7	58.8
Massachusetts .....	135	104	31	77.0
Rhode Island .....	14	13	1	92.9
Connecticut .....	38	29	9	76.3
Mid-Atlantic: .....	663	563	100	84.9
New York .....	335	287	48	85.7
New Jersey .....	101	93	8	92.1
Pennsylvania .....	227	183	44	80.6
South Atlantic: .....	718	466	252	64.9
Delaware .....	7	7	0	100.0
Maryland .....	46	37	9	80.4
District of Columbia .....	14	14	0	100.0
Virginia .....	98	63	35	64.3
West Virginia .....	72	38	34	52.8
North Carolina .....	129	69	60	53.5
South Carolina .....	66	37	29	56.1
Georgia .....	132	65	67	49.2
Florida .....	154	136	18	88.3
E. North Central: .....	878	675	203	76.9
Ohio .....	190	146	44	76.8
Indiana .....	108	78	30	72.2
Illinois .....	247	189	58	76.5
Michigan .....	185	149	36	80.5
Wisconsin .....	148	113	35	76.4
E. South Central: .....	422	237	185	56.2
Kentucky .....	99	66	33	66.7
Tennessee .....	126	65	61	51.6
Alabama .....	111	74	37	66.7
Mississippi .....	86	32	54	37.2
W. North Central: .....	694	431	263	62.1
Minnesota .....	165	112	53	67.9
Iowa .....	123	81	42	65.9
Missouri .....	116	73	43	62.9
North Dakota .....	50	23	27	46.0
South Dakota .....	42	24	18	57.1
Nebraska .....	83	48	35	57.8
Kansas .....	115	70	45	60.9

TABLE 3

**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY PRESENCE  
OF A FORMAL EMPLOYEE HEALTH CARE PROGRAM,  
GEOGRAPHIC REGION<sup>1</sup> AND STATE  
(RESPONSE TO QUESTION 1)**

Geographic region <sup>1</sup>	Total	Formal Program		
		Yes	No	Yes, percent
		Number		
W. South Central: .....	703	404	299	57.5
Arkansas .....	80	42	38	52.5
Louisiana .....	116	59	57	50.9
Oklahoma .....	105	56	49	53.3
Texas .....	402	247	155	61.4
Mountain: .....	289	186	103	64.4
Montana .....	42	22	20	52.4
Idaho .....	37	23	14	62.2
Wyoming .....	22	12	10	54.5
Colorado .....	59	39	20	66.1
New Mexico .....	35	28	7	80.0
Arizona .....	49	30	19	61.2
Utah .....	29	21	8	72.4
Nevada .....	16	11	5	68.8
Pacific: .....	654	478	176	73.1
Washington .....	94	55	39	58.5
Oregon .....	70	43	27	61.4
California .....	490	380	110	77.6

<sup>1</sup>Based upon U.S. Bureau of Census Divisions, and selection criteria specified in Appendix B.

<sup>2</sup>Excluding Alaska, Hawaii, Commonwealth, and territories.

Source of Data: NIOSH Hospital Occupational Health Services Survey, U.S., 1972.

TABLE 4

**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY LOCATION  
OF TREATMENT FOR AN INJURY OR ILLNESS ON THE JOB  
AND HOSPITAL SIZE<sup>1</sup>  
(RESPONSE TO QUESTION 3)**

Treatment location	Number				Percent			
	Total	Hospital size <sup>1</sup>			Total	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	100.0	100.0	100.0	100.0
Emergency room .....	4,313	2,361	1,535	417	81.4	87.1	84.2	54.6
Outpatient clinic .....	277	190	73	14	5.2	7.0	4.0	1.8
Employee health unit .....	489	7	170	312	9.2	.3	9.3	40.8
Other: .....	181	136	30	15	3.4	5.0	1.6	2.0
In-house facility .....	131	100	20	11	2.5	3.7	1.1	1.4
Off-site facility .....	50	36	10	4	.9	1.3	.5	.5
None .....	38	16	16	6	.7	.6	.9	.8

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)

Source of Data: NIOSH Hospital Occupational Health Services Survey, U.S., 1972.

**TABLE 5**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY LOCATION**  
**OF TREATMENT FOR AN INJURY OR ILLNESS ON THE JOB**  
**AND GEOGRAPHIC REGION<sup>1</sup>**  
**(RESPONSE TO QUESTION 3)**

Geographic Region <sup>1</sup>	Location					
	Total	Emergency room	Out patient clinic	Employee health unit	Other	None
Total .....	5,298	4,313	277	489	181	38
New England .....	277	185	18	62	10	2
Mid-Atlantic .....	663	513	16	122	12	0
South Atlantic .....	718	588	45	53	29	3
E. North Central .....	878	693	22	141	12	10
E. South Central .....	422	370	18	18	16	0
W. North Central .....	694	612	28	33	18	3
W. South Central .....	703	598	43	12	44	6
Mountain .....	289	250	14	11	9	5
Pacific .....	654	504	73	37	31	9

	Percent					
	Total	Emergency room	Out patient clinic	Employee health unit	Other	None
Total .....	100.0	81.4	5.2	9.2	3.4	0.7
New England .....	100.0	66.8	6.5	22.4	3.6	0.7
Mid-Atlantic .....	100.0	77.4	2.4	18.4	1.8	—
South Atlantic .....	100.0	81.9	6.3	7.4	4.0	0.4
E. North Central .....	100.0	78.9	2.5	16.1	1.4	1.1
E. South Central .....	100.0	87.7	4.3	4.3	3.8	—
W. North Central .....	100.0	88.2	4.0	4.8	2.6	.4
W. South Central .....	100.0	85.1	6.1	1.7	6.3	.9
Mountain .....	100.0	86.5	4.8	3.8	3.1	1.7
Pacific .....	100.0	77.1	11.2	5.7	4.7	1.4

<sup>1</sup>Based upon U.S. Bureau of Census Divisions, and selection criteria specified in Appendix B.  
**Source of Data:** NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 6**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY PRESENCE**  
**OF A SEPARATE ROOM OR FACILITY EXCLUSIVELY FOR THE**  
**HEALTH CARE OF HOSPITAL EMPLOYEES AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 4)**

Separate facility	Number				Percent			
	Total	Hospital size <sup>1</sup>			Total	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	100.0	100.0	100.0	100.0
Yes .....	773	53	279	441	14.6	2.0	15.3	57.7
No .....	4,525	2,657	1,545	323	85.4	98.0	84.7	42.3

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)  
**Source of Data:** NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 7**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY SEPARATE ROOM OR FACILITY EXCLUSIVELY FOR THE HEALTH CARE OF HOSPITAL EMPLOYEES AND GEOGRAPHIC REGION<sup>1</sup>**  
**(RESPONSE TO QUESTION 4)**

Geographic region <sup>1</sup>	Separate facility					
	Number			Percent		
	Total	Yes	No	Total	Yes	No
Total .....	5,298	773	4,525	100.0	14.6	85.4
New England .....	277	78	199	100.0	28.2	71.8
Mid Atlantic .....	663	206	457	100.0	31.1	68.9
South Atlantic .....	718	82	636	100.0	11.4	88.6
E. North Central .....	878	202	676	100.0	23.0	77.0
E. South Central .....	422	25	397	100.0	5.9	94.1
W. North Central .....	694	52	642	100.0	7.5	92.5
W. South Central .....	703	33	670	100.0	4.7	95.3
Mountain .....	289	17	272	100.0	5.9	94.1
Pacific .....	654	78	576	100.0	11.9	88.1

<sup>1</sup>Based upon U.S. Bureau of Census Divisions, and selection criteria specified in Appendix B.  
**Source of Data:** NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 8**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY WHETHER A ROOM OR FACILITY USED EXCLUSIVELY FOR THE HEALTH CARE OF HOSPITAL EMPLOYEES WAS STAFFED BY REGULARLY ASSIGNED PERSONNEL AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 4a)**

Facility staffed	Number				Percent			
	Total	Hospital size <sup>1</sup>			Total	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	—	—	—	—
Blank (no facility) .....	4,519	2,655	1,541	323	—	—	—	—
With facility .....	779	55	283	441	100.0	100.0	100.0	100.0
Yes .....	744	31	272	441	95.5	56.4	96.1	100.0
No .....	35	24	11	0	4.5	43.6	3.9	—

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+) **Source of Data:** NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 9**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS WHICH HAVE**  
**A FACILITY FOR EMPLOYEE HEALTH CARE BY DAY**  
**AND SHIFT OPEN AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 4b)**

When open	Number			Percent				
	Total	Hospital size <sup>1</sup>			Total	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
Have facility .....	773	53	279	441	100.0	100.0	100.0	100.0
Day:								
Monday .....	710	35	243	432	91.8	66.0	87.1	98.0
Tuesday .....	716	35	251	430	92.6	66.0	90.0	97.5
Wednesday .....	706	37	241	428	91.3	69.8	86.4	97.1
Thursday .....	711	37	245	429	92.0	69.8	87.8	97.3
Friday .....	706	35	239	432	91.3	66.0	85.7	98.0
Saturday .....	135	25	49	61	17.5	47.2	17.6	13.8
Sunday .....	116	25	43	48	15.0	47.2	15.4	10.9
Evening:								
Monday .....	150	25	47	78	19.4	47.2	16.8	17.7
Tuesday .....	150	25	47	78	19.4	47.2	16.8	17.7
Wednesday .....	153	25	47	81	19.8	47.2	16.8	18.4
Thursday .....	152	25	49	78	19.7	47.2	17.6	17.7
Friday .....	150	25	47	78	19.4	47.2	16.8	17.7
Saturday .....	104	25	39	40	13.5	47.2	14.0	9.1
Sunday .....	104	25	39	40	13.5	47.2	14.0	9.1
Night:								
Monday .....	121	23	45	53	15.7	43.4	16.1	12.0
Tuesday .....	119	23	43	53	15.4	43.4	15.4	12.0
Wednesday .....	125	23	47	55	16.2	43.4	16.8	12.5
Thursday .....	121	23	43	55	15.7	43.4	15.4	12.5
Friday .....	121	23	43	55	15.7	43.4	15.4	12.5
Saturday .....	102	23	39	40	13.2	43.4	14.0	9.1
Sunday .....	105	23	41	41	13.6	43.4	14.7	9.3

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)  
Source of Data: NIOSH Hospital Occupational Health Services Survey, U.S., 1972.

**TABLE 10**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY WHETHER**  
**EMPLOYEES RECEIVED IN-HOUSE CARE IF THERE WAS NO**  
**SEPARATE FACILITY OR WHEN THE FACILITY WAS NOT OPEN**  
**AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 5)**

Care within hospital	Number				Percent			
	Total	Hospital size <sup>1</sup>			Total	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	100.0	100.0	100.0	100.0
Yes .....	5,026	2,556	1,742	728	94.9	94.3	95.5	95.3
No .....	272	154	82	36	5.1	5.7	4.5	4.7

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)   
**Source of Data:** NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 11**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY WHETHER**  
**THE EMPLOYEES RECEIVED IN-HOUSE CARE IF THERE WAS NO**  
**SEPARATE FACILITY OR WHEN THE FACILITY WAS NOT OPEN**  
**AND GEOGRAPHIC REGION<sup>1</sup>**  
**(RESPONSE TO QUESTION 5)**

Geographic region <sup>1</sup>	Care within hospital					
	Number			Percent		
	Total	Yes	No	Total	Yes	No
Total .....	5,298	5,026	272	100.0	94.9	5.1
New England .....	277	266	11	100.0	96.0	4.0
Mid-Atlantic .....	663	634	29	100.0	95.6	4.4
South Atlantic .....	718	675	43	100.0	94.0	6.0
E. North Central .....	878	841	37	100.0	95.8	4.2
E. South Central .....	422	402	20	100.0	95.3	4.7
W. North Central .....	694	671	23	100.0	96.7	3.3
W. South Central .....	703	673	30	100.0	95.7	4.3
Mountain .....	289	269	20	100.0	93.1	6.9
Pacific .....	654	595	59	100.0	91.0	9.0

<sup>1</sup>Based upon U.S. Bureau of Census Divisions, and selection criteria specified in Appendix B.   
**Source of Data:** NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 12**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY WHETHER**  
**EMPLOYEES WERE NORMALLY SEEN BY A PHYSICIAN OR NURSE**  
**BEFORE GOING HOME DUE TO ILLNESS OR INJURY**  
**AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 6a)**

Seen before going home	Number				Percent			
	Total	Hospital size <sup>1</sup>			Total	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	100.0	100.0	100.0	100.0
Yes .....	4,956	2,516	1,708	732	93.5	92.8	93.6	95.8
No .....	342	194	116	32	6.5	7.2	6.4	4.2

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)  
**Source of Data:** NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 13**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY WHETHER**  
**EMPLOYEES WERE NORMALLY SEEN BY A PHYSICIAN OR NURSE**  
**BEFORE GOING HOME DUE TO ILLNESS OR INJURY**  
**AND GEOGRAPHIC REGION<sup>1</sup>**  
**(RESPONSE TO QUESTION 6a)**

Geographic region <sup>1</sup>	Seen before going home					
	Number			Percent		
	Total	Yes	No	Total	Yes	No
Total .....	5,298	4,956	342	100.0	93.5	6.5
New England .....	277	251	26	100.0	90.6	9.4
Mid-Atlantic .....	663	650	13	100.0	98.0	2.0
So. Atlantic .....	718	660	58	100.0	91.9	8.1
E. North Central .....	878	835	43	100.0	95.1	4.9
E. South Central .....	422	399	23	100.0	94.5	5.5
W. North Central .....	694	650	44	100.0	93.7	6.3
W. South Central .....	703	671	32	100.0	95.4	4.6
Mountain .....	289	239	50	100.0	82.7	17.3
Pacific .....	654	601	53	100.0	91.9	8.1

<sup>1</sup>Based upon U.S. Bureau of Census Divisions, and selection criteria specified in Appendix B.  
**Source of Data:** NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 14**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY WHETHER**  
**EMPLOYEES WERE NORMALLY SEEN BY A PHYSICIAN OR NURSE**  
**UPON RETURN TO WORK AFTER ILLNESS OR INJURY**  
**AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 6b)**

Seen upon return	Number			Percent				
	Total	Hospital size <sup>1</sup>			Total	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	100.0	100.0	100.0	100.0
Yes .....	3,151	1,620	1,011	520	59.5	59.8	55.4	68.1
No .....	2,147	1,090	813	244	40.5	40.2	44.6	31.9

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300 +)  
**Source of Data:** NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 15**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY WHETHER**  
**EMPLOYEES WERE NORMALLY SEEN BY A PHYSICIAN OR NURSE**  
**UPON RETURN TO WORK AFTER ILLNESS OR INJURY**  
**AND GEOGRAPHIC REGION<sup>1</sup>**  
**(RESPONSE TO QUESTION 6b)**

Geographic region	Seen upon return					
	Number			Percent		
	Total	Yes	No	Total	Yes	No
Total .....	5,298	3,151	2,147	100.0	59.5	40.5
New England .....	277	169	108	100.0	61.0	39.0
Mid-Atlantic .....	663	423	240	100.0	63.8	36.2
South Atlantic .....	718	339	379	100.0	47.2	52.8
E. North Central .....	878	627	251	100.0	71.4	28.6
E. South Central .....	422	248	174	100.0	58.8	41.2
W. North Central .....	694	434	260	100.0	62.5	37.5
W. South Central .....	703	379	324	100.0	53.9	46.1
Mountain .....	289	161	128	100.0	55.7	44.3
Pacific .....	654	371	283	100.0	56.7	43.3

<sup>1</sup>Based upon U.S. Bureau of Census Divisions, and selection criteria specified in Appendix B.  
**Source of Data:** NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 16**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY PRESENCE**  
**OF A FORMAL EMPLOYEE HEALTH CARE PROGRAM AND THE**  
**LOCATION WHERE WORKERS USUALLY OBTAIN TREATMENT**  
**FOR AN INJURY OR ILLNESS ON THE JOB.**  
**(RESPONSE TO QUESTIONS 1 AND 3)**

Location of treatment	Formal employee health program					
	Number			Percent		
	Total	Yes	No	Total	Yes	No
Total .....	5,298	3,641	1,657	100.0	100.0	100.0
Emergency room .....	4,313	2,876	1,437	81.4	79.0	86.7
Outpatient clinic .....	277	183	94	5.2	5.0	5.7
Employee Health Unit .....	489	474	15	9.2	13.0	.9
Other .....	181	96	85	3.4	2.6	5.1
None .....	38	12	26	.7	.3	1.6

Source of Data: NIOSH *Hospital Occupational Health Services Survey, U.S., 1972.*

**TABLE 17**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY LOCATION**  
**OF TREATMENT FOR AN INJURY OR ILLNESS ON THE JOB**  
**AND WHETHER THERE IS A SEPARATE EMPLOYEE**  
**HEALTH CARE UNIT**  
**(RESPONSE TO QUESTIONS 3 AND 4)**

Location of treatment	Separate employee health unit					
	Number			Percent		
	Total	Yes	No	Total	Yes	No
Total .....	5,298	773	4,525	100.0	100.0	100.0
Emergency Room .....	4,313	264	4,049	81.4	34.2	89.5
Outpatient Clinic .....	277	18	259	5.2	2.3	5.7
Employee Health Unit .....	489	475	14	9.2	61.4	.3
Other .....	181	15	166	3.4	1.9	3.7
None .....	38	1	37	.7	.1	.8

Source of Data: NIOSH *Hospital Employee Health Services Survey, U.S., 1972.*

## **APPENDIX B — TECHNICAL NOTES**



## METHOD USED IN SELECTING AND CONTACTING SURVEY RESPONDENTS

The following is an excerpt of the protocol used by the contractor in performing the survey of hospitals described in this report.

### A. Population Studied

In order to achieve the objectives of this study within the constraints of available time and funds, it was decided to arbitrarily limit selection of the hospitals to be included in the study. According to the *Journal of the American Hospital Association*, August 1, 1971:

"Data compiled for the period 1960-1970 showed a major shift in utilization among various types of hospitals. An indication of this shift is apparent in the decline in the number of beds maintained by non-community hospitals, including Federal, psychiatric, tuberculosis, and other long-term institutions."

Based on this finding, it was decided that only short-term hospitals would be included in the study. Further, the decision was made to exclude alcoholism, psychiatric, tuberculosis and other respiratory disease hospitals since these hospitals are assumed to have employee health problems which are sufficiently different from other short-term hospitals, and their inclusion in the survey might distort the findings.

Employees of hospitals operated by the Federal Government are covered by employee health benefit plans of the U.S. Government. Since information on these plans, as well as their utilization, is available from other and less expensive sources, Federally-owned hospitals were not included in the survey.

In order to be eligible to be included in the survey, a hospital must:

- 1.) Be located in the continental United States
- 2.) Be a member of the American Hospital Association (A.H.A.)
- 3.) Have 25 or more beds, excluding bassinets
- 4.) Have an average length of patient stay of 30 days or less
- 5.) Be classed as non-Federal by the A.H.A.
- 6.) Be other than an alcoholism, psychiatric, tuberculosis or other respiratory disease hospital, or hospital unit of an institution.

The study group is believed to represent a relatively homogeneous selection of hospitals defined by the A.H.A. as "community hospitals".

### B. Sampling Procedures

Hospital data for each of the 48 states (continental U.S.) were examined, and the total number of hospitals eligible included in the study population as defined above was determined. If the total number of hospitals for a particular state was 120 or less, then every eligible hospital in that state was included; i.e., a 100 percent sample was used. There are 15 states with more than 120 eligible hospitals. Hospitals in these 15 states were stratified by hospital size according to the following grouping:

Strata	Number of Beds
Small .....	25-99
Medium .....	100-299
Large .....	300 or more

Random sampling was conducted within each strata according to the following rules:

- 1.) If no fewer than about 40 hospitals fall in a hospital size group, all hospitals in that group were included.
- 2.) If about 40 or more hospitals fall in a hospital size group, the contractor selected 40 at random from that group for inclusion in the study.

Application of the sampling procedure resulted in the selection of 3,699 hospitals as a representative sample of 5,298 hospitals in the contiguous states (Alaska and Hawaii omitted). Due to the closing or merging of 12 hospitals, the sampling size became 3,687 and remained constant throughout the study.

## METHODS USED FOR ANALYZING AND INTERPRETING RESPONSES

The NIOSH Hospital Occupational Health Services Study is based upon the statistical analyses of responses received in 2,664 questionnaires that NIOSH received by September 15, 1972. These data have been extrapolated to 5,298 hospitals which conform to the criteria described in Appendix C of Publication 1 of this study.

The overall response rate was 72.4 percent. The percentage response between states ranged from a low of 43.8 percent to a high of 92.0 percent. The range of response by geographic division was from 60.2 percent to 83.5 percent. The overall response, by size of hospital, was: small, 65.2 percent; medium, 76.7 percent; large, 83.9 percent. The population estimates for a particular response were obtained for each hospital size group within each state, rounded to the next highest integer, and accumulated as necessary for regional and national estimates. The sample response was multiplied by the result of dividing the number of hospitals for the population by the number of hospitals in the sample.

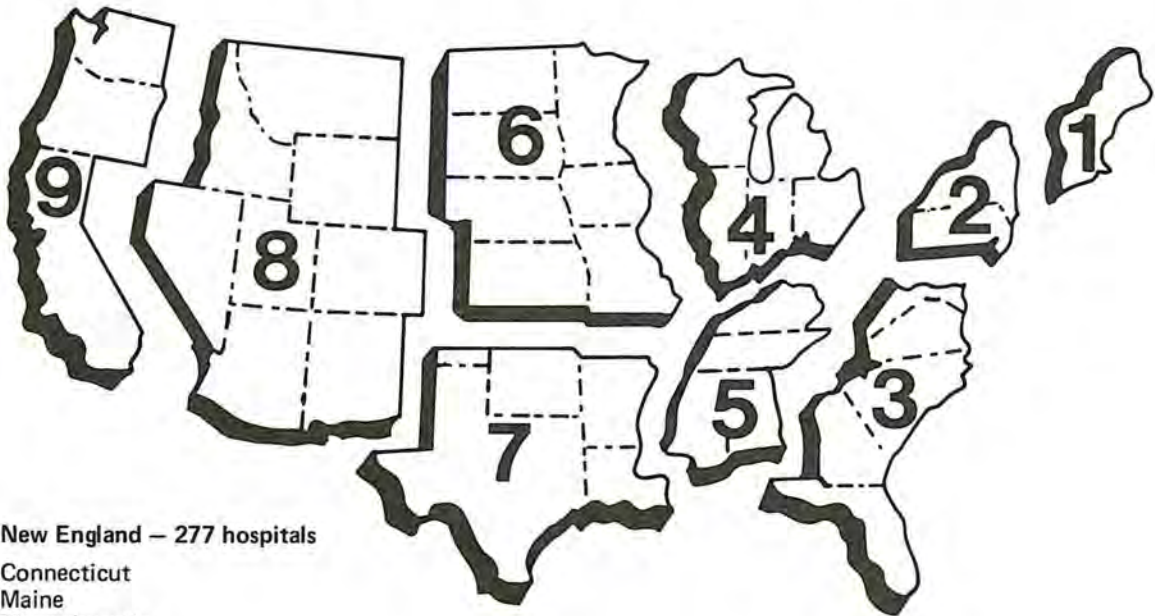
**TABLE 18**  
**HOSPITAL POPULATION FROM WHICH SAMPLE WAS SELECTED,**  
**BY U.S. BUREAU OF THE CENSUS DIVISION,**  
**AND BY SIZE OF HOSPITAL<sup>1</sup>**

U.S. Bureau of the Census Division	Hospital population			Sample of hospitals				
	Total	Hospital size <sup>1</sup>		Total	Hospital size <sup>1</sup>			
		Small	Medium	Large	Total	Small	Medium	Large
Total .....	5,298	2,710	1,824	764	3,687	1,799	1,221	667
New England .....	277	110	128	39	242	110	93	39
Middle Atlantic .....	663	162	327	174	341	99	127	115
South Atlantic .....	718	355	245	118	596	256	222	118
East North Central	878	338	365	175	557	205	198	154
East South Central	422	264	119	39	375	217	119	39
West North Central	694	449	174	71	591	345	174	72
West South Central	703	477	174	52	412	238	122	52
Mountain .....	289	186	77	26	289	186	77	26
Pacific .....	654	369	215	70	284	143	89	52

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)  
**Source of Data:** NIOSH Hospital Employee Health Services Survey, U.S., 1972.

FIGURE 7

REGIONAL DISTRIBUTION OF THE 5,298 HOSPITALS INCLUDED IN THE STUDY POPULATION  
U. S. BUREAU OF THE CENSUS DIVISIONS



1. New England – 277 hospitals

- Connecticut
- Maine
- Massachusetts
- New Hampshire
- Rhode Island
- Vermont

2. Middle Atlantic – 663 hospitals

- New Jersey
- New York
- Pennsylvania

3. South Atlantic – 718 hospitals

- Delaware
- District of Columbia
- Florida
- Georgia
- Maryland
- North Carolina
- South Carolina
- Virginia
- West Virginia

4. East North Central – 878 hospitals

- Illinois
- Indiana
- Michigan
- Ohio
- Wisconsin

5. East South Central – 422 hospitals

- Alabama
- Kentucky
- Mississippi
- Tennessee

6. West North Central – 694 hospitals

- Iowa
- Kansas
- Minnesota
- Missouri
- Nebraska
- North Dakota
- South Dakota

7. West South Central – 703 hospitals

- Arkansas
- Louisiana
- Oklahoma
- Texas

8. Mountain – 289 hospitals

- Arizona
- Colorado
- Idaho
- Montana
- Nevada
- New Mexico
- Utah
- Wyoming

9. Pacific – 654 hospitals

- \*Alaska
- California
- \*Hawaii
- Oregon
- Washington

\*States omitted from this study

Source of Data: NIOSH *Hospital Occupational Health Services Study, U.S., 1972.*



**IV. Staffing of the Hospital Occupational Health Unit  
Hospital Occupational Health Services Study**



# **Hospital Occupational Health Services Study**

## **IV. Staffing of the Hospital Occupational Health Unit Hospital Occupational Health Services Study**

### **INTRODUCTION**

This is the fourth in a series of seven reports comprising the Hospital Occupational Health Services Study, which was conducted by the National Institute for Occupational Safety and Health. Volume I described various aspects of Environmental Health and Safety Control. The second report covered Hospital Employee Health and Safety Statistics and Records. The third publication presented statistical information on the Organization and Administration of Employee Health Services.

This fourth report provides information concerning the Staffing of the Hospital Occupational Unit. It describes the primary source for day-to-day health care services to hospital employees, identifies the physician (or physicians) responsible for medical treatment of job-related health problems, reports the extent to which a registered nurse was identified as having primary responsibility for the provision of employee health services, and reports the amount of time spent on this assignment per week.

This series of reports is based on responses to a questionnaire sent to 3,687 U.S. Hospitals in 1972. The part of the questionnaire discussed in this report is reproduced below. A detailed analysis and cross comparison of the responses to those particular questions follow. The data are presented in tabular form in Appendix A.

**SECTION B. ORGANIZATION AND ADMINISTRATION  
OF EMPLOYEE HEALTH SERVICES**

**I. Policies and Practices**

2. Who is the primary source for day-to-day health care services to employees in your hospital?  
(Check one)
- Occupational Health Nurse .....
  - Floor Nurse .....
  - House Physician .....
  - Outpatient Department Staff .....
  - Emergency Room Staff .....
  - Other (specify) \_\_\_\_\_
  - None of the above .....

**II. Staffing**

8. Which physician (or physicians) has responsibility for medical treatment of job-related health problems?  
(Check all applicable boxes)
- House Physician .....
  - Outpatient Physician .....
  - Emergency Room Physician .....
  - Physician on Call .....
  - Employee's Family Physician .....
  - Other (specify) \_\_\_\_\_
  - None of the above .....
9. How many hours per week does he spend in this assignment?  
(Enter 1 hour as 01, 3 hours as 03, etc.)

10. Is there a registered nurse (or nurses) whose primary responsibility is the provision of employee health services? Yes  No   
If the answer to question 10 is yes, please answer the following.

- a. How many hours per week does the nurse spend in this assignment:  
(Enter 1 hour as 01, 3 hours as 03, etc.)
- b. To whom is the nurse administratively responsible?  
(Check one)
- The Physician in Charge of Employees' Health Services .....
  - The Director of Nursing .....
  - The Hospital Administrator .....
  - The Personnel Director .....
  - Other (specify) \_\_\_\_\_
- c. How is the nurse usually given medical direction to provide employee health care?  
(Check one)
- Written Individual Orders .....
  - Written Standing Orders .....
  - Other (specify) \_\_\_\_\_

## SUMMARY

This is the fourth of seven reports describing important findings from the first national study of occupational safety and health of workers in the third largest and one of the most rapidly growing employer groups in this country . . . hospitals. When a hospital employee becomes ill or injured on the job, the worker usually receives treatment in a particular location within the hospital by a specific member of the medical or nursing staff. This report provides information on the hospital's policy or practice to determine who provides day-to-day health care for workers. Staffing patterns of physicians and nurses responsible for employee health care are discussed in this report. The size of the hospitals, the geographic regions and the availability of a formal program for occupational health care to employees are cross tabulated.

In general, the findings reveal that nearly 50 percent of all hospitals stated that the Emergency Room Staff provided the day-to-day health care services for hospital workers. About ten percent named the Occupational Health Nurse or the Floor Nurse. In 40 percent of the large hospitals, an Occupational Health Nurse was specified as the primary source of employee health care. The Emergency Room Staff was named by 30 percent of the large hospitals, and over 60 percent of the medium-sized hospitals for day-to-day care of hospital workers. Occupational Health Nurses were reported more frequently by all hospitals in the three northeastern regions (Nos. 1, 2 and 4), but Floor Nurses were substantially more prevalent in four central regions (Nos. 5, 6, 7 and 8) of the United States, as the provider for employee health care.

The responsibility for medical treatment of job-related problems was provided by a Physician on Call in about 40 percent of all the reporting hospitals. The Emergency Room Physician was reported by about a third of all hospitals. It is interesting to note that over 70 percent of small hospitals delegated employee medical treatment to the Employee's Family Physician. Medium-sized and large hospitals reported the use of the Employee's Family Physician in 60 percent and 45 percent of the time, respectively.

When asked for information concerning the time a physician spent in providing medical treatment for hospital employees, almost half of all hospitals either did not answer the question or indicated zero. Of those hospitals responding, 30 percent indicated the physicians spent 1 to 4 hours per week giving medical treatment to hospital employees for job-related health problems. Large hospitals indicated physicians spent considerably more time providing these services to employees than medium-sized or small hospitals.

Only 20 percent of all hospitals reported that a registered nurse had primary responsibility for providing health care to their hospital employees. Sixty-five percent of the large hospitals had an employee health nurse.

Nearly 80 percent of the hospitals failed to provide information on the hours per week that nurses spent treating employees. Apparently over 90 percent of small hospitals, three-quarters of medium-sized and about one-third of the large hospitals do not have a nurse specifically assigned to perform these services. Of the small percentage that did respond, about 10 percent reported the nurse spent 37 to 40 hours per week on this assignment. About half of the responses from the large hospitals indicated that the nurse worked full-time (e.g., 40 hours per week) in the employee health unit. The relatively few hospitals which had an employee health nurse reported that the nurse was administratively responsible to the Director of Nursing in one-third of all hospitals, and to the Personnel Director in one-fourth of the hospitals. In small hospitals, medical direction was usually given to the nurse by Written Individual Orders. Apparently, as the hospital size increased, so did the policy of providing Written Standing Orders while Written Individual Orders decreased.

## STAFFING OF THE OCCUPATIONAL HEALTH UNIT

### Responses to Questions in Section B

**Question 2.** Who is the primary source for day-to-day health care services to employees in your hospital?

(Check one)

Occupational Health Nurse .....

Floor Nurse .....

House Physician .....

Outpatient Department Staff .....

Emergency Room Staff .....

Other (specify) \_\_\_\_\_ .....

None of the above .....

**Results:** This question and the following questions were asked to determine hospital policies and practices generally followed for the provision of health care services to hospital workers. It was felt necessary to identify specifically what professional (physician or nurse), and in what hospital department or unit (emergency room or outpatient department) was care provided for job-related injury or illness.

Nearly 50 percent (45.7%) of all hospitals reported that the Emergency Room Staff was the primary source for day-to-day health care services for hospital employees. Figure 1 graphically illustrates the response rates to the question above. The Occupational Health Nurse was mentioned by all hospitals in 11.0 percent of the time and the Floor Nurse in 10.0 percent of the total responses, while the House Physician and Outpatient Department received 7.9 percent and 7.0 percent, respectively. However, 14.5 percent of all hospitals specified "Other" primary sources for day-to-day health care services. Only four percent of all hospitals (3.9%) indicated None of the Above. These results are presented in tabular form in Appendix A, Table 1.

About 15 percent of all hospitals (14.5%) specified "Other" sources for day-to-day health care services, rather than checking one of the five primary sources listed in the question. As shown in Table 2, Appendix A, most of the other sources that were specified were similar to the five sources listed in the question and amounted to a very small percent of all hospitals (0.4% to 3.6%). However, over 10 percent (10.9%) of all large hospitals (300+ beds) that checked "Other" specified the Employee Health Unit as the primary source of these services.

Considerable variation was found when responses from all hospitals to Question 2 were analyzed by geographic distribution of these data. Figure 2 illustrates how the percent distribution of the data on various sources of employee health care varies in each of the nine U.S. Bureau of the Census regions. Although the Emergency Room Staff appears to be the predominant primary source, it ranges from about 30 percent (29.8%) to almost 60 percent (56.1%). The Occupational Health Nurse was the primary source for employee health care in about 20 percent of the hospitals in the New England, Middle Atlantic and East North Central Regions, and in less than 10 percent in the other regions. In the West North Central Region, the Floor Nurse provided these services in almost 30 percent of all hospitals (27.5%), and in about 15 percent of the East South Central, West South Central and Mountain Regions.

The percentage of small hospitals (25-99 beds) which named the Emergency Room Staff as the primary source of employee health care services was identical (39.8%) to the percentage of large hospitals (300+ beds) which identified the Occupational Health Nurse as the source for these services. The Floor Nurse was named by almost 20 percent of small hospitals, while the House Physician and Outpatient Department Staff were checked in less than 10 percent (8.1% and 8.0%, respectively) of the responses from small hospitals.

Greatest use of the Emergency Room Staff was in medium-sized hospitals (100-200 beds), where over 60 percent (61.3%) used this as the primary source of employee health care.

Nearly 15 percent indicated that these services were provided by an Occupational Health Nurse (13.2%). The Floor Nurse was used in only about two percent (1.7%), whereas the House Physician and Outpatient Department Staff were each used less than 10 percent (8.1% and 5.3%, respectively) as sources of these services in medium-sized hospitals.

As Figure 1 indicates, the results from large hospitals (300+ beds) were considerably different when compared to responses obtained from the other sizes of hospitals in this study. Almost 40 percent of the hospitals in this group named the Occupational Health Nurse as the primary source for these services (39.8%). The Emergency Room Staff was specified next as the source for employee health care by almost 30 percent (29.1%) of all large hospitals in this study. The Outpatient Department Staff and House Physician received about the same percentage (7.1% and 6.8% respectively). Only one-tenth of a percent (0.1%) named the Floor Nurse. See Appendix A, Table 1 for additional statistical information.

**Question 8.** Which physician (or physicians) has responsibility for medical treatment of job-related health problems?

(Check all applicable boxes)

- House Physician .....
- Outpatient Physician .....
- Emergency Room Physician .....
- Physician on Call .....
- Employee's Family Physician .....
- Other (specify) \_\_\_\_\_ .....
- None of the above .....

**Results:** The purpose of this question was to learn the extent to which hospitals assigned the responsibility for medical treatment of job-related health problems of hospital workers to one or more of five categories of physicians named in the question, or as specified by those hospitals that checked Other. Since this question allowed the hospital to indicate all physician categories used by them for employee health care, the distribution of responses received adds to much more than 100 percent. Only one percent (1.1%) of all hospitals indicated None of the above. The statistical data are tabulated in Table 4, Appendix A.

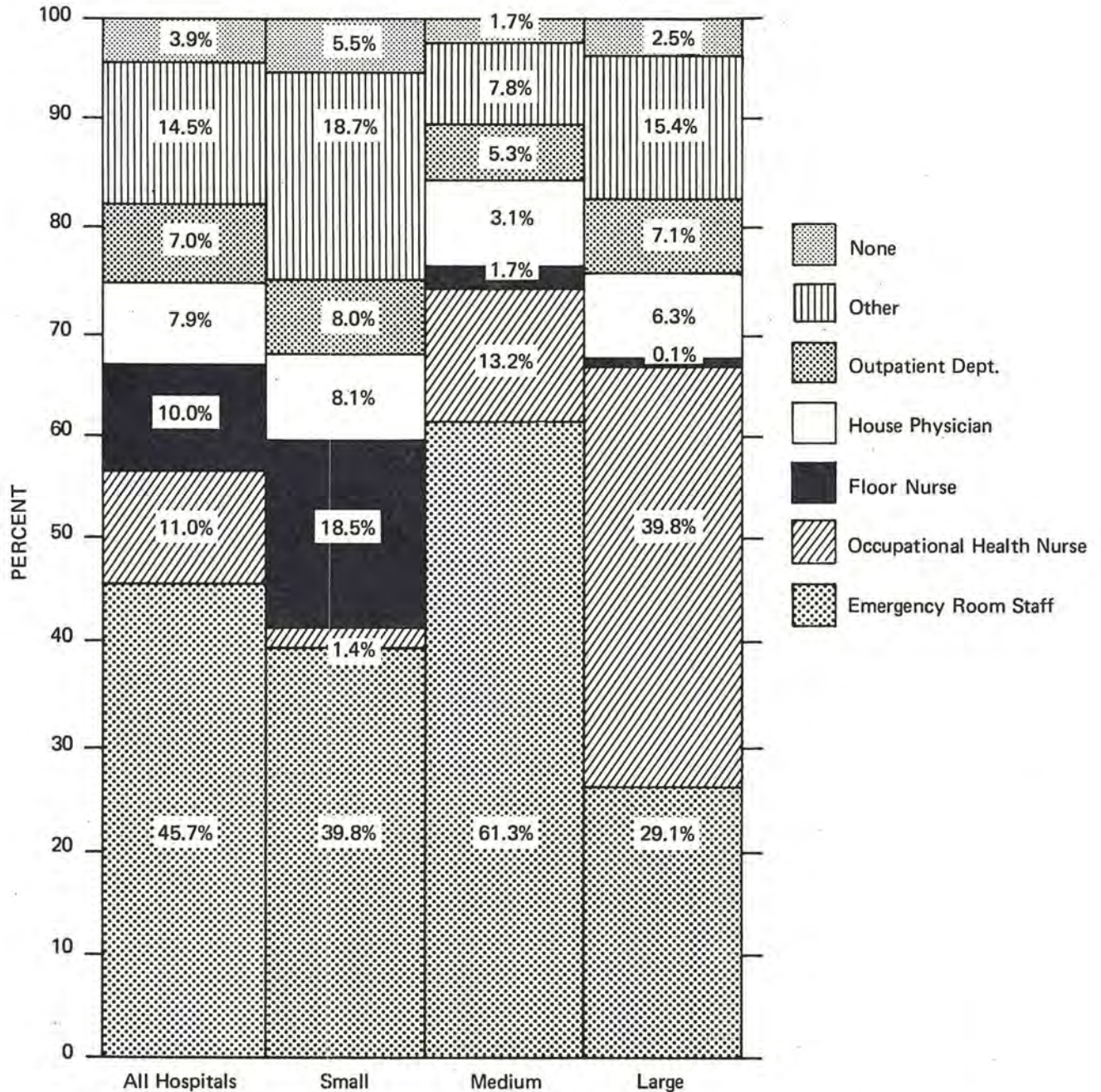
Figure 3 presents a comparison of the distribution of percent responses received that specified one or more of the five physician categories listed, or indicated the Employee Health Unit in answer to "Other". Almost 25 percent (23.7%) of the 11.4 percent of all hospitals that specified "Other" were large hospitals (300+ beds). Please see Table 5 Appendix A, for additional details.

Almost 65 percent (64.7%) of all hospitals indicated that the Employee's Family Physician is responsible for medical treatment of job-related health problems. Over 70 percent (72.0%) of small hospitals (25-99 beds) used the Employee's Family Physician, while medium-sized hospitals (100-299 beds) and large hospitals (300+ beds) reported 62.8% and 43.1% respectively, followed this practice.

Over one-third of the hospitals (35.7%) reported that the Emergency Room Physician had responsibility for employee medical treatment. About 70 percent (68.1%) of the large hospitals and almost half (47.4%) of the medium-sized hospitals reported using the Emergency Room Physician for treatment of hospital workers, as compared to less than 20 percent (18.6%) of the small hospitals.

Forty percent of all hospitals used the Physician on Call. The percentage of hospitals which followed this practice decreased as the hospital size increased. Almost half the small hospitals (48.9%) and 35.7 percent of the medium-sized hospitals, but only about 20 percent of the large hospitals (18.7%) specified that the Physician on Call was used for hospital employee medical care.

**FIGURE 1**  
**PERCENT OF HOSPITALS BY PRIMARY SOURCES FOR DAY-TO-DAY**  
**EMPLOYEE HEALTH CARE SERVICES**  
**AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 2)<sup>2</sup>**

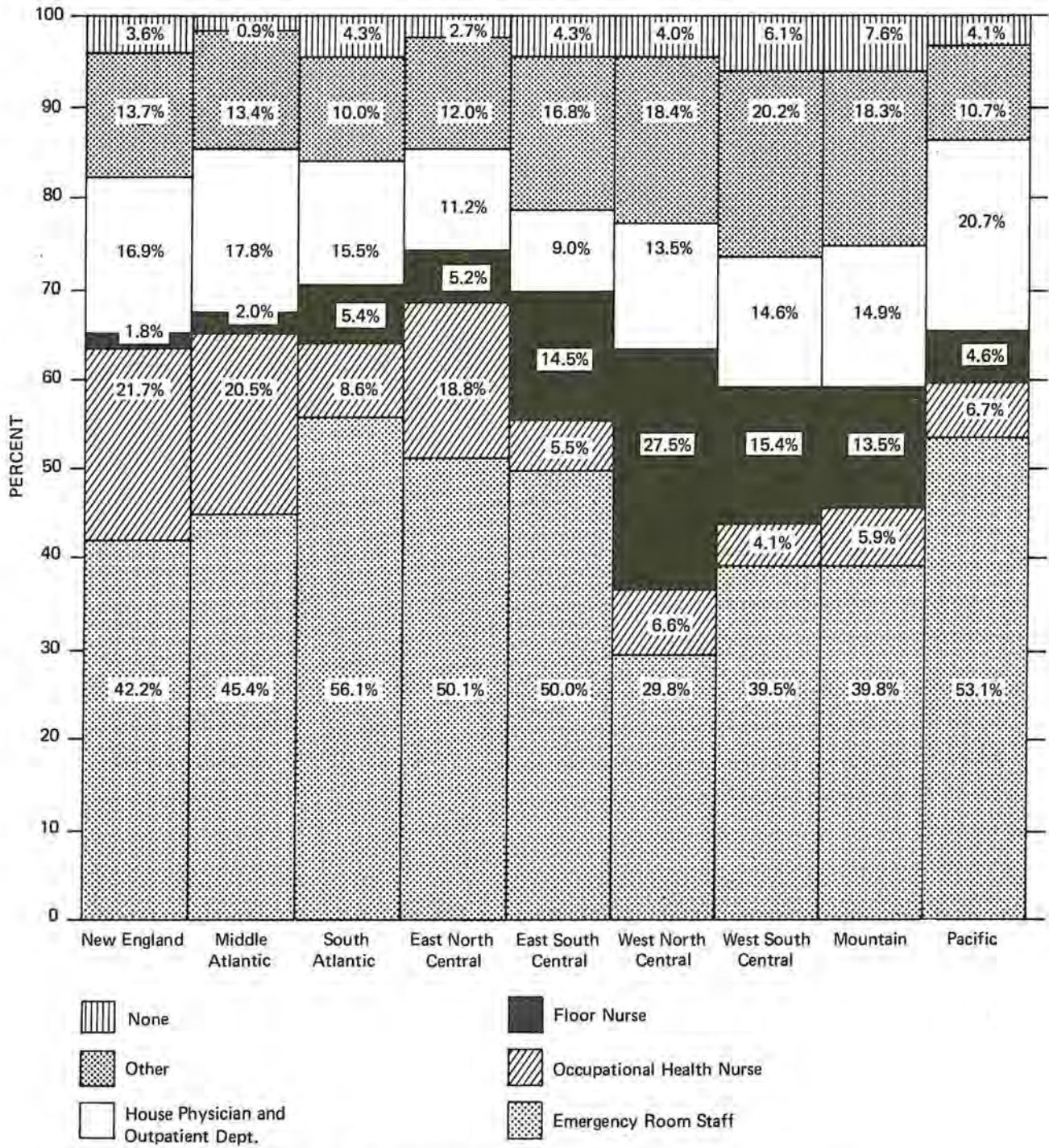


<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)

<sup>2</sup>These data are presented in tabular form in Appendix A, Table 1.

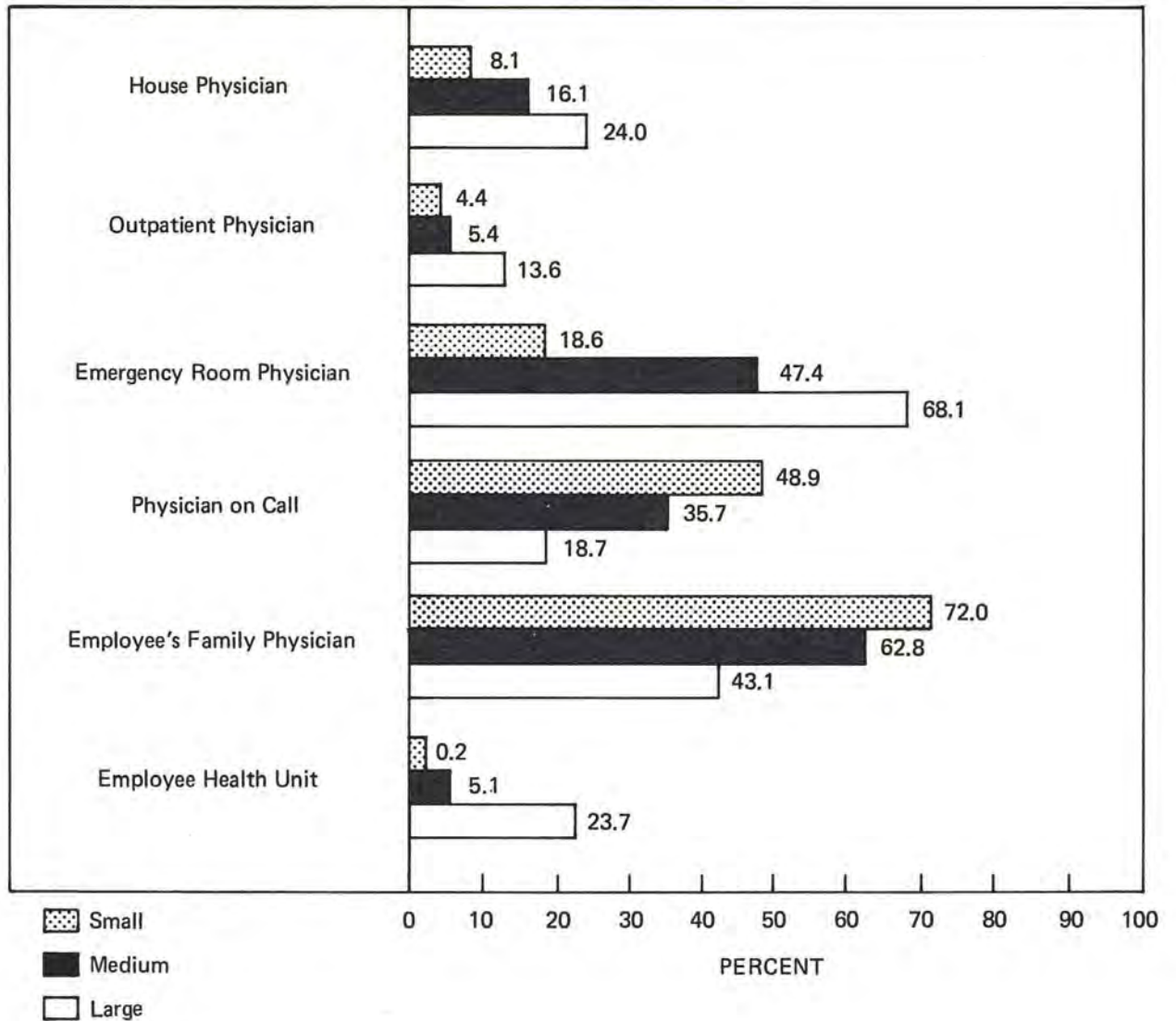
Source of Data: NIOSH Hospital Occupational Health Services Study, U.S., 1972.

**FIGURE 2**  
**PERCENT OF HOSPITALS BY PRIMARY SOURCES FOR DAY-TO-DAY**  
**EMPLOYEE HEALTH CARE SERVICES**  
**AND GEOGRAPHIC REGION**  
**(RESPONSE TO QUESTION 2)<sup>1</sup>**



<sup>1</sup>These data are presented in tabular form in Appendix A, Table 3.  
**Source of Data:** NIOSH Hospital Occupational Health Services Study, U.S., 1972.

**FIGURE 3**  
**PERCENT OF HOSPITALS BY PHYSICIAN RESPONSIBLE FOR MEDICAL**  
**TREATMENT OF JOB-RELATED HEALTH PROBLEMS**  
**AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 8)<sup>2</sup>**



<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)

<sup>2</sup>These data are presented in tabular form in Appendix A, Table 4.

Source of Data: NIOSH Hospital Occupational Health Services Study, U.S., 1972.

**Question 9.** How many hours per week does he\* spend in this assignment?

\*The physician (or physicians) referred to in responses to Question 8.

**Results:** This question was designed to determine the amount of time one or more physicians as indicated in the answers to the preceding question actually spent per week on this assignment. It has been assumed that the hospitals that gave more than one response to Question 8 indicated the total time for all physicians mentioned. Unfortunately, almost half (47.9%) of all hospitals either did not answer this question or indicated zero hours. Thus, about half of all hospitals studied either had too small a case load to estimate the number of hours per week that a physician spent treating hospital employees, or there was no basis that could be used for such evaluation. The actual results are tabulated in Table 6, Appendix A.

For statistical purposes, the following groupings of hours worked per week were used to provide some evaluation of the responses received: Blank or 0, 1-4, 5-8, 9-12, 13-20, 21-28, 29-36, 37-40, 41 and over.

Thirty percent of the hospitals (30.0%) indicated that 1-4 hours of physician time were spent in employee health services per week, and less than 10 percent indicated 5-8 hours per week (6.5%). This gradually decreases to almost no hospitals (0.6%) indicating 29-36 hours. Less than five percent of the hospitals that answered this question indicated physician hours of 37-40, and 41 and over (3.3% and 3.4%, respectively). Generally, the small and medium-sized hospitals had percentages similar to those reported by all hospitals, with the small hospitals having slightly lower percentages and the medium-sized hospitals having slightly higher ones.

Large hospitals have a different distribution. Slightly less than 20 percent (17.7%) of the large hospitals indicated 1-4 hours of physician time per week. For 5-8, 9-12, and 13-20 hours per week, the large hospitals indicated between 10 and 15 percent each, and for 21-28 and 29-36 hours per week the percentage was under five percent each. Almost 10 percent (9.9%) of the large hospitals indicated that the physician works 37-40 hours per week, and over five percent (6.2%) indicated 41 and over hours per week were spent in providing health services to hospital employees.

**Question 10.** Is there a registered nurse (or nurses) whose primary responsibility is the provision of employee health services?

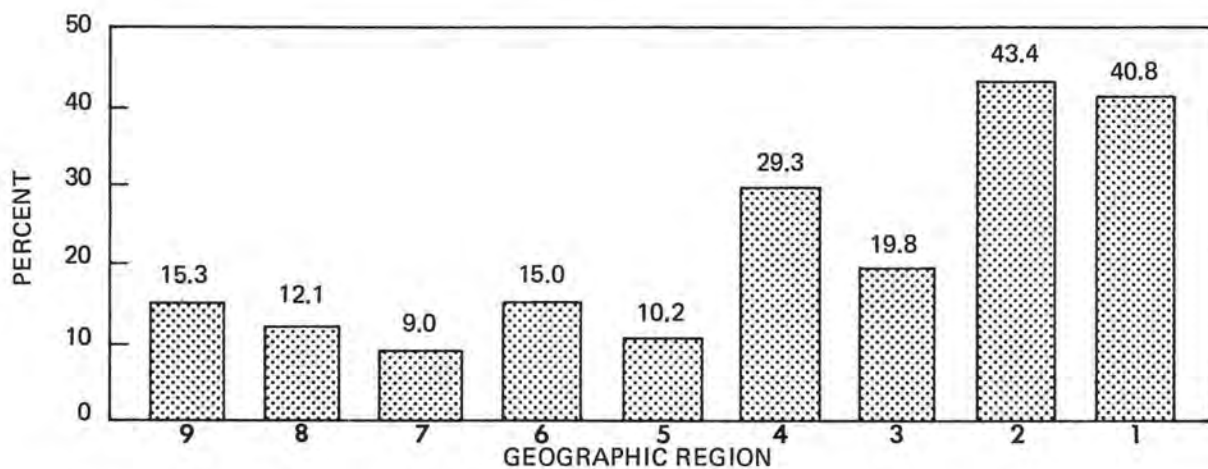
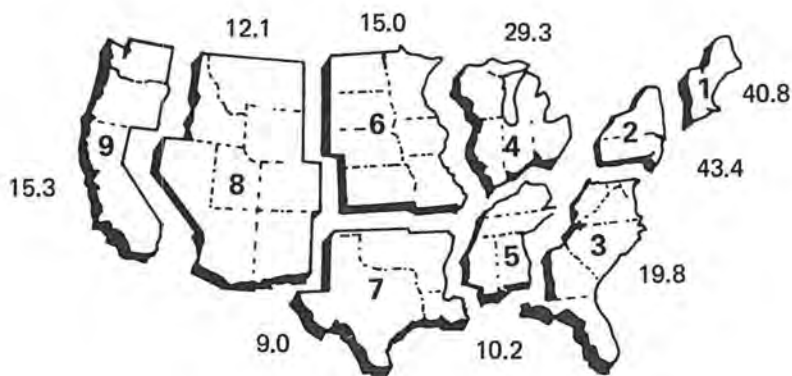
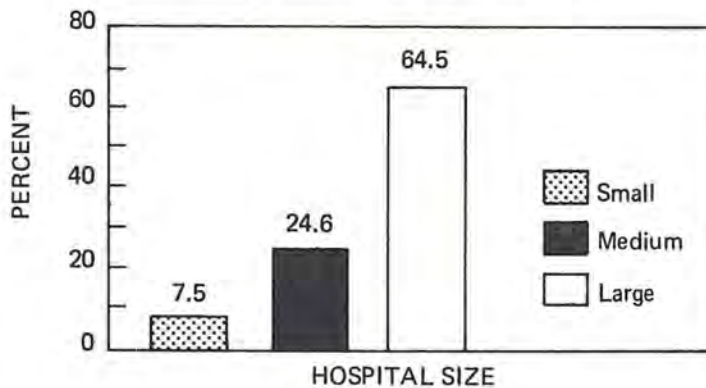
Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

**Results:** About 20 percent (21.6%) of all hospitals reported that they had a registered nurse where primary responsibility was to provide health care to hospital employees. The responses to this question are contained in Table 7, Appendix A, and are tabulated according to hospital size, based upon number of beds (Small: 25-99, Medium: 100-299, and Large: 300+ beds). There was considerable variation in responses received from different size hospitals. Less than 10 percent of the small hospitals (7.5%) and about one-fourth (24.6%) of the medium-sized hospitals indicated that there was a registered nurse assigned to the care of hospital employees. Sixty-five percent of the large hospitals (64.5%) had an employee health nurse. As expected, the large hospital employing hundreds of workers rates highest of those reporting the use of an employee health service nurse.

As shown in Figure 4, there were also considerable differences among the geographic distribution of hospitals that reported the use of a registered nurse. Two regions (New England and Middle Atlantic) reported using registered nurses about 40 percent (40.8 and 43.4% respectively); another two regions (South Atlantic, 19.8% and East North Central, 29.3%) reported about 20 to 30 percent, while the remaining five regions reported using registered nurses only 10 to 15 percent. For additional details on the geographic distribution of results, please refer to Appendix A, Table 8.

**FIGURE 4**

**PERCENT OF HOSPITALS INDICATING A REGISTERED NURSE HAD PRIMARY RESPONSIBILITY FOR PROVIDING EMPLOYEE HEALTH SERVICES BY SIZE<sup>1</sup> AND GEOGRAPHIC DISTRIBUTION<sup>2</sup> (RESPONSE TO QUESTION 10)<sup>3</sup>**



<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-9 A, Tables 7 and 8.

<sup>2</sup>Based upon U.S. Bureau of the Census Divisions, and s9) (Medium: 100-299) (Large: 300+)

<sup>3</sup>These data are presented in tabular form in Appendixelection criteria specified in Appendix B.

Source of Data: NIOSH Hospital Occupational Health Services Study, U.S., 1972.

**Question 10a.** If the answer to Question 10 is yes, please answer the following.  
 How many hours per week does the nurse spend in this assignment?  
 (Enter 1 hour as 01, 3 hours as 03, etc.) □□

**Results:** Nearly 80 percent (79.4%) of all hospitals left this question blank or indicated zero. Based upon the responses received, over 90 percent (93.5%) of the small hospitals (25–99 beds) and three quarters (76.4%) of all medium-sized hospitals (100–299 beds) do not have a registered nurse assigned to provide health services to the hospital workers. Over one-third (36.1%) of all large hospitals (300+ beds) do not use a registered nurse for these services.

The nine categories of working hours, used in the previous question to evaluate the time physicians spend on hospital employee health services, were used to study the number of hours per week that registered nurses provided these services to hospital workers. Over 10 percent (11.3%) of all hospitals reported a registered nurse (or nurses) spent 37-40 hours per week providing health services to hospital employees. Almost half (49.2%) of the large hospitals, and about 10 percent (11.7%) of medium-sized hospitals, but practically none (0.3%) of the small hospitals had a nurse assigned this responsibility who spent 37–40 hours per week in this assignment. Only a few percent (0.1%–4.5%) of these responses fell into the other time categories. Further statistical information on the responses to Question 10a are presented in Table 9 of Appendix A.

**Question 10b.** To whom is the nurse administratively responsible?  
 (Check one)

- The Physician in Charge of Employees' Health Services .....
- The Director of Nursing .....
- The Hospital Administrator .....
- The Personnel Director .....
- Other (specify) \_\_\_\_\_ .....

**Results:** In response to Question 10, if a hospital indicated that it had a registered nurse whose primary responsibility was to provide employee health services, it was then asked to identify the person to whom that registered nurse was administratively responsible. As shown above, four hospital staff members were listed, plus Other, thereby providing the responding hospital an opportunity to specify someone else in its organization. Slightly more hospitals (52) answered this question (10b) than the number of hospitals that stated they had such a nurse when answering Question 10. About 80 percent (77.4%) failed to indicate the use of any such nurse in response to this question.

Over one-third of all hospitals (36.3%) indicated that the Employee Health Nurse was responsible to the Director of Nursing and over one-fourth (26.1%) checked Personnel Director. Less than 20 percent (19.0%) stated that the nurse was responsible to the Physician in Charge of Employees' Health Services, and about the same percent (17.4%) reported the Hospital Administrator. As shown in Figure 5, the pattern of these responses is quite different for each reported size of hospital. Table 10, Appendix A, presents this data in tabular form.

Almost half of the small hospitals indicated that the Employee Health Nurse reported to the Hospital Administrator (45.5%) or to the Director of Nursing (43.4%). A small number of hospitals indicated that the nurse reported to the Physician in Charge of Employees' Health Services (9.0%) or to the Personnel Director (2%).

Medium-sized hospitals (100–299 beds) had the largest percentage (43.4%) reporting to the Director of Nursing, but over one-fourth (26.5%) reported to the Personnel Director. Over 15 percent of the hospitals had the Employee Health Nurse report to the Physician in Charge of Employee Health Services (16.5%), and almost as many (13.0%) to the Hospital Administrator.

Again, the policies of large hospitals show some differences. Almost 40 percent of the large hospitals had the Employee Health Service Nurse administratively responsible to the Personnel

Director (37.6%). Both the Director of Nursing and Physician in Charge of Employees' Health Services were reported to be responsible for the nurse in over 25 percent of the large hospitals (26.0% and 26.4%, respectively). The Hospital Administrator was responsible for the nurse in less than 10 percent of these hospitals (7.5%).

There was little difference in the distribution of these data among the geographic regions — most follow the pattern of the total as previously discussed. A few exceptions were outstanding and worth noting. In the East South Central Region, less than five percent of the hospitals (2.3%) reported that the nurse was responsible to the Physician in Charge of Employees' Health Services, and thus this region has slightly higher percentages in the various other categories — particularly the Personnel Director — than other regions. The West South Central Region showed a somewhat lower percentage for the Physician in Charge of Employees' Health Services and the Director of Nursing, yet somewhat higher for the Hospital Administrator category. The Mountain Region also had a somewhat lower percentage for the Physician in Charge of Employees' Health Services category, but the remainder was distributed among the other categories. The East North Central Region had a somewhat lower percentage for the Physician in Charge of Employees' Health Services category, and a somewhat higher percentage for the Personnel Director. Over 50 percent of the hospitals (50.9%) in the Pacific Region reported that the nurse was responsible to the Director of Nursing, and less than five percent (3.6%) reported that the nurse was responsible to the Hospital Administrator. Please see Table 11, Appendix A, for additional information.

## STAFFING OF THE OCCUPATIONAL HEALTH UNIT

**Question 10c.** How is the nurse usually given medical direction to provide employee health care?

(Check one)

- Written Individual Orders .....   
 Written Standing Orders .....   
 Other (specify) \_\_\_\_\_ .....

**Results:** In answering Question 10, if the hospital stated that there was a registered nurse whose primary responsibility was the provision of employee health services, the hospital was asked how the nurse usually received medical direction to provide this employee health care. Slightly more hospitals responded to this question (35) than answered "yes" to Question 10, which asked if these hospitals had a registered nurse for employee health services. The percentages shown in Figure 6 and discussed below are for those hospitals which responded to this question and do not include about 80 percent of those hospitals which failed to answer.

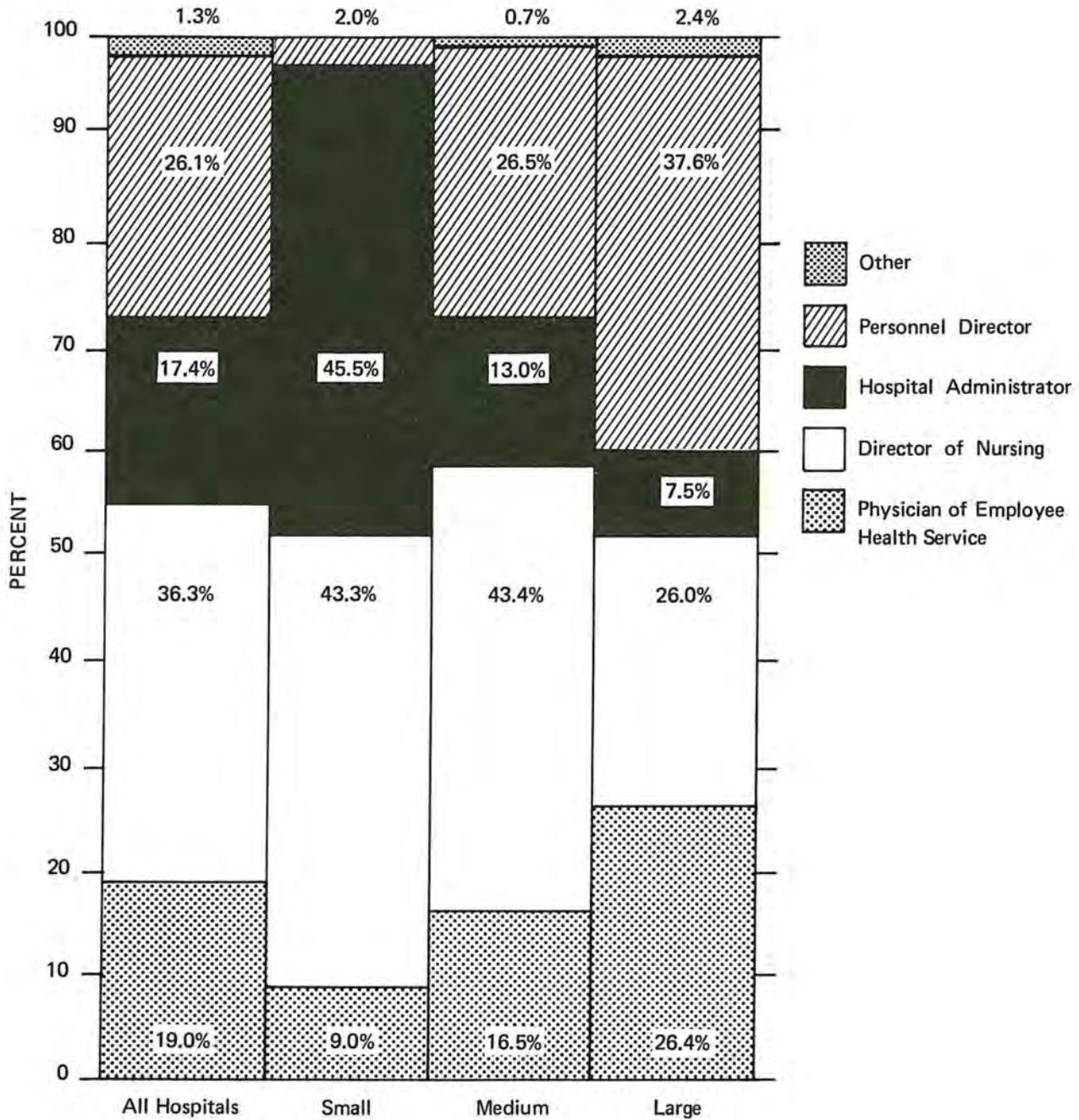
Over 50 percent of the hospitals (54.0%) indicated that the nurse was usually given medical direction by Written Individual Orders. Almost one-third of the hospitals (32.8%) reported Written Standing Orders. The remainder — under 15 percent (13.2%) — was divided among these categories; Both Individual and Standing Written Orders (6.9%), Verbal Individual Orders (3.3%), and a variety of responses (3.0%).

Small hospitals reported that over 70 percent of the time (71.5%), the nurse was given Written Individual Orders. In over 20 percent of the small hospitals (21.5%), the nurse is usually given Written Standing Orders, and in about five percent of the hospitals (5.3%); the nurse is given Verbal Individual Orders. Please refer to Table 12, Appendix A, for additional statistical data.

Medium-sized and large hospitals had distributions similar to that reported by all hospitals responding to this question. As shown in Table 13, Appendix A, there were no outstanding differences among geographic regions.

FIGURE 5

PERCENT OF HOSPITALS IDENTIFYING THE HOSPITAL OFFICIAL TO WHOM THE EMPLOYEE HEALTH NURSE IS ADMINISTRATIVELY RESPONSIBLE AND HOSPITAL SIZE<sup>1</sup>  
(RESPONSE TO QUESTION 10b)<sup>2</sup>

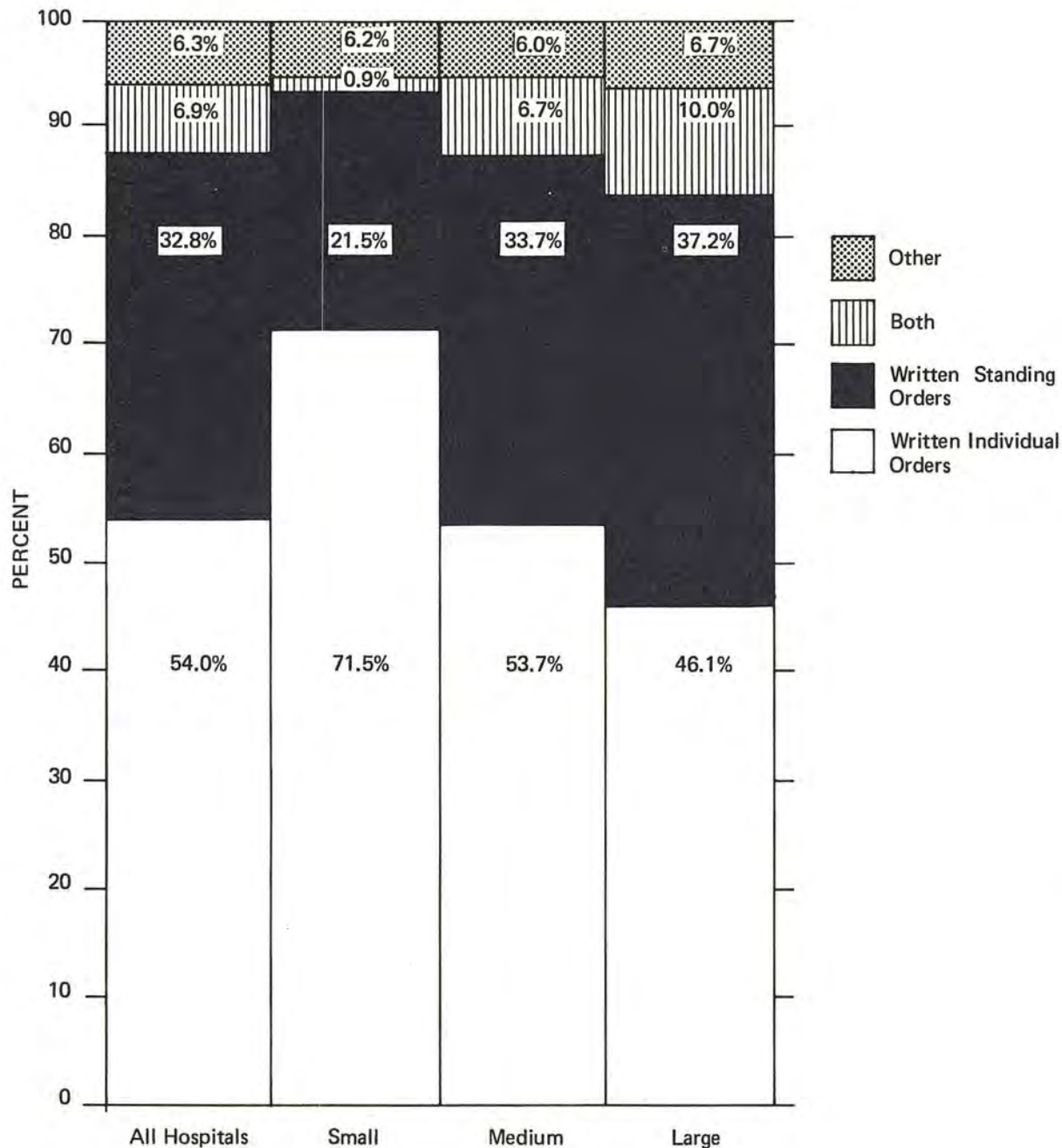


<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)

<sup>2</sup>These data are presented in tabular form in Appendix A, Table 10.

Source of Data: NIOSH Hospital Occupational Health Services Study, U.S., 1972.

**FIGURE 6**  
**PERCENT OF HOSPITALS WHICH SPECIFIED HOW THE EMPLOYEE**  
**HEALTH NURSE USUALLY RECEIVED MEDICAL DIRECTION**  
**TO PROVIDE EMPLOYEE HEALTH CARE AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 10c)<sup>2</sup>**



<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)

<sup>2</sup>These data are presented in tabular form in Appendix A, Table 12.

Source of Data: NIOSH Hospital Occupational Health Services Study, U.S., 1972.





## APPENDIX A — STATISTICAL TABLES



**TABLE 1**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY PRIMARY SOURCE FOR DAY-TO-DAY EMPLOYEE HEALTH CARE SERVICES AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 2)**

Primary source of service	Number				Percent			
	Total	Hospital size <sup>1</sup>			Total	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	100.0	100.0	100.0	100.0
Occupational health nurse .....	582	37	241	304	11.0	1.4	13.2	39.8
Floor nurse .....	532	500	31	1	10.0	18.5	1.7	0.1
House physician .....	419	219	148	52	7.9	8.1	8.1	6.8
Outpatient department staff .....	369	218	97	54	7.0	8.0	5.3	7.1
Emergency room staff .....	2,419	1,078	1,119	222	45.7	39.8	61.3	29.1
Other .....	768	508	142	118	14.5	18.7	7.8	15.4
None .....	209	150	46	13	3.9	5.5	2.5	1.7

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)   
**Source of Data:** NIOSH *Hospital Occupational Health Services Study, U.S., 1972.*

**TABLE 2**  
**ESTIMATED NUMBER OF HOSPITALS AND PERCENT OF ALL HOSPITALS WHICH CHECKED "OTHER" BY SPECIFIED CERTAIN OTHER PRIMARY SOURCES FOR DAY-TO-DAY EMPLOYEE HEALTH CARE SERVICES AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 2)**

Other specified service	Number				Percent			
	Total	Hospital size <sup>1</sup>			Total	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
All hospitals .....	5,298	2,710	1,824	764	100.0	100.0	100.0	100.0
Total Hospitals								
Checking "Other" .....	768	508	142	118	14.5	18.7	7.8	15.4
Employee health unit .....	115	9	23	83	2.2	.3	1.3	10.9
Nursing .....	192	150	41	1	3.6	5.5	2.2	.1
Medical staff .....	95	70	19	6	1.8	2.6	1.0	.8
Personnel or administration .....	22	17	5	0	.4	.6	.3	—
Own family physician .....	147	100	35	12	2.8	3.7	1.9	1.6
Contract M.D. .....	21	14	6	1	.4	.5	.3	.1
Miscellaneous .....	26	16	6	4	.5	.6	.3	.5
Not specified .....	150	132	7	11	2.8	4.9	.4	1.4

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)   
**Source of Data:** NIOSH *Hospital Occupational Health Services Study, U.S., 1972.*

**TABLE 3**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY PRIMARY**  
**SOURCES FOR DAY-TO-DAY EMPLOYEE HEALTH CARE SERVICES**  
**AND GEOGRAPHIC REGION<sup>1</sup>**  
**(RESPONSE TO QUESTION 2)**

Geographic region <sup>1</sup>	Primary source of service							
	Total	Occupational health nurse	Floor nurse	House physician	Out-patient dept. staff	Emergency room staff	Other	None
	Number							
Total .....	5,298	582	532	419	369	2,419	768	209
New England .....	277	60	5	20	27	117	38	10
Middle Atlantic .....	663	136	13	92	26	301	89	6
South Atlantic .....	718	62	39	68	43	403	72	31
E. North Central .....	878	165	46	50	48	440	105	24
E. South Central .....	422	23	61	17	21	211	71	18
W. North Central .....	694	46	191	44	50	207	128	28
W. South Central .....	703	29	108	60	43	278	142	43
Mountain .....	289	17	39	18	25	115	53	22
Pacific .....	654	44	30	50	86	347	70	27
	Percent							
Total .....	100.0	11.0	10.0	7.9	7.0	45.7	14.5	3.9
New England .....	100.0	21.7	1.8	7.2	9.7	42.2	13.7	3.6
Middle Atlantic .....	100.0	20.5	2.0	13.9	3.9	45.4	13.4	.9
South Atlantic .....	100.0	8.6	5.4	9.5	6.0	56.1	10.0	4.3
E. North Central .....	100.0	18.8	5.2	5.7	5.5	50.1	12.0	2.7
E. South Central .....	100.0	5.5	14.5	4.0	5.0	50.0	16.8	4.3
W. North Central .....	100.0	6.6	27.5	6.3	7.2	29.8	18.4	4.0
W. South Central .....	100.0	4.1	15.4	8.5	6.1	39.5	20.2	6.1
Mountain .....	100.0	5.9	13.5	6.2	8.7	39.8	18.3	7.6
Pacific .....	100.0	6.7	4.6	7.6	13.1	53.1	10.7	4.1

<sup>1</sup>Based upon U.S. Bureau of the Census Divisions, and selection criteria specified in Appendix B.  
**Source of Data:** NIOSH *Hospital Occupational Health Services Study, U.S., 1972.*

**TABLE 4**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY WHICH**  
**PHYSICIAN (OR PHYSICIANS) HAD RESPONSIBILITY FOR MEDICAL**  
**TREATMENT OF JOB-RELATED HEALTH PROBLEMS**  
**AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 8)**

Responsible physician	Number				Percent			
	Total	Hospital size <sup>1</sup>			All hospitals	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
All hospitals .....	5,298	2,710	1,824	764	—	—	—	—
House physician .....	697	220	294	183	13.2	8.1	16.1	24.0
Outpatient physician .....	321	118	99	104	6.1	4.4	5.4	13.6
Emergency room physician .....	1,890	505	865	520	35.7	18.6	47.4	68.1
Physician on call .....	2,120	1,326	651	143	40.0	48.9	35.7	18.7
Employee's family physician .....	3,425	1,951	1,145	329	64.7	72.0	62.8	43.1
Other .....	605	141	214	250	11.4	5.2	11.7	32.7
None of the above .....	59	35	16	8	1.1	1.3	.9	1.0

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25–99) (Medium: 100–299) (Large: 300+)

NOTE: Numbers and percentages are those which indicated a positive response for a particular category. A hospital may have more than one positive response.

Source of Data: NIOSH *Hospital Occupational Health Services Study*, U.S., 1972.

**TABLE 5**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS**  
**WHICH CHECKED "OTHER" BY SPECIFIED CERTAIN OTHER**  
**PHYSICIANS RESPONSIBLE FOR MEDICAL TREATMENT OF**  
**JOB-RELATED HEALTH PROBLEMS AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 8)**

Responsible physician	Number				Percent			
	Total	Hospital size <sup>1</sup>			All hospitals	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
All hospitals .....	5,298	2,710	1,824	765	—	—	—	—
Total hospitals checking "Other" ....	605	141	214	250	11.4	5.2	11.7	32.7
Employee health unit .....	279	5	93	181	5.3	.2	5.1	23.7
Other in-house staff .....	205	81	84	40	3.9	3.0	4.6	5.2
Off-site .....	54	19	16	19	1.0	.7	.9	2.5
Miscellaneous .....	43	19	14	10	.8	.7	.8	1.3
Not stated .....	24	17	7	0	.5	.6	.4	—

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25–99) (Medium: 100–299) (Large: 300+)

Source of Data: NIOSH *Hospital Occupational Health Services Study*, U.S., 1972.

**TABLE 6**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS**  
**BY INDICATED HOURS PER WEEK THE PHYSICIAN NAMED**  
**IN QUESTION 8 SPENDS TREATING JOB-RELATED HEALTH PROBLEMS**  
**OF HOSPITAL EMPLOYEES AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 9)**

Hours per week	Number				Percent			
	Total	Hospital size <sup>1</sup>			All	Hospital size <sup>1</sup>		
		Small	Medium	Large hospitals		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	100.0	100.0	100.0	100.0
Blank or 0 .....	2,538	1,575	798	165	47.9	58.1	43.8	21.6
1-4 .....	1,587	917	535	135	30.0	33.8	29.3	17.7
5-8 .....	345	58	174	113	6.5	2.1	9.5	14.8
9-12 .....	188	28	71	89	3.5	1.0	3.9	11.6
13-20 .....	152	8	52	92	2.9	.3	2.8	12.0
21-28 .....	99	25	43	31	1.9	.9	2.4	4.1
29-36 .....	32	7	9	16	.6	.3	.5	2.1
37-40 .....	176	42	58	76	3.3	1.5	3.2	9.9
41 and over .....	181	50	84	47	3.4	1.8	4.6	6.2

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)  
**Source of Data:** NIOSH *Hospital Occupational Health Services Study, U.S., 1972.*

**TABLE 7**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS**  
**BY PRESENCE OF A REGISTERED NURSE HAVING PRIMARY**  
**RESPONSIBILITY FOR PROVIDING EMPLOYEE HEALTH SERVICES**  
**AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 10)**

Is there a registered nurse?	Number				Percent			
	Total	Hospital size <sup>1</sup>			All	Hospital size <sup>1</sup>		
		Small	Medium	Large hospitals		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	100.0	100.0	100.0	100.0
Yes .....	1,145	204	448	493	21.6	7.5	24.6	64.5
No .....	4,083	2,468	1,348	267	77.1	91.1	73.9	34.9
Blank .....	70	38	28	4	1.3	1.4	1.5	.5

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)  
**Source of Data:** NIOSH *Hospital Occupational Health Services Study, U.S., 1972.*

**TABLE 8**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS**  
**BY PRESENCE OF A REGISTERED NURSE HAVING PRIMARY**  
**RESPONSIBILITY FOR PROVIDING EMPLOYEE HEALTH SERVICES**  
**AND GEOGRAPHIC REGION<sup>1</sup>**  
**(RESPONSE TO QUESTION 10)**

Geographic region <sup>1</sup>	Registered Nurse							
	Number				Percent			
	Total	Yes	No	Blank	All hospitals	Yes	No	Blank
Total .....	5,298	1,145	4,083	70	100.0	21.6	77.1	1.3
New England .....	277	113	160	4	100.0	40.8	57.8	1.4
Middle Atlantic .....	663	288	363	12	100.0	43.4	54.8	1.8
South Atlantic .....	718	142	567	9	100.0	19.8	79.0	1.3
E. North Central .....	878	257	607	14	100.0	29.3	69.1	1.6
E. South Central .....	422	43	375	4	100.0	10.2	88.9	.9
W. North Central .....	694	104	585	5	100.0	15.0	84.3	.7
W. South Central .....	703	63	634	6	100.0	9.0	90.2	.9
Mountain .....	289	35	251	3	100.0	12.1	86.9	1.0
Pacific .....	654	100	541	13	100.0	15.3	82.7	2.0

<sup>1</sup>Based upon U.S. Bureau of the Census Divisions, and selection criteria specified in Appendix .  
**Source of Data:** NIOSH *Hospital Occupational Health Services Study*, U.S., 1972.

**TABLE 9**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS**  
**BY NUMBER OF HOURS PER WEEK THE EMPLOYEE HEALTH NURSE**  
**SPENDS ON HOSPITAL EMPLOYEE HEALTH CARE**  
**AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 10a)**

Hours per week	Number				Percent			
	Total	Hospital size <sup>1</sup>			All hospitals	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	100.0	100.0	100.0	100.0
Blank or 0 .....	4,204	2,535	1,393	276	79.4	93.5	76.4	36.1
1-4 .....	169	122	39	8	3.2	4.5	2.1	1.0
5-8 .....	65	13	44	8	1.2	.5	2.4	1.0
9-12 .....	46	12	25	9	.9	.4	1.4	1.2
13-20 .....	95	7	62	26	1.8	.3	3.4	3.4
21-28 .....	33	6	15	12	6.	.2	.8	1.6
29-36 .....	29	2	9	18	.5	.1	.5	2.4
37-40 .....	597	7	214	376	11.3	.3	11.7	49.2
41 and over .....	60	6	23	31	1.1	.2	1.3	4.1

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)  
**Source of Data:** NIOSH *Hospital Occupational Health Services Study*, U.S., 1972.

**TABLE 10**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS**  
**BY THE HOSPITAL OFFICIAL TO WHOM THE EMPLOYEE HEALTH**  
**NURSE IS ADMINISTRATIVELY RESPONSIBLE**  
**AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 10b)**

Employee health nurse responsible to	Number				Percent			
	Total	Hospital size <sup>1</sup>			All hospitals	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	—	—	—	—
Blank (no nurse) .....	4,101	2,466	1,363	272	—	—	—	—
Responses Total: .....	1,197	244	461	492	100.0	100.0	100.0	100.0
Physician of employee health service .....	228	22	76	130	19.0	9.0	16.5	26.4
Director of nursing ..	434	106	200	128	36.3	43.4	43.4	26.0
Hospital administrator	208	111	60	37	17.4	45.5	13.0	7.5
Personnel director ..	312	5	122	185	26.1	2.0	26.5	37.6
Other .....	15	0	3	12	1.3	—	.7	2.4

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25–99) (Medium: 100–299) (Large: 300+)  
**Source of Data:** NIOSH *Hospital Occupational Health Services Study, U.S., 1972.*

**TABLE 11**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS BY HOSPITAL**  
**OFFICIAL ADMINISTRATIVELY RESPONSIBLE FOR EMPLOYEE**  
**HEALTH NURSE AND GEOGRAPHIC REGION<sup>1</sup>**  
**(RESPONSE TO QUESTION 10b)**

Geographic region <sup>1</sup>	Employee health nurse responsible to					
	Total	Physician of employee health service	Director of nursing	Hospital admin- istrator	Personnel director	Other
Total .....	1,197	228	434	208	312	15
New England .....	117	31	47	17	20	2
Middle Atlantic .....	287	77	113	42	51	4
South Atlantic .....	150	19	58	34	38	1
E. North Central .....	269	39	81	41	105	3
E. South Central .....	43	1	17	8	16	1
W. North Central .....	113	17	39	26	30	1
W. South Central .....	74	12	11	30	20	1
Mountain .....	34	4	12	6	11	1
Pacific .....	110	28	56	4	21	1
<b>Percent</b>						
All Hospitals .....	100.0	19.0	36.3	17.4	26.1	1.3
New England .....	100.0	26.5	40.2	14.5	17.1	1.7
Middle Atlantic .....	100.0	26.8	39.4	14.6	17.8	1.4
South Atlantic .....	100.0	12.7	38.7	22.7	25.3	.7
E. North Central .....	100.0	14.5	30.1	15.2	39.0	1.1
E. South Central .....	100.0	2.3	39.5	18.6	37.2	2.3
W. North Central .....	100.0	15.0	34.5	23.0	26.5	.9
W. South Central .....	100.0	16.2	14.9	40.5	27.0	1.4
Mountain .....	100.0	11.8	35.3	17.6	32.4	2.9
Pacific .....	100.0	25.5	50.9	3.6	19.1	.9

<sup>1</sup>Based upon U.S. Bureau of the Census Divisions, and selection criteria specified in Appendix B.  
**Source of Data:** NIOSH *Hospital Occupational Health Services Study*, U.S., 1972.

**TABLE 12**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS**  
**BY HOW THE EMPLOYEE HEALTH NURSE USUALLY RECEIVED**  
**MEDICAL DIRECTION TO PROVIDE EMPLOYEE HEALTH CARE**  
**AND HOSPITAL SIZE<sup>1</sup>**  
**(RESPONSE TO QUESTION 10c)**

Medical direction	Number				Percent			
	Total	Hospital size <sup>1</sup>			All hospitals	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	—	—	—	—
Blank (no nurse) .....	4,118	2,482	1,364	272	—	—	—	—
Responses total: .....	1,180	228	460	492	100.0	100.0	100.0	100.0
Written individual								
Orders .....	637	163	247	227	54.0	71.5	53.7	46.1
Written standing								
Orders .....	387	49	155	183	32.8	21.5	33.7	37.2
Other: .....	156	16	58	82	13.2	7.0	12.6	16.7
Both .....	82	2	31	49	6.9	.9	6.7	10.0
Verbal								
individual								
orders .....	39	12	12	15	3.3	5.3	2.6	3.0
Miscellaneous ..	35	2	15	18	3.0	.9	3.4	3.7

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25–99) (Medium: 100–299) (Large: 300+)  
Source of Data: NIOSH *Hospital Occupational Health Services Study*, U.S., 1972.

**TABLE 13**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS**  
**WHICH SPECIFIED HOW THE EMPLOYEE HEALTH NURSE**  
**USUALLY RECEIVED MEDICAL DIRECTION TO PROVIDE**  
**EMPLOYEE HEALTH CARE AND GEOGRAPHIC REGION<sup>1</sup>**  
**(RESPONSE TO QUESTION 10c)**

Geographic region <sup>1</sup>	Medical direction							
	Total	Number			Percent			
		Written individual orders	Written standing orders	Other	All hospitals	Written individual orders	Written standing orders	Other
Total .....	1,180	637	387	156	100.0	54.0	32.8	13.2
New England .....	113	51	50	12	100.0	45.1	44.2	10.6
Middle Atlantic .....	287	190	70	27	100.0	66.2	24.4	9.4
South Atlantic .....	145	81	38	26	100.0	55.9	26.2	17.9
E. North Central .....	266	117	116	33	100.0	44.0	43.6	12.4
E. South Central .....	43	22	13	8	100.0	51.2	30.2	18.6
W. North Central .....	112	57	36	19	100.0	50.9	32.1	17.0
W. South Central .....	72	44	16	12	100.0	61.1	22.2	16.7
Mountain .....	33	18	12	3	100.0	54.5	36.4	9.1
Pacific .....	109	57	36	16	100.0	52.3	33.0	14.7

<sup>1</sup>Based upon U.S. Bureau of the Census Divisions, and selection criteria specified in Appendix B.  
**Source of Data:** NIOSH *Hospital Occupational Health Services Study*, U.S., 1972.

**TABLE 14**  
**ESTIMATED NUMBER AND PERCENT OF HOSPITALS**  
**BY THE PRIMARY SOURCE OF EMPLOYEE HEALTH CARE**  
**FROM HOSPITALS AND PRESENCE OF A FORMAL PROGRAM**  
**FOR OCCUPATIONAL HEALTH CARE OF EMPLOYEES**  
**(RESPONSES TO QUESTIONS 2 AND 1)**

Source of service	Formal program for occupational health care of employees					
	Total	Number		Percent		
		Yes	No	Total	Yes	No
Total .....	5,298	3,639	1,659	100.0	100.0	100.0
Occupational health nurse .....	582	558	24	11.0	15.3	1.4
Floor nurse .....	532	285	247	10.0	7.8	14.9
House physician .....	419	275	144	7.9	7.6	8.7
Outpatient department staff .....	369	274	95	7.0	7.5	5.7
Emergency room staff .....	2,419	1,687	732	45.7	46.4	44.1
Other .....	768	520	248	14.5	14.3	14.9
None .....	209	40	169	3.9	1.1	10.2

**Source of Data:** NIOSH *Hospital Occupational Health Services Study*, U.S., 1972.

**APPENDIX B — TECHNICAL NOTES**  
**METHOD USED IN SELECTING AND CONTACTING**  
**SURVEY RESPONDENTS**

The following is an excerpt of the protocol used by the contractor in performing the survey of hospitals described in this report.

**A. Population Studied**

In order to achieve the objectives of this study within the constraints of available time and funds, it was decided to arbitrarily limit selection of hospitals to be included in the study. According to the *Journal of the American Hospital Association*, August 1, 1971:

“Data compiled for the period 1960-1970 showed a major shift in utilization among various types of hospitals. An indication of this shift is apparent in the decline in the number of beds maintained by non-community hospitals, including Federal, psychiatric, tuberculosis, and other long-term institutions.”

Based on this finding, it was decided that only short-term hospitals would be included in the study. Further, the decision was made to include alcoholism, psychiatric, tuberculosis and other respiratory disease hospitals since these hospitals are assumed to have employee health problems which are sufficiently different from other short-term hospitals, and their inclusion in the survey might distort the findings.

Employees of hospitals operated by the Federal Government are covered by employee health benefit plans of the U.S. Government. Since information on these plans, as well as their utilization, is available from other and less expensive sources, Federally-owned hospitals were not included in the survey.

In order to be eligible to be included in the survey, a hospital must:

- 1.) Be located in the continental United States
- 2.) Be a member of the American Hospital Association (A.H.A.)
- 3.) Have 25 or more beds, excluding bassinets
- 4.) Have an average length of patient stay of 30 days or less
- 5.) Be classed as non-Federal by the A.H.A.
- 6.) Be other than an alcoholism, psychiatric, tuberculosis or other respiratory disease hospital, or hospital unit of an institution.

The study group is believed to represent a relatively homogeneous selection of hospitals defined by the A.H.A. as “community hospitals”.

**B. Sampling Procedures**

Hospital data for each of the 48 states (continental U.S.) were examined, and the total number of hospitals eligible included in the study population as defined above was determined. If the total number of hospitals for a particular state was 120 or less, then every eligible hospital in that state was included; i.e., a 100 percent sample was used. There are 15 states with more than 120 eligible hospitals. Hospitals in these 15 states were stratified by hospital size according to the following grouping:

Strata	Number of Beds
Small .....	25-99
Medium .....	100-299
Large .....	300 or more

Random sampling was conducted within each strata according to the following rules:

- 1.) If no fewer than about 40 hospitals fall in a hospital size group, all hospitals in that group were included.
- 2.) If about 40 or more hospitals fall in a hospital size group, the contractor selected 40 at random from that group for inclusion in the study.

Application of the sampling procedure resulted in the selection of 3,699 hospitals as a representative sample of 5,298 hospitals in the 48 contiguous states (Alaska and Hawaii omitted). Due to the closing or merging of 12 hospitals, the sampling size became 3,687 and remained constant throughout the study.

## METHODS USED FOR ANALYZING AND INTERPRETING RESPONSES

The NIOSH Hospital Occupational Health Services Study is based upon the statistical analyses of responses received in 2,664 questionnaires that NIOSH received by September 15, 1972. These data have been extrapolated to 5,298 hospitals which conform to the criteria described in Appendix C of Publication 1 of this study.

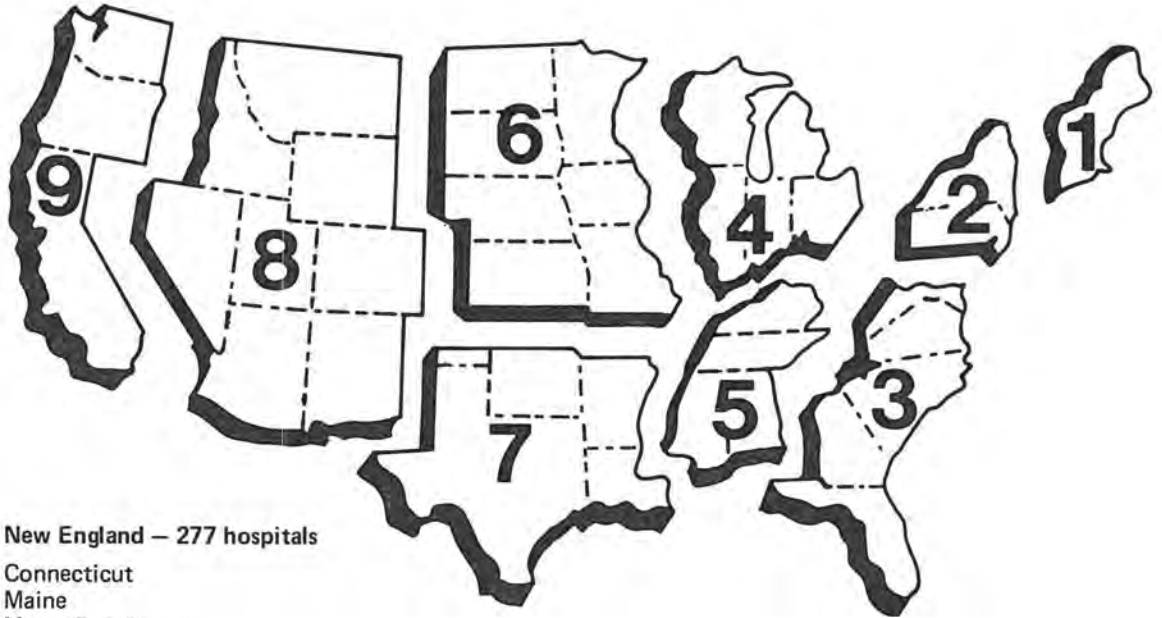
The overall response rate was 72.4 percent. The percentage response between states ranged from a low of 43.8 percent to a high of 92.0 percent. The range of response by geographic division was from 60.2 percent to 83.5 percent. The overall response, by size of hospital, was: small, 65.2 percent; medium, 76.7 percent; large, 83.9 percent. The population estimates for a particular response were obtained for each hospital size group within each state, rounded to the next highest integer, and accumulated as necessary for regional and national estimates. The sample response was multiplied by the result of dividing the number of hospitals for the population by the number of hospitals in the sample.

**TABLE 15**  
**HOSPITAL POPULATION FROM WHICH SAMPLE WAS SELECTED,**  
**BY U.S. BUREAU OF THE CENSUS DIVISION,**  
**AND BY SIZE OF HOSPITAL<sup>1</sup>**

U.S. Bureau of the Census Division	Hospital population				Sample of hospitals			
	Total	Hospital size <sup>1</sup>			Total	Hospital size <sup>1</sup>		
		Small	Medium	Large		Small	Medium	Large
Total .....	5,298	2,710	1,824	764	3,687	1,799	1,221	667
New England .....	277	110	128	39	242	110	93	39
Middle Atlantic .....	663	162	327	174	341	99	127	115
South Atlantic .....	718	355	245	118	596	256	222	118
E. North Central .....	878	338	365	175	557	205	198	154
E. South Central .....	422	264	119	39	375	217	119	39
W. North Central .....	694	449	174	71	591	345	174	72
W. South Central .....	703	477	174	52	412	238	122	52
Mountain .....	289	186	77	26	289	186	77	26
Pacific .....	654	369	215	70	284	143	89	52

<sup>1</sup>Hospital Size based upon number of beds: (Small: 25-99) (Medium: 100-299) (Large: 300+)  
Source of Data: NIOSH Hospital Occupational Health Services Study, U.S., 1972.

**FIGURE 7**  
**REGIONAL DISTRIBUTION OF THE 5,298 HOSPITALS**  
**INCLUDED IN THE STUDY POPULATION**  
**U. S. BUREAU OF THE CENSUS DIVISIONS**



**1. New England – 277 hospitals**

- Connecticut
- Maine
- Massachusetts
- New Hampshire
- Rhode Island
- Vermont

**2. Middle Atlantic – 663 hospitals**

- New Jersey
- New York
- Pennsylvania

**3. South Atlantic – 718 hospitals**

- Delaware
- District of Columbia
- Florida
- Georgia
- Maryland
- North Carolina
- South Carolina
- Virginia
- West Virginia

**4. East North Central – 878 hospitals**

- Illinois
- Indiana
- Michigan
- Ohio
- Wisconsin

**5. East South Central – 422 hospitals**

- Alabama
- Kentucky
- Mississippi
- Tennessee

**6. West North Central – 694 hospitals**

- Iowa
- Kansas
- Minnesota
- Missouri
- Nebraska
- North Dakota
- South Dakota

**7. West South Central – 703 hospitals**

- Arkansas
- Louisiana
- Oklahoma
- Texas

**8. Mountain – 289 hospitals**

- Arizona
- Colorado
- Idaho
- Montana
- Nevada
- New Mexico
- Utah
- Wyoming

**9. Pacific – 654 hospitals**

- \*Alaska
- California
- \*Hawaii
- Oregon
- Washington

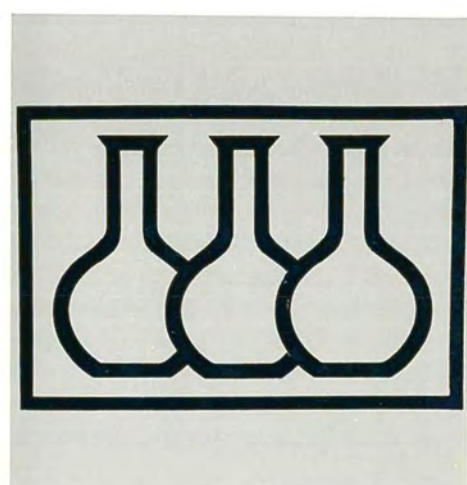
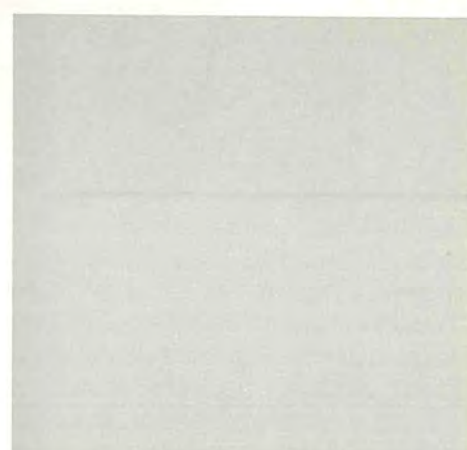
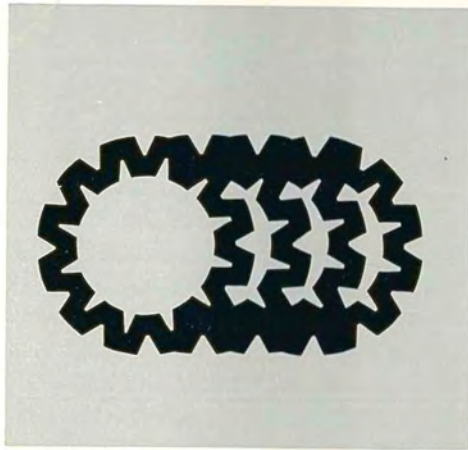
\*States omitted from this study

Source of Data: NIOSH *Hospital Occupational Health Services Study*, U.S., 1972.









U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
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