

QUALITY HEALTH STATISTICS

Characteristics of Registered Nurses, 1972 and 1977-78

Comparable data on all registered nurses in the United States were collected in 1972 and again in 1977-78. Changes in the supply and distribution of nurses and their demographic and practice characteristics were examined to determine what significant trends occurred between the two inventories. This report summarizes the results of an analysis of some of the data.

**Data From the National Health
Survey
Series 14, No. 27**

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Symbols used in tables

- - - Data not available
 - . . . Category not applicable
 - Quantity zero
 - 0.0 Quantity more than zero but less than 0.05
 - Z Quantity more than zero but less than 500 where numbers are rounded to thousands
 - * Figure does not meet standards of reliability or precision (more than 30 percent relative standard error)
 - # Figure suppressed to comply with confidentiality requirements
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Characteristics of Registered Nurses, 1972 and 1977-78

by Joseph Barbano, Dorothy Graham, and Armand Checker,* Division of Health Care Statistics

Introduction

In September 1976, the National Center for Health Statistics contracted with the American Nurses Association to provide the Center with a data tape containing information collected during the 1977-78 Inventory of Registered Nurses on all registered nurses in the United States. This report compares data from the 1972 inventory¹ (also conducted by the American Nurses Association) with data from the 1977-78 inventory. (Descriptive data on registered nurses in 1980 are available in a Bureau of Health Professions report,² and data on changes in the registered nurse population between 1977 and 1980 are available in another Bureau of Health Professions publication.³) Duplicate records from the data tape, a result of nurses being licensed in more than one State, were deleted; active nurses were placed in their principal State of employment, and inactive nurses were placed in their State of residence.⁴

The information in the 1977-78 Inventory of Registered Nurses was collected using self-administered questionnaires mailed directly to all licensed nurses. The questionnaire mailing was conducted through two separate but parallel mechanisms. The first was the Cooperative Health Statistics System.⁵ States with the System's Manpower Component contract collected data on registered nurses and submitted a specified set of data elements (the minimum data set) to the American Nurses Association and the National Center for Health Statistics. The Center had an individual contract with each State in the Cooperative Health Statistics System, usually with the State health department. All contractors in the System developed their own questionnaires for distribution in their

States. Questionnaires were required to include all minimum data set items specified by the Center and often contained the wording and format suggested by the Center. The second mechanism used a single source, the American Nurses Association, to collect the same minimum data set items in all States that did not collect data through the Cooperative Health Statistics System.

Similar methodologies were utilized by both the Cooperative Health Statistics System State contractors and the American Nurses Association to ensure uniformity of the data so that statistics from both groups of States could be merged into a national data file. In every State, either the Cooperative Health Statistics System State agency or the American Nurses Association collaborated with the State licensing board to ensure that questionnaires were sent to all licensed nurses. In many States the questionnaires were attached to license renewal applications mailed by State licensing boards. The questionnaires were returned either to the American Nurses Association or the Cooperative Health Statistics System State contractor for editing, coding, and keytaping.

Data collection for the 1977-78 inventory ranged from late 1976 to early 1979. Questions in the minimum data set were modeled after those in the 1972 inventory; consequently, 1977-78 inventory data were directly comparable to the 1972 data. Data that were not comparable were not included in this report. Because the American Nurses Association was responsible either for all data processing such as editing for consistency among data elements or removing duplicate records for both inventories, biases from such factors should be minimal.

Readers should note that rates (including percents) used in this report were calculated based on original, unrounded figures and may not agree with rates calculated from rounded data. In addition, missing data were excluded from the calculation of percents.

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Findings

Activity status

Between the 1972 and 1977-78 inventories, the estimated number of nurses employed in the profession increased about 29 percent (table 1). During this period 233,000 nurses entered the profession and became actively engaged in nursing activities. This percent increase is approximately the same as the increase for the previous 6 years, which was 25 percent.

Except for Alaska, which showed no increase in the supply of nurses, Wyoming, South Dakota, and New Jersey showed the smallest percent changes (4, 11, and 11 percent, respectively) in the ratio of active nurses per 100,000 population. Arkansas, New Mexico, Indiana, Missouri, and Tennessee had the largest percent increases, all between 41 and 48 percent (table 2). Summarizing the data by region showed that the smallest percent increases occurred in the New England and Middle Atlantic States, where increases of 11 and 16 percent were recorded. The largest increases—between 31 and 34 percent—occurred in the North Central and East South Central States (table 3).

In both survey years, the ratio of nurses to population varied considerably among the States and regions. In 1972 the range (the difference between the lowest and highest value) among States was 459 compared with 514 for 1977-78; the standard deviations were 107 and 132^b (table 4). The higher values of the range and standard deviation in 1977-78 indicate more variability among States in the 1977-78 nurse population ratios than in the 1972 ratios. However, if the standard deviations are adjusted for mean values, the coefficient of variations are equal.

In both survey years the majority (about 7 out of 10) of licensed nurses were employed in the profession. A significant proportion, 30 of every 100 nurses, were inactive in nursing in 1972 compared with about 25 per 100 in 1977-78 (table 1). The median age of

inactive nurses increased significantly during the interval—from 42 years of age in 1972 to 45 in 1977-78. Although the number of active nurses increased greatly between the surveys, a small increase (4 percent) also was registered for nurses not employed in nursing. Unfortunately, no information exists in the 1972 survey that indicates the availability of the inactive nurses for future employment in the profession. However, the 1977-78 survey identified a small number of nurses (slightly more than 20,000, or about 1 percent of all licensed nurses) who were not employed but were seeking work as registered nurses.

Age

The median age of nurses employed in the profession decreased from 39 to 37 years between 1972 and 1977-78 (table 5). Nationwide, the group of younger nurses (under 35 years of age) increased 43 percent between 1972 and 1977-78.^c

Educational preparation

Distribution of the highest educational level of registered nurses shifted substantially between the two inventories. In the 6 years between the two surveys, the proportion of nurses who graduated from 3-year diploma programs decreased from 76 to 61 percent. To complement this decrease, the proportion of nurses graduating from associate and baccalaureate degree programs increased. The shift to nurses graduating from associate degree programs has been large—from 5 percent of the active nurses in 1972 to 15 percent in 1977-78. The proportion of baccalaureate degree holders also increased, from 15 percent in 1972 to 20 percent in 1977-78 (table 6).

The shift in emphasis to the 2- and 4-year educational programs from the 3-year diploma pro-

^bThe District of Columbia was excluded from these calculations because it may be atypical due to the large number of nurses working for the Federal Government in a nonclinical capacity.

^cUsing adjusted counts based on distributions with known data.

gram has been progressing for many years. The number of State-approved diploma programs decreased from 497 in 1971–72 to 293 on January 1, 1981. Similarly, the number of accredited baccalaureate programs increased from 213 in 1971–72 to 311 on January 1, 1981. The number of students also has been shifting. In 1979–80 only 17,000 students were admitted to diploma programs, compared with 30,000 in 1972–73. The number of students admitted to associate degree programs increased from 44,000 to 54,000. A smaller but significant increase in the number of students in baccalaureate programs also occurred—in 1972–73, there were 30,000 compared with 36,000 in 1979–80 (table 7).⁶

The pattern of proportionately more degree holders in 1977 was apparent in all of the 5-year age groups. However, the difference between the 1972 and 1977–78 results was widest among younger nurses. For example, in 1977–78, baccalaureate or postbaccalaureate degrees were held by 27 percent of the nurses under 25 years of age and by 12 percent of the nurses 65 years of age or older. In 1972, baccalaureate or postbaccalaureate degrees were held by 17 percent of the nurses under 25 years of age and by 11 percent of those 65 years of age and over (tables 8 and 9).

Sex

Between 1972 and 1977–78 the number of employed male nurses increased from about 11,000 to 23,500.^c Despite this large increase, male nurses still represented only 3 percent of all employed registered nurses in 1977–78 (table 10). The distribution of male nurses by type of positions reveals some changes between the two surveys. The number of male nurses working as staff or general duty nurses increased greatly, rising from 3,500 in 1972 to about 10,200 in 1977–78.^c Although the number of males having a position of supervisor or assistant supervisor increased between the two surveys, supervisors accounted for only 11 percent of the men employed in nursing, compared with 17 percent in 1972. A similar decrease took place among the administrators; 6 percent of the male nurses in 1977–78 were administrators, compared with 9 percent in 1972 (table 11).

In 1972, the distribution of male nurses by type of position differed substantially from that of females. For example, 58 of every 100 female nurses were employed as general duty nurses compared with only 33 of every 100 male nurses. Eleven percent of female nurses were supervisors compared with 17 percent of the males. By 1977–78 (with the exception of the category “other”), these differences decreased; the only significant differences appeared in the percent of male and female nurses working in a staff capacity and as administrators (table 12).

^cUsing adjusted counts based on distributions with known data.

Ethnicity

Conclusions about the racial or ethnic background of registered nurses in the 1977–78 inventory must be drawn with extreme caution because of the large amount of missing data for this item. Racial or ethnic background was missing for 41 percent of the nurses (table 13). Many States did not collect these data; in other States, the data could not be used because their coding categories did not conform to American Nurses Association categories.

Of those answering the question on ethnicity, the largest minority group was black persons, who composed 4 percent of all registered nurses in the United States, a considerably smaller proportion than the percent of black persons in the U.S. population. According to the U.S. Bureau of the Census, on the other hand, Asian Americans constituted 1.5 percent of the U.S. population in 1978. Nurses of Asian ethnicity, however, composed 3 percent of the licensed nurses.

Site of basic nursing education

Information concerning nurses who earned their nursing credentials outside the United States was not available in the 1972 inventory. However, the data were deemed of sufficient interest to be included in the 1977–78 inventory.

U.S. nursing schools provided basic education to 96 percent of the nurses in the 1977–78 inventory. Among nurses not trained in the United States, 30 percent emigrated from the Philippines and 15 percent from the United Kingdom. Most of the others were from Asia (tables 14 and 15).

Slightly fewer than 3 out of 4 nurses trained in the United States were employed in nursing at the time of the 1977–78 inventory, compared with 94 and 97 percent for those nurses trained in the Philippines and India, respectively (table 16).

Employment status and sex

The shift between 1972 and 1977–78 toward a larger proportion of licensed nurses employed full time in nursing was characteristic of both male and female nurses in the inventory. During the 1977–78 inventory, 80 percent of the licensed male nurses indicated that they were employed full time in nursing, up from 76 percent in the 1972 inventory. About 52 percent of the females in the 1977–78 inventory were employed full time, compared with the 47 percent reported in the 1972 inventory (tables 17–20).

Employment status and age

Examination of activity rates for nurses among the 5-year age intervals disclosed that in each of the age

intervals under 50 years, a larger proportion of nurses were employed in nursing full time in 1977-78 than in 1972. The reverse pattern was observed in the 5-year age intervals for nurses 50 years of age and over. The increase of nurses under 35 years of age that occurred between 1972 and 1977-78 was cited previously. Activity rates obviously were affected by the age shift; however, whether the increase in labor force rates could be attributed to the increase in young persons becoming nurses, to immigration, or to some other factor cannot be determined from the 1977-78 inventory data.

For nurses employed part time on a regular basis, a pattern different from that for nurses employed full time was observed. For each group under 50-54 years of age there were proportionately slightly fewer part-time nurses in 1977-78 than there were in 1972. For the remaining age groups, virtually the same proportion in the two inventories were employed part time on a regular basis (tables 21 and 22).

Area of clinical practice and employment setting

A small but noticeable change in employment in hospitals and nursing homes was found for nurses who specified geriatrics as their primary area of clinical practice. In 1972, 18 percent worked in hospitals, compared with 12 percent in 1977-78. A complementary increase took place in the percent of the geriatric nurses working in nursing homes. In 1972, 71 percent worked in nursing homes compared with 77 percent in 1977-78 (tables 23 and 24).

Settings for nurses working in the area of pediatrics, including maternal and child health, changed considerably between the inventories. The proportion of pediatric nurses working in public health declined from 11 percent to 4 percent between the 1972 inventory and the 1977-78 inventory. Another setting where relatively large changes occurred among pediatric nurses was the hospital. The proportion of pediatric nurses employed in hospitals increased from 61 percent in 1972 to 70 percent in 1977-78. An opposite shift occurred among pediatric nurses employed in schools: in 1972, employment as school nurses accounted for 11 percent of pediatric nurses; in 1977-78 the comparable figure was 8 percent.

The 1977-78 inventory data revealed some changes since the 1972 inventory for employment of nurses in the clinical practice area of psychiatry and

mental health. The proportion of nurses working in hospitals who indicated psychiatry or mental health as their area of clinical practice decreased from about 82 percent in the 1972 inventory to about 71 percent in the 1977-78 inventory. A change in the opposite direction was reported for such nurses employed in nursing homes; representation in nursing homes increased from 1 percent of all employed nurses in 1972 to 3 percent in 1977-78. Another employment setting in which a proportional change in employment occurred was public health. The nurses designating psychiatry or mental health as their clinical practice area and who worked in public health settings increased by six percentage points. In the 1972 inventory, 5 percent of those nurses indicated public health as their setting; in the 1977-78 inventory, 11 percent did.

Type of nursing position and employment setting

The distributions of nurses by employment setting in the 1972 and 1977-78 inventories were almost the same except for those nurses indicating private duty and "other specified field" as their setting. The number of private-duty nurses decreased by about one-third between the two inventories, from about 39,000 to 26,500; the proportion of nurses in private duty decreased, from 5 percent in 1972 to 3 percent in 1977-78.

Among nurses in supervisory or assistant supervisory positions, hospitals were reported proportionately less and nursing homes proportionately more as the employment setting in 1977-78 compared with 1972. Hospitals were the most frequent employment setting among nurses who were supervisors or assistant supervisors—68 percent in 1972 compared with 62 percent in 1977-78.

As expected, schools of nursing were listed most often as the employment setting by instructors. In 1972, 7 of 10 instructors listed this setting compared with 6 of 10 in 1977-78. A small, but perhaps significant, change occurred in the frequency with which nursing homes were listed as the employment setting for instructors. In 1972 only 2 percent of the instructors listed nursing homes as their employment setting compared with 4 percent in 1977-78. However, the number of these instructors increased from 652 in 1972 to 1,648 in 1977-78^c (tables 25 and 26).

^cUsing adjusted counts based on distributions with known data.

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⁴American Nurses Association, Duane C. Schulte: *Inventory of Registered Nurses, 1977-78*. Kansas City, Mo. American Nurses Association, 1981.

⁵National Center for Health Statistics: The Cooperative Health Statistics System, its mission and program. *Vital and Health Statistics*. Series 4, No. 19. DHEW Pub. No. (HRA) 77-1456. Health Resources Administration, Washington. U.S. Government Printing Office, Apr. 1977.

⁶National League for Nursing: *State Approved Schools of Nursing—R.N.* Pub. No. 19-1853, 1981 and previous years.

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Table 1. Number of registered nurses, by employment status and year of inventory, and percent increase between 1972 and 1977-78, by employment status: United States, 1972 and 1977-78

Employment status	Year of inventory		Percent increase
	1972	1977-78	
	Number		
All registered nurses.....	1,127,657	1,375,208	22.0
Original count:			
Employed in nursing.....	778,470	958,308	23.1
Not employed in nursing...	316,611	323,483	2.2
Not reported.....	32,576	93,417	186.8
Estimated count:			
Employed in nursing.....	1794,979	11,028,003	29.3
Not employed in nursing...	1332,678	1347,205	4.4
Nurses employed per 100,000 population.....	1380	1472	24.2

¹Adjusted for nonresponse to questions on employment status and county of employment.

Table 2. Number of registered nurses employed in nursing per 100,000 population, by State and year of inventory, and percent increase between 1972 and 1977-78, by State: United States, 1972 and 1977-78

State	Year of inventory		Percent increase
	1972	1977-78	
	Number per 100,000 population ¹		
United States	380	472	24.2
Alaska	422	422	-
Wyoming.....	425	440	3.5
South Dakota	462	513	11.0
New Jersey.....	432	480	11.1
Montana	451	510	13.1
West Virginia	350	398	13.7
Vermont.....	612	698	14.0
Connecticut.....	579	662	14.3
New York.....	485	561	15.7
Hawaii	380	440	15.8
Delaware	514	602	17.1
Pennsylvania.....	519	611	17.7
South Carolina	295	348	17.9
Colorado.....	491	583	18.7
Louisiana	245	291	18.8
Utah	285	340	19.3
Massachusetts.....	649	776	19.6
Virginia	348	420	20.7
Mississippi.....	226	273	20.8
Wisconsin.....	416	505	21.4
California	334	407	21.8
Idaho.....	329	404	22.8
Maine	464	574	23.7
Kansas.....	400	506	26.5
North Dakota.....	455	577	26.8
Oklahoma.....	246	312	26.8
Nebraska	443	562	26.9
Ohio	389	494	26.9
Iowa	413	530	28.3
Texas	240	309	28.8
Maryland.....	363	471	29.7
Illinois.....	397	515	29.8
Kentucky.....	256	333	30.1
Washington	420	547	30.2
Alabama	223	291	30.5
Nevada	323	422	30.6
District of Columbia	673	885	31.5
Oregon.....	399	532	33.3
Minnesota.....	486	652	34.2
Florida.....	353	475	34.6
North Carolina.....	318	429	34.9
Michigan	335	454	35.5
Rhode Island.....	485	661	36.3
New Hampshire	572	782	36.8
Georgia.....	263	361	37.3
Arizona.....	428	590	37.8
Arkansas	190	268	41.0
New Mexico.....	258	368	42.6
Indiana	298	429	43.9
Missouri	312	449	43.9
Tennessee	233	344	47.6

¹Adjusted for nonresponse to questions on employment status and county of employment.

Table 3. Number of registered nurses employed in nursing per 100,000 population, by region and year of inventory, and percent increase between 1972 and 1977-78, by region: United States, 1972 and 1977-78

Region	Year of inventory		Percent increase
	1972	1977-78	
	Number per 100,000 population ¹		
United States	380	472	24.2
New England.....	596	664	11.4
Middle Atlantic	485	561	15.7
Pacific	352	436	23.9
Mountain.....	393	492	25.2
West South Central	237	302	27.4
South Atlantic.....	340	438	28.8
East North Central.....	370	483	30.5
West North Central.....	406	536	32.0
East South Central	235	315	34.0

¹ Adjusted for nonresponse to questions on employment status and county of employment.

Table 4. Variability of ratios of State-employed registered nurses to the population, by year of inventory: United States, 1972 and 1977-78

Measure of variability ¹	Year of inventory	
	1972	1977-78
Range	459	514
Standard deviation	107	132
Coefficient of variation .....	.28	.28

¹ Excludes the District of Columbia.

Table 5. Number and percent distribution of registered nurses employed in nursing by age, according to year of inventory, and median age by year of inventory: United States, 1972 and 1977-78

Age	Year of inventory			
	1972		1977-78	
	Number		Percent distribution	
All ages.....	778,470	958,308	100.0	100.0
Under 35 years.....	288,103	412,079	38.7	44.0
35-44 years.....	167,454	220,456	22.5	23.6
45-54 years.....	165,139	182,798	22.2	19.5
55-64 years.....	98,313	100,254	13.2	10.7
65 years and over.....	25,248	20,365	3.4	2.2
Not reported.....	34,213	22,346	...	...
Median age.....	39.4	36.9	...	...

Table 6. Number and percent distribution of registered nurses employed in nursing by highest educational preparation, according to year of inventory: United States, 1972 and 1977-78

Highest educational preparation	Year of inventory			
	1972		1977-78	
	Number		Percent distribution	
Total.....	778,470	958,308	100.0	100.0
Less than baccalaureate....	1626,857	722,861	182.0	75.8
Diploma	580,846	579,444	76.0	60.7
Associate degree	41,095	143,417	5.4	15.0
Baccalaureate in nursing ...	94,287	158,086	12.3	16.6
Baccalaureate in other field	17,188	31,262	2.2	3.3
Master's in nursing	17,260	26,608	2.3	2.8
Master's in other field.....	7,625	13,162	1.0	1.4
Doctorate.....	1,106	1,846	0.1	0.2
Not reported.....	14,147	4,483	...	...

¹ Includes basic nursing education not reported.

Table 7. Number and percent distribution of nursing student admissions by type of program, according to academic year: United States, 1972-73 and 1979-80

Type of program	Academic year			
	1972-73		1979-80	
	Number		Percent distribution	
All programs.....	104,713	107,368	100.0	100.0
Diploma	29,848	16,905	28.5	15.7
Associate degree.....	44,387	54,428	42.4	50.7
Baccalaureate.....	30,478	36,035	29.1	33.6

Source: National League for Nursing: *State Approved Schools of Nursing - R.N.* Pub. No. 19-1853, 1981 and previous years.

Table 8. Number of registered nurses employed in nursing, by age, highest educational preparation, and year of inventory: United States, 1972 and 1977-78

Age	Highest educational preparation and year of inventory									
	Total		Less than baccalaureate		Baccalaureate		Master's and above		Not reported	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78
All ages.....	778,470	958,308	626,857	722,861	111,475	189,348	25,991	41,616	14,147	4,483
Under 25 years.....	66,991	92,791	55,637	67,778	10,977	24,628	145	222	232	163
25-29 years.....	126,869	177,311	98,045	117,961	26,140	54,501	2,164	4,395	520	454
30-34 years.....	94,243	141,977	74,699	103,547	15,743	30,866	3,122	7,055	679	509
35-39 years.....	84,937	115,850	68,032	88,191	12,662	20,660	3,351	6,535	892	464
40-44 years.....	82,517	104,606	67,391	80,976	10,672	17,168	3,389	5,985	1,065	477
45-49 years.....	91,609	92,654	75,449	73,938	10,850	13,137	3,960	5,110	1,350	469
50-54 years.....	73,530	90,144	59,619	73,468	8,891	11,254	3,692	4,931	1,328	491
55-59 years.....	54,900	63,902	45,121	52,119	5,806	7,594	2,635	3,795	1,338	394
60-64 years.....	43,413	36,362	36,511	30,449	3,610	3,644	1,639	1,950	1,653	319
65 years and over.....	25,248	20,365	20,304	17,656	1,757	1,567	823	739	2,364	403
Not reported.....	34,213	22,346	26,049	16,778	4,367	4,329	1,071	899	2,726	340

Table 9. Percent distribution of registered nurses employed in nursing by highest educational preparation, according to age and year of inventory: United States, 1972 and 1977-78

Age	Highest educational preparation and year of inventory							
	Total		Less than baccalaureate		Baccalaureate		Master's and above	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78
All ages.....	100.0	100.0	82.0	75.8	14.6	19.9	3.4	4.4
Under 25 years.....	100.0	100.0	83.3	73.2	16.4	26.6	0.2	0.2
25-29 years.....	100.0	100.0	77.6	66.7	20.7	30.8	1.7	2.5
30-34 years.....	100.0	100.0	79.8	73.2	16.8	21.8	3.3	5.0
35-39 years.....	100.0	100.0	80.9	76.4	15.1	17.9	4.0	5.7
40-44 years.....	100.0	100.0	82.7	77.8	13.1	16.5	4.2	5.7
45-49 years.....	100.0	100.0	83.6	80.2	12.0	14.3	4.4	5.5
50-54 years.....	100.0	100.0	82.6	81.9	12.3	12.6	5.1	5.5
55-59 years.....	100.0	100.0	84.2	82.1	10.8	12.0	4.9	6.0
60-64 years.....	100.0	100.0	87.4	84.5	8.6	10.1	3.9	5.4
65 years and over.....	100.0	100.0	88.7	88.4	7.7	7.8	3.6	3.7

Table 10. Number and percent distribution of registered nurses employed in nursing by sex, according to year of inventory: United States, 1972 and 1977-78

Sex	Year of inventory			
	1972		1977-78	
	Number		Percent distribution	
Both sexes.....	778,470	958,308	100.0	100.0
Female.....	766,416	907,928	98.6	97.6
Male.....	10,989	22,855	1.4	2.4
Not reported.....	1,065	27,525	...	...

Table 11. Number and percent distribution of male registered nurses employed in nursing by type of position, according to year of inventory: United States, 1972 and 1977-78

Type of position	Year of inventory			
	1972		1977-78	
	Number		Percent distribution	
All nursing positions.....	10,989	22,855	100.0	100.0
Administrator or assistant.....	897	1,374	8.6	6.1
Consultant.....	125	180	1.2	0.8
Supervisor or assistant.....	1,733	2,543	16.5	11.3
Instructor.....	480	735	4.6	3.3
Head nurse or assistant.....	1,657	2,969	15.8	13.2
Staff or general duty.....	3,461	10,148	33.0	45.2
Other ¹	2,135	4,527	20.4	20.1
Not reported.....	501	379	...	...

¹Includes nurse practitioners and clinical specialists for 1977-78 and additional categories for both 1972 and 1977-78. Clinical specialists in 1972 were coded as consultants.

Table 12. Number of registered nurses employed in nursing and percent distribution by type of position, according to year of inventory and sex: United States, 1972 and 1977-78

Type of position	Year of inventory			
	1972		1977-78	
	Male	Female	Male	Female
	Number			
All nursing positions ¹	10,488	746,972	22,476	919,267
	Percent distribution			
Total.....	100.0	100.0	100.0	100.0
Administrator or assistant.....	8.6	3.9	6.1	3.6
Consultant.....	1.2	0.9	0.8	0.8
Supervisor or assistant.....	16.5	10.6	11.3	9.7
Instructor.....	4.6	4.3	3.3	4.6
Head nurse or assistant.....	15.8	15.8	13.2	14.2
Staff or general duty.....	33.0	57.5	45.2	58.0
Other ²	20.4	7.1	20.1	9.0

¹Excludes nurses for whom sex is unknown or type of position is not reported.

²Includes nurse practitioners and clinical specialists for 1977-78 and additional categories for both 1972 and 1977-78. Clinical specialists in 1972 were coded as consultants.

Table 13. Number and percent distribution of registered nurses by race or Hispanic origin: United States, 1977-78

Race or Hispanic origin	Number	Percent distribution
All races and ethnic origins.....	1,375,208	100.0
White.....	741,863	91.0
Black.....	32,712	4.0
Asian or Pacific Islander.....	25,567	3.1
Hispanic origin.....	8,702	1.1
American Indian or Alaskan		
Native.....	2,283	0.3
Other.....	4,137	0.5
Not reported.....	559,944	...

Table 14. Number of registered nurses, by site of basic nursing education and employment status: United States, 1977-78

<i>Site of basic nursing education</i>	<i>Employment status</i>			
	<i>All registered nurses</i>	<i>Employed in nursing</i>	<i>Not employed in nursing</i>	<i>Not reported</i>
All sites	1,375,208	958,308	323,483	93,417
North America.....	1,133,788	830,616	280,864	22,308
United States ¹	1,119,631	819,954	277,757	21,920
Canada.....	10,315	7,149	2,884	282
Jamaica.....	1,477	1,364	79	34
Other	2,245	2,037	140	68
North America, country not indicated.....	120	112	4	4
Australia and East Indies	16,095	14,752	1,009	334
Philippines.....	15,567	14,324	919	324
Other	517	419	88	10
Australia and East Indies, country not indicated.....	11	9	2	-
Europe	11,505	9,452	1,723	330
United Kingdom.....	7,956	6,747	997	212
Other	3,526	2,689	721	116
Europe, country not indicated.....	23	16	5	2
Asia and Pacific Islands	7,253	6,333	789	131
Korea.....	2,368	2,040	272	56
India.....	1,695	1,622	58	15
Thailand	1,382	1,261	101	20
Other	1,793	1,395	358	40
Asia and Pacific Islands, country not indicated.....	15	15	-	-
Africa.....	498	435	51	12
All known countries.....	441	385	47	9
Country not indicated.....	57	50	4	3
South America and Antarctica.....	1,412	1,274	105	33
Guyana.....	698	656	32	10
Other	639	550	67	22
South America, country not indicated.....	75	68	6	1
Other foreign country not indicated.....	888	683	180	25
Not reported.....	203,769	94,763	38,762	70,244

¹ Includes outlying areas of the United States.

Table 15. Percent distribution of all registered nurses and those employed in nursing by site of basic nursing education: United States, 1977-78

<i>Site of basic nursing education</i>	<i>All registered nurses</i>	<i>Employed in nursing</i>
All sites.....	100.0	100.0
North America.....	96.8	96.2
United States ¹	95.6	95.0
Canada.....	0.9	0.9
Jamaica.....	0.1	0.2
Other.....	0.2	0.2
North America, country not indicated.....	0.0	0.0
Australia and East Indies.....	1.4	1.7
Philippines.....	1.3	1.7
Other.....	0.0	0.0
Australia and East Indies, country not indicated.....	0.0	0.0
Europe.....	1.0	1.1
United Kingdom.....	0.7	0.8
Other.....	0.3	0.3
Europe, country not indicated...	0.0	0.0
Asia and Pacific Islands.....	0.6	0.7
Korea.....	0.2	0.2
India.....	0.1	0.2
Thailand.....	0.1	0.1
Other.....	0.2	0.2
Asia and Pacific Islands, country not indicated.....	0.0	0.0
Africa.....	0.0	0.1
All known countries.....	0.0	0.0
Country not indicated.....	0.0	0.0
South America and Antarctica.....	0.1	0.1
Guyana.....	0.1	0.1
Other.....	0.1	0.1
South America, country not indicated.....	0.0	0.0
Other foreign country not indicated.....	0.1	0.1

¹Includes outlying areas of the United States.

Table 16. Percent distribution of registered nurses by employment status, according to site of basic nursing education: United States, 1977-78

<i>Site of basic nursing education</i>	<i>Employment status</i>		
	<i>All registered nurses</i>	<i>Employed in nursing</i>	<i>Not employed in nursing</i>
All sites.....	100.0	74.8	25.2
North America.....	100.0	74.7	25.3
United States ¹	100.0	74.7	25.3
Canada.....	100.0	71.3	28.7
Jamaica.....	100.0	94.5	5.5
Other.....	100.0	93.6	6.4
North America, country not indicated.....	100.0	96.6	3.4
Australia and East Indies ...	100.0	93.6	6.4
Philippines.....	100.0	94.0	6.0
Other.....	100.0	82.6	17.4
Australia and East Indies, country not indicated.....	100.0	81.8	18.2
Europe.....	100.0	84.6	15.4
United Kingdom.....	100.0	87.1	12.9
Other.....	100.0	78.9	21.1
Europe, country not indicated.....	100.0	76.2	23.8
Asia and Pacific Islands.....	100.0	88.9	11.1
Korea.....	100.0	88.2	11.8
India.....	100.0	96.5	3.5
Thailand.....	100.0	92.6	7.4
Other.....	100.0	79.6	20.4
Asia and Pacific Islands, country not indicated ...	100.0	100.0	-
Africa.....	100.0	89.5	10.5
All known countries.....	100.0	89.1	10.9
Country not indicated.....	100.0	92.6	7.4
South America and Antarctica.....	100.0	92.4	7.6
Guyana.....	100.0	95.3	4.7
Other.....	100.0	89.1	10.9
South America, country not indicated.....	100.0	91.9	8.1
Other foreign country not indicated.....	100.0	79.1	20.9

¹Includes outlying areas of the United States.

Table 17. Number of male registered nurses, by age, employment status, and year of inventory: United States, 1972 and 1977-78

Age	Employment status and year of inventory											
	All male registered nurses ¹		Employed full time		Employed part time, regular		Employed part time, irregular		Not employed in nursing		Not reported	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972 ²	1977-78 ³
All ages.....	14,625	27,301	8,935	20,743	628	1,187	413	842	1,793	3,300	2,856	1,229
Under 25 years.....	657	1,826	525	1,490	44	83	20	86	23	113	45	54
25-29 years.....	2,076	6,727	1,560	5,511	118	315	64	214	167	511	167	176
30-34 years.....	2,144	6,031	1,575	4,960	123	228	66	156	191	524	189	163
35-39 years.....	1,679	3,462	1,222	2,773	67	170	46	79	184	352	160	88
40-44 years.....	1,465	2,345	1,064	1,800	69	125	33	62	173	301	126	57
45-49 years.....	1,206	1,934	853	1,501	61	73	39	54	147	259	106	47
50-54 years.....	1,013	1,380	711	1,039	36	60	21	47	165	204	80	30
55-59 years.....	908	1,084	578	716	33	47	19	29	217	252	61	40
60-64 years.....	557	761	313	399	20	23	29	36	161	273	34	30
65 years and over.....	541	654	153	131	37	34	49	55	266	402	36	32
Not reported.....	2,379	1,097	381	423	20	29	27	24	99	109	1,852	512

¹ Excludes 1,826 respondents who did not report their sex in 1972 and 74,873 who did not report their sex in 1977-78.

² Includes 1,013 male nurses employed in nursing for whom full- or part-time employment was not specified.

³ Includes 83 male nurses employed in nursing for whom full- or part-time employment was not specified.

Table 18. Percent distribution of male registered nurses by employment status, according to age and year of inventory: United States, 1972 and 1977-78

Age	Employment status and year of inventory									
	All male registered nurses		Employed full time		Employed part time, regular		Employed part time, irregular		Not employed in nursing	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78
All ages.....	100.0	100.0	75.9	79.6	5.3	4.6	3.5	3.2	15.2	12.7
Under 25 years.....	100.0	100.0	85.8	84.1	7.2	4.7	3.3	4.9	3.8	6.4
25-29 years.....	100.0	100.0	81.7	84.1	6.2	4.8	3.4	3.3	8.7	7.8
30-34 years.....	100.0	100.0	80.6	84.5	6.3	3.9	3.4	2.7	9.8	8.9
35-39 years.....	100.0	100.0	80.4	82.2	4.4	5.0	3.0	2.3	12.1	10.4
40-44 years.....	100.0	100.0	79.5	78.7	5.2	5.5	2.5	2.7	12.9	13.2
45-49 years.....	100.0	100.0	77.5	79.5	5.5	3.9	3.5	2.9	13.4	13.7
50-54 years.....	100.0	100.0	76.2	77.0	3.9	4.4	2.3	3.5	17.7	15.1
55-59 years.....	100.0	100.0	68.2	68.6	3.9	4.5	2.2	2.8	25.6	24.1
60-64 years.....	100.0	100.0	59.8	54.6	3.8	3.1	5.5	4.9	30.8	37.4
65 years and over.....	100.0	100.0	30.3	21.1	7.3	5.5	9.7	8.8	52.7	64.6
Not reported.....	100.0	100.0	72.3	72.3	3.8	5.0	5.1	4.1	18.8	18.6

Table 19. Number of female registered nurses, by age, employment status, and year of inventory: United States, 1972 and 1977-78

Age	Employment status and year of inventory											
	All female registered nurses ¹		Employed full time		Employed part time, regular		Employed part time, irregular		Not employed in nursing		Not reported	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972 ²	1977-78 ³
All ages.....	1,111,206	1,273,034	495,666	629,801	158,807	178,646	78,025	95,616	314,334	314,277	64,374	54,694
Under 25 years.....	72,696	95,450	57,146	78,558	5,520	5,882	1,915	3,762	6,190	5,276	1,925	1,972
25-29 years.....	162,774	197,453	83,431	123,033	27,776	28,203	9,815	13,966	37,147	28,025	4,605	4,226
30-34 years.....	141,692	181,092	49,784	79,788	27,998	35,481	11,565	17,357	48,553	44,685	3,792	3,781
35-39 years.....	127,334	153,879	45,468	66,331	24,494	29,396	10,282	14,114	42,940	40,872	4,150	3,166
40-44 years.....	115,620	135,370	48,359	64,770	20,630	24,087	8,643	10,950	33,509	32,615	4,479	2,948
45-49 years.....	123,365	118,995	58,841	61,728	19,276	18,437	8,249	8,357	32,018	27,862	4,981	2,611
50-54 years.....	98,823	120,652	50,826	62,288	11,865	16,234	6,157	7,901	25,423	31,364	4,552	2,865
55-59 years.....	75,963	91,605	38,864	46,314	7,366	9,272	4,684	5,778	21,114	27,639	3,935	2,602
60-64 years.....	65,529	62,260	30,377	25,492	5,115	4,973	4,696	4,361	21,699	24,998	3,642	2,436
65 years and over.....	59,223	67,823	11,896	8,676	3,647	3,803	7,454	6,855	32,710	43,630	3,516	4,859
Not reported.....	68,187	48,455	20,674	12,823	5,120	2,878	4,565	2,215	13,031	7,311	24,797	23,228

¹ Excludes 1,826 respondents who did not report their sex in 1972 and 74,873 who did not report their sex in 1977-78.

² Includes 33,918 female nurses employed in nursing for whom full- or part-time employment was not specified.

³ Includes 3,865 female nurses employed in nursing for whom full- or part-time employment was not specified.

Table 20. Percent distribution of female registered nurses by employment status, according to age and year of inventory: United States, 1972 and 1977-78

Age	Employment status and year of inventory									
	All female registered nurses		Employed full time		Employed part time, regular		Employed part time, irregular		Not employed in nursing	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78
All ages.....	100.0	100.0	47.3	51.7	15.2	14.7	7.5	7.8	30.0	25.8
Under 25 years.....	100.0	100.0	80.7	84.0	7.8	6.3	2.7	4.0	8.7	5.6
25-29 years.....	100.0	100.0	52.7	63.7	17.6	14.6	6.2	7.2	23.5	14.5
30-34 years.....	100.0	100.0	36.1	45.0	20.3	20.0	8.4	9.8	35.2	25.2
35-39 years.....	100.0	100.0	36.9	44.0	19.9	19.5	8.3	9.4	34.9	27.1
40-44 years.....	100.0	100.0	43.5	48.9	18.6	18.2	7.8	8.3	30.1	24.6
45-49 years.....	100.0	100.0	49.7	53.0	16.3	15.8	7.0	7.2	27.0	23.9
50-54 years.....	100.0	100.0	53.9	52.9	12.6	13.8	6.5	6.7	27.0	26.6
55-59 years.....	100.0	100.0	54.0	52.0	10.2	10.4	6.5	6.5	29.3	31.1
60-64 years.....	100.0	100.0	49.1	42.6	8.3	8.3	7.6	7.3	35.0	41.8
65 years and over.....	100.0	100.0	21.4	13.8	6.5	6.0	13.4	10.9	58.7	69.3
Not reported.....	100.0	100.0	47.6	50.8	11.8	11.4	10.5	8.8	30.0	29.0

Table 21. Number of registered nurses, by age, employment status, and year of inventory: United States, 1972 and 1977-78

Age	Employment status and year of inventory											
	All registered nurses ¹		Employed full time		Employed part time, regular		Employed part time, irregular		Not employed in nursing		Not reported	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972 ²	1977-78 ³
All ages.....	1,125,831	1,300,335	504,601	650,536	159,435	179,833	78,438	96,466	316,127	317,577	67,230	55,923
Under 25 years.....	73,353	97,276	57,671	80,048	5,564	5,965	1,935	3,848	6,213	5,389	1,970	2,026
25-29 years.....	164,850	204,180	84,991	128,544	27,894	28,518	9,879	14,180	37,314	28,536	4,772	4,402
30-34 years.....	143,836	187,123	51,359	84,748	28,121	35,709	11,631	17,513	48,744	45,209	3,981	3,944
35-39 years.....	129,013	157,341	46,690	69,104	24,561	29,566	10,328	14,193	43,124	41,224	4,310	3,254
40-44 years.....	117,085	137,715	49,423	66,570	20,699	24,212	8,676	11,020	33,682	32,916	4,605	2,997
45-49 years.....	124,571	120,929	59,694	63,221	19,337	18,510	8,288	8,411	32,165	28,121	5,087	2,666
50-54 years.....	99,836	122,032	51,537	63,327	11,901	16,294	6,178	7,948	25,588	31,568	4,632	2,895
55-59 years.....	76,871	92,689	39,442	47,030	7,399	9,319	4,703	5,807	21,331	27,891	3,996	2,642
60-64 years.....	66,086	63,021	30,690	25,891	5,135	4,996	4,725	4,397	21,860	25,271	3,676	2,466
65 years and over.....	59,764	68,477	12,049	8,807	3,684	6,837	7,503	6,910	32,976	44,032	3,552	4,891
Not reported.....	70,566	49,552	21,055	13,246	5,140	2,907	4,592	2,239	13,130	7,420	26,649	23,740

¹ Excludes 1,826 respondents who did not report their sex in 1972 and 74,873 who did not report their sex in 1977-78.

² Includes 34,931 nurses employed in nursing for whom full- or part-time employment was not specified.

³ Includes 3,948 nurses employed in nursing for whom full- or part-time employment was not specified.

Table 22. Percent distribution of registered nurses by employment status, according to age and year of inventory: United States, 1972 and 1977-78

Age	Employment status and year of inventory									
	All registered nurses		Employed full time		Employed part time, regular		Employed part time, irregular		Not employed in nursing	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78
All ages.....	100.0	100.0	47.7	52.3	15.1	14.5	7.4	7.8	29.9	25.5
Under 25 years.....	100.0	100.0	80.8	84.0	7.8	6.3	2.7	4.0	8.7	5.7
25-29 years.....	100.0	100.0	53.0	64.3	17.4	14.3	6.2	7.1	23.3	14.3
30-34 years.....	100.0	100.0	36.7	46.3	20.1	19.5	8.3	9.6	34.9	24.7
35-39 years.....	100.0	100.0	37.4	44.8	19.7	19.2	8.3	9.2	34.6	26.8
40-44 years.....	100.0	100.0	43.9	49.4	18.4	18.0	7.7	8.2	29.9	24.4
45-49 years.....	100.0	100.0	50.0	53.5	16.2	15.7	6.9	7.1	26.9	23.8
50-54 years.....	100.0	100.0	54.1	53.2	12.5	13.7	6.5	6.7	26.9	26.5
55-59 years.....	100.0	100.0	54.1	52.2	10.2	10.3	6.5	6.4	29.3	31.0
60-64 years.....	100.0	100.0	49.2	42.8	8.2	8.3	7.6	7.3	35.0	41.7
65 years and over.....	100.0	100.0	21.4	13.9	6.6	6.0	13.3	10.9	58.7	69.2
Not reported.....	100.0	100.0	47.9	51.3	11.7	11.3	10.5	8.7	29.9	28.7

Table 23. Number of registered nurses employed in nursing, by area of clinical practice, employment setting, and year of inventory: United States, 1972 and 1977-78

Area of clinical practice	Employment setting and year of inventory									
	All settings		Hospital		Nursing home		School of nursing		Private duty	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78
All areas of practice.....	778,470	958,308	499,594	622,804	53,988	72,692	28,820	32,199	38,923	26,410
Geriatric.....	61,377	76,606	10,583	9,147	43,186	58,578	498	634	2,869	2,716
Gynecologic or obstetric..	59,029	76,057	48,427	59,519	206	303	1,620	3,487	385	364
Medical or surgical.....	293,822	375,361	251,330	332,077	1,090	1,455	12,343	13,397	9,917	7,195
Pediatric or maternal-child health.....	58,161	59,928	35,224	41,559	281	434	3,883	2,983	360	337
Psychiatric or mental health.....	37,860	51,564	30,400	35,823	503	1,747	2,687	3,280	375	345
General practice.....	156,633	142,205	72,891	78,976	3,019	3,733	5,038	3,100	12,236	9,973
Other specified area.....	22,654	108,137	15,321	32,428	100	1,000	578	3,844	573	1,037
Not reported.....	88,934	68,450	35,418	33,275	5,603	5,442	2,173	1,474	12,208	4,443

Area of clinical practice	Employment setting and year of inventory											
	Public health or community health		School nurse		Industrial or occupational		Office nurse		Other specified setting		Not reported	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78
All areas of practice.....	39,096	52,864	29,849	33,530	19,403	20,736	52,390	59,553	4,086	24,784	12,321	12,736
Geriatric.....	2,480	2,345	175	153	131	152	389	423	221	1,756	845	702
Gynecologic or obstetric..	1,547	2,127	204	401	125	122	5,779	7,349	150	1,901	586	484
Medical or surgical.....	2,447	1,563	879	919	1,804	1,053	11,120	12,610	482	3,219	2,410	1,873
Pediatric or maternal-child health.....	6,247	2,348	6,496	4,539	120	102	4,581	6,004	354	1,208	615	414
Psychiatric or mental health.....	1,942	5,456	408	517	177	279	339	484	289	2,752	740	881
General practice.....	18,293	3,586	13,283	5,050	10,603	11,110	18,368	21,504	932	3,880	1,970	1,293
Other specified area.....	901	33,116	837	17,763	612	4,713	2,602	5,054	862	7,462	268	1,720
Not reported.....	5,239	2,323	7,567	4,188	5,831	3,205	9,212	6,125	796	2,606	4,887	5,369

Table 24. Percent distribution of registered nurses employed in nursing by employment setting, according to area of clinical practice and year of inventory:
United States, 1972 and 1977-78

Area of clinical practice	Employment setting and year of inventory																			
	All settings		Hospital		Nursing home		School of nursing		Private duty		Public health or community health		School nurse		Industrial or occupational		Office nurse		Other specified setting	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78
All areas of practice.....	100.0	100.0	65.2	65.9	7.0	7.7	3.8	3.4	5.1	2.8	5.1	5.6	3.9	3.5	2.5	2.2	6.8	6.3	0.5	2.6
Geriatric.....	100.0	100.0	17.5	12.1	71.3	77.2	0.8	0.8	4.7	3.6	4.1	3.1	0.3	0.2	0.2	0.2	0.6	0.6	0.4	2.3
Gynecologic or obstetric.....	100.0	100.0	82.9	78.8	0.4	0.4	2.8	4.6	0.7	0.5	2.6	2.8	0.3	0.5	0.2	0.2	9.9	9.7	0.3	2.5
Medical or surgical.....	100.0	100.0	86.2	88.9	0.4	0.4	4.2	3.6	3.4	1.9	0.8	0.4	0.3	0.2	0.6	0.3	3.8	3.4	0.2	0.9
Pediatric or maternal-child health.....	100.0	100.0	61.2	69.8	0.5	0.7	6.7	5.0	0.6	0.6	10.9	3.9	11.3	7.6	0.2	0.2	8.0	10.1	0.6	2.0
Psychiatric or mental health.....	100.0	100.0	81.9	70.7	1.4	3.4	7.2	6.5	1.0	0.7	5.2	10.8	1.1	1.0	0.5	0.6	0.9	1.0	0.8	5.4
General practice.....	100.0	100.0	47.1	56.0	2.0	2.6	3.2	2.2	7.9	7.1	11.8	2.5	8.6	3.6	6.9	7.9	11.9	15.3	0.6	2.8
Other specified area.....	100.0	100.0	68.4	30.5	0.4	0.9	2.6	3.6	2.6	1.0	4.0	31.1	3.7	16.7	2.7	4.4	11.6	4.7	3.9	7.0
Not reported.....	100.0	100.0	42.1	52.7	6.7	8.6	2.6	2.3	14.5	7.0	6.2	3.7	9.0	6.6	6.9	5.1	11.0	9.7	0.9	4.1

Table 25. Number of registered nurses employed in nursing, by type of position, employment setting, and year of inventory: United States, 1972 and 1977-78

Type of position	Employment setting and year of inventory											
	All settings		Hospital		Nursing home		School of nursing		Private duty			
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78		
All nursing positions	778,470	958,308	499,594	622,804	53,988	72,692	28,820	32,199	38,923	26,410		
Administrator or assistant.....	29,752	34,881	13,953	14,796	6,816	8,052	2,800	2,755	...	...
Consultant.....	6,681	7,609	2,079	1,236	380	1,273	243	125	...	...
Supervisor or assistant.....	80,648	91,862	54,445	56,734	13,362	17,456	640	289	...	...
Instructor	32,657	42,775	7,150	10,266	637	1,612	22,859	26,272	...	...
Head nurse or assistant..	119,905	133,426	89,952	96,019	13,428	17,273	350	179	...	...
Staff or general duty	432,976	543,782	309,794	408,443	17,853	24,233	1,019	807	...	...
Other ¹	54,841	87,408	11,290	29,471	252	1,638	214	1,351	38,923	26,410		
Not reported.....	21,010	16,565	10,931	5,839	1,260	1,155	695	421	...	...

Type of position	Employment setting and year of inventory											
	Public health or community health		School nurse		Industrial or occupational		Office nurse		Other specified setting		Not reported	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78
All nursing positions	39,096	52,864	29,849	33,530	19,403	20,736	52,390	59,553	4,086	24,784	12,321	12,736
Administrator or assistant.....	2,667	3,998	927	1,099	595	756	1,057	1,213	393	1,855	544	357
Consultant.....	2,022	1,778	842	807	309	298	137	191	295	1,708	374	193
Supervisor or assistant.....	5,494	7,470	1,576	1,816	1,881	2,375	1,980	2,839	349	2,194	921	689
Instructor	826	878	...	...	97	324	158	232	304	2,797	626	394
Head nurse or assistant..	2,281	3,389	2,161	2,507	3,899	3,865	6,422	7,653	303	1,838	1,109	703
Staff or general duty	22,431	27,964	23,829	23,840	12,345	11,594	41,383	38,764	902	5,469	3,420	2,668
Other ¹	537	6,276	514	3,461	277	1,524	1,253	8,661	1,219	7,659	362	957
Not reported.....	2,838	1,111	...	...	...	...	...	...	321	1,264	4,965	6,775

¹ Includes nurse practitioners and clinical specialists for 1977-78 and additional categories for both 1972 and 1977-78. Clinical specialists in 1972 were coded as consultants.

Table 26. Percent distribution of registered nurses employed in nursing by employment setting, according to type of position and year of inventory: United States, 1972 and 1977-78

Type of position	Employment setting and year of inventory																			
	All settings		Hospital		Nursing home		School of nursing		Private duty		Public health or community health		School nurse		Industrial or occupational		Office nurse		Other specified setting	
	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78	1972	1977-78
All nursing positions	100.0	100.0	65.2	65.9	7.0	7.7	3.8	3.4	5.1	2.8	5.1	5.6	3.9	3.5	2.5	2.2	6.8	6.3	0.5	2.6
Administrator or assistant.....	100.0	100.0	47.8	42.9	23.3	23.3	9.6	8.0	...	...	9.1	11.6	3.2	3.2	2.0	2.2	3.6	3.5	1.3	5.4
Consultant.....	100.0	100.0	33.0	16.7	6.0	17.2	3.9	1.7	...	...	32.1	24.0	13.4	10.9	4.9	4.0	2.2	2.6	4.7	23.0
Supervisor or assistant.....	100.0	100.0	68.3	62.2	16.8	19.1	0.8	0.3	...	...	6.9	8.2	2.0	2.0	2.4	2.6	2.5	3.1	0.4	2.4
Instructor	100.0	100.0	22.3	24.2	2.0	3.8	71.4	62.0	...	...	2.6	2.1	...	...	0.3	0.8	0.5	0.5	0.9	6.6
Head nurse or assistant.....	100.0	100.0	75.7	72.3	11.3	13.0	0.3	0.1	...	...	1.9	2.6	1.8	1.9	3.3	2.9	5.4	5.8	0.3	1.4
Staff or general duty.....	100.0	100.0	72.1	75.5	4.2	4.5	0.2	0.1	...	...	5.2	5.2	5.5	4.4	2.9	2.1	9.6	7.2	0.2	1.0
Other ¹	100.0	100.0	20.7	34.1	0.5	1.9	0.4	1.6	71.4	30.5	1.0	7.2	0.9	4.0	0.5	1.8	2.3	10.0	2.2	8.9

¹ Includes nurse practitioners and clinical specialists for 1977-78 and additional categories for both 1972 and 1977-78. Clinical specialists in 1972 were coded as consultants.

Appendixes

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Appendix I. Definitions of certain terms used in this report

Geographic area.—The following are based on U.S. Bureau of the Census classifications:

<u>Region</u>	<u>States included</u>
East North Central	Illinois, Indiana, Michigan, Ohio, Wisconsin
East South Central	Alabama, Kentucky, Mississippi, Tennessee
Middle Atlantic	New Jersey, New York, Pennsylvania
Mountain.....	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
New England.....	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
Pacific	Alaska, California, Hawaii, Oregon, Washington
South Atlantic.....	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
West North Central.....	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
West South Central	Arkansas, Louisiana, Oklahoma, Texas

Age.—Age of nurse was obtained by subtracting the nurse's year of birth from 1977.

Part-time work and racial and ethnic categories.—These variables are not defined and are self-reported.

Appendix II. Data collection and processing

Cooperative Health Statistics System

In response to a need for demographic and practice data on health professions personnel, the National Center for Health Statistics (NCHS) established the manpower component of the Cooperative Health Statistics System (CHSS), which was designed to decentralize the collection of data from the Federal to the State level. The data were transferred from each State in the system to NCHS. The CHSS was never fully developed to provide health manpower data in all States, and eventually this component of the system was terminated. While it was in operation, 19 States provided data on registered nurses to the American Nurses Association (ANA) for use in the 1977-78 Inventory of Registered Nurses (table I of this appendix). Data collected by the CHSS States were sent on tapes to the ANA and NCHS. In those States not part of the CHSS, the ANA conducted a survey of all licensed nurses in conjunction with each State's licensing board.

Minimum data set

As part of the CHSS, NCHS developed a uniform minimum data set (MDS) in consultation with other producers and users of health manpower data. The MDS consisted of a core of basic data on 13 health occupations^d plus occupation-specific data elements. For each occupation there was to have been developed an occupation-specific set of data elements which, combined with the core set, became the MDS. However, at the time of this publication data elements germane to only six occupations were developed. These were dentistry, dental hygiene, nursing (registered and practical), optometry, and pharmacy. Aside

^dThe health occupations were chiropractic, dental hygiene, dentistry, medicine (allopathic and osteopathic), nursing (registered and practical), nursing home administration, optometry, pharmacy, physical therapy, podiatry, and veterinary medicine.

Table I. Cooperative Health Statistics System (CHSS) States supplying data to the American Nurses Association for 1977-78 Registered Nurse Inventory and year of data

<i>CHSS States</i>	<i>Year of data</i>
Arkansas	1978
Colorado.....	1978
Florida.....	1977
Maine.....	1976
Massachusetts.....	1976
Michigan.....	1977
Minnesota.....	1977
Missouri.....	1977
Nebraska.....	1976
North Carolina.....	1978
Oregon.....	1977
Pennsylvania.....	1977
Rhode Island.....	1977
South Carolina.....	1978
Tennessee.....	1976
Utah.....	1976
Virginia.....	1976
West Virginia.....	1976
Wisconsin.....	1976

from identifying numbers, the core data were as follows:

- Current name.
- Mailing address.
- State of residence.
- Principal place of work.
- Birth date.
- Sex.
- Race.
- Hispanic origin.
- Year of graduation for initial licensure.
- State in which school or program was located.
- Weeks worked in past 12 months.
- Hours worked.

The occupation-specific data items were the following:

- County of residence.
- Marital status.
- Basic nursing educational preparation.
- Highest degree held.
- Number of States in which licensed.
- Employment status.
- Activity status.
- Principal field of employment.
- Type of nursing position.
- Major clinical, teaching, or practice area in nursing.
- List of States in which currently licensed.

For the 1977–78 Survey of Licensed Nurses, this MDS was the basis for the development of the data collection instrument. Data items on the individual questionnaires developed by each State participating in the CHSS were to be identical. However, because legislative and administrative requirements varied among the States, the order of the questions and the wording or the format of the questionnaires departed from the NCHS model. In a few cases, State legislation prevented the collection of certain data items considered sensitive, such as race. In addition, States were permitted to exclude from the questionnaire any items for which data were available from their State licensing board records. They were also allowed to include on their questionnaires other questions that were not part of the MDS but that States needed for their own information. The use of the MDS as the basis for all questionnaires resulted in data that could be merged to produce a national file of registered nurses. Appendix III documents the items collected during the 1977–78 Inventory of Registered Nurses.

Removing duplicate records

The 51 State tapes (including that from the District of Columbia) were obtained by the ANA either through the CHSS or from the ANA surveys of the individual States. When the individual State tapes were merged into a national data file, the file contained the total number of nursing licenses held in the country. Although this number is interesting and useful, from a national perspective it is far more important to focus on the number of individual health practitioners as the unit of analysis. Shortage area designation, adequacy of supply, and minority assimilation, to name some functions, depend on individuals and their work locations, and multiple counting of the same individual would not be acceptable in evaluating these factors. Thus it was necessary to remove duplicate records of nurses licensed in more than one State

and derive a national data file in which each nurse was counted only once.

The total number of licenses held by nurses before unduplication was 1,601,532. After 226,324 licenses were eliminated from the file by the deletion process, 1,375,208 individually licensed nurses remained.

<i>Reason for removal of licenses on national data file</i>	<i>Number</i>
Total number of licenses.....	1,601,532
Total removed from file.....	226,324
Geographically located outside United States.....	10,916
No unique identifiers (social security number, name, address).....	765
Matching social security number.....	129,000
Matching process.....	84,743
Other.....	900
Total number of registered nurses.....	1,375,208

Before passage of the Privacy Act of 1974 (Public Law 93–579), the primary tool for removing duplicate records of individuals licensed in more than one State was the social security number. But as the public became concerned about the potential invasion of privacy made possible by the development of high-speed computers and the linking of various data systems, the Privacy Act was passed to ensure the confidentiality of records. The Act, among other things, established stringent conditions on the use of the social security number. Section 7(b) states the following:

Any Federal, State, or local government agency which requests an individual to disclose his social security number shall inform that individual whether that disclosure is mandatory or voluntary, by what statutory or other authority such number is solicited, and what uses will be made of it.

The effect of this provision was twofold. First, all manpower questionnaires had to comply with Section 7(b) above. Second, many State CHSS contractors were prohibited from asking social security number by executive decree or through State legislative action. Because the effect of the Privacy Act was to make it difficult to collect or use the social security number as a means for purging the file of duplicate records, an alternative method to remove duplicate records was devised.

All records that did not contain social security numbers and the unduplicated file that contained social security numbers were compared, using alphabetized name and invariant statistical information, such as year and month of birth, location of basic nursing education, and year of graduation.

Appendix III. Data collected for the 1977-78 Inventory of Registered Nurses

Identifying number

- 1 Social security number
- 2 License number
- 3 Other

Name: Last, first, middle initial

Mailing address

Location of basic nursing program

State

Foreign country

Year of graduation from basic nursing program

Basic nursing educational preparation

- 1 Diploma
- 2 Associate degree
- 3 Baccalaureate or higher
- 4 Other

Highest degree held

- 1 Diploma
- 2 Associate degree
- 3 Baccalaureate in nursing
- 4 Baccalaureate in other field
- 5 Master's in nursing
- 6 Master's in other field
- 7 Doctorate

Birthdate: Month, day, year

Sex

- 1 Male
- 2 Female

Marital status

- 1 Never married
- 2 Married
- 3 Separated
- 4 Widowed
- 5 Divorced

Race

- 1 Caucasian or white
- 2 Negro or black
- 3 American Indian or native American
- 4 Oriental or Asian
- 5 Other

Hispanic origin or descent

- 1 Mexican or Chicano
- 2 Puerto Rican or Boricua
- 3 Cuban
- 4 Central or South American
- 5 Other Hispanic

Number of States, territories, and Commonwealths in which currently licensed

List of States, territories, and Commonwealths in which currently licensed

Average hours per week worked in past 12 months

Number of weeks worked in past 12 months

Employment status

- 1 Full time in nursing
- 2 Part time in nursing
- 3 Full time in field other than nursing
- 4 Part time in field other than nursing
- 5 Unemployed
- 6 Employed in nursing but full- or part-time not indicated
- 7 Employed in field other than nursing but full- or part-time not indicated
- 8 Retired

If unemployed, are you actively seeking employment as a registered nurse?

- 1 Yes
- 2 No

Location of residence

State, territory, Commonwealth

County

City

Location of Employment

State, territory, Commonwealth

County

City

ZIP Code

Principal field or setting of employment

- 01 Hospital
- 02 Nursing home

- 03 School of nursing
- 04 Private duty
- 05 School nurse
- 06 Occupational health nurse
- 07 Office nurse
- 08 Community health
- 09 Self-employed other than private duty
- 10 Other

Type of nursing position

- 1 Administrator or assistant administrator
- 2 Consultant
- 3 Supervisor or assistant
- 4 Instructor
- 5 Head nurse or assistant

- 6 Staff or general duty
- 7 Nurse associate or practitioner
- 8 Clinical specialist (master's degree)
- 9 Other

Major clinical, teaching, or practice area in nursing

- 1 Generalized community health
- 2 General practice
- 3 Geriatric
- 4 Obstetric or gynecologic
- 5 Medical or surgical
- 6 Pediatric
- 7 Psychiatric or mental health
- 8 Other

Appendix IV. Limitation of data

This portion of the report is taken from material found in D.C. Schulte: *Inventory of Registered Nurses, 1977-78*. Kansas City, Mo. American Nurses Association, 1981. This material is being reprinted with the permission of the American Nurses Association and the authors appreciate and thank the ANA for permission to use the material.

Race or ethnic background

Many States did not collect data on race or ethnic background. Some States were prohibited from including such questions by either executive decree or by legislative action. The race questions of many other States were slightly different from that of the majority in that the category for Hispanic origin or descent was not included, or a separate question on Hispanic origin was not included in the questionnaire for these States. For these States, nurses of Hispanic origin could have been coded as having missing data or could have been scattered throughout the other categories, depending upon their responses to the incomplete race question.

To remove the bias of such data against Hispanic origin, all States that supplied race data using an incomplete race question had all of these data converted to missing values. Although this removes the bias against Hispanic origin, it creates a bias against those States that supplied incomplete race data. The States supplying complete race data may not be representative of those States that prohibited race questions or supplied incomplete race data. The national distributions of nurses in the race categories are limited to those States supplying complete data and may therefore be biased. The following States supplied no race data: Maryland, Minnesota, Nebraska, Nevada, North Carolina, Ohio, Oklahoma, and Utah.

For the following States, the race data collected were not complete: Arkansas, Georgia, Michigan, Missouri, New Hampshire, Pennsylvania, Rhode Island, South Carolina, Virginia, and West Virginia. Finally, for approximately 175 Alaska nurses and 3,000 New Mexico nurses, no race data were collected.

Basic and highest educational background

The question on highest educational preparation has been modified slightly. The present inventory has diploma and associate degree as new categories for this item. In previous inventories, if the highest degree was less than a baccalaureate, it had to be inferred from the basic educational preparation. The small group of nurses with a diploma as their basic and an associate degree as their highest was categorized as having a diploma as the highest degree in the previous inventory.

Nurses who failed to supply their highest degree were given one by having it recoded to equal their basic. Nurses who failed to supply their basic degree were given one equal to their highest if their highest degree was one of the three basic nursing preparation degrees (diploma, associate degree, or baccalaureate in nursing). All nurses indicating "other" for their basic degree had this response recoded. If the nurse reported the highest degree as being one of the basic nursing preparation degrees and listed "other" for basic, that basic degree was recoded by computer from "other" to equal the nurse's highest degree. If the nurse reported the highest degree as being something other than one of the basic nursing preparations, the basic degree if "other" was recoded to diploma.

Type of position

It is uncertain how the nurses responded to the clinical specialist category because of the master's degree caveat attached to the category. The category was listed as "clinical specialist (master's degree)" for all but the following States: Delaware, Maryland, and North Carolina (1978-1979 renewal period only). These three States had the category "clinical specialist." A large percent of those responding as clinical specialists did not indicate that they had a master's degree in nursing for their highest degree—or even a baccalaureate in nursing. It is uncertain how many

nurses who were functioning as specialists failed to indicate such because of the master's degree restriction.

Population coverage

Much correspondence was exchanged between the ANA and the respective State boards and others to ensure as complete a coverage of the nurse population as possible for each State (at least of renewals). The surveys were sent out primarily at license renewal time. The renewal forms themselves served as inventory questionnaires for most States. Questionnaires sent with the renewal notice were used for three other States. For the remaining four States for which ANA was responsible for data collection, a census file was received and served as a file for mailing questionnaires. Mailing followups by ANA to nonrespondents were conducted to ensure high response rates for several States. Matching of all survey respondents to complete census files was carried out to obtain responses from nonrespondents in 12 of the 32 States (including the District of Columbia) for which ANA had total responsibility for data collection. The 19 State contractors of the Cooperative Health Statistics System handled the data in the same general manner.

Nonresponse

Table II is a list of the percents of missing data for some of the major variables in the inventory. These

percents are quite low; but given the large number of survey respondents, the numbers affected are large. Wherever counts were utilized, adjustments for non-response were addressed.

It was not possible to calculate an overall nonresponse figure because the CHSS States very often included information on their tapes that was available from licensing board records. Thus identifying nonrespondents was not always possible. In a personal communication, Duane Schulte⁴ suggested that the percent nonresponse to the question on employment status (6.8 percent) would be representative of nonresponse to the questionnaire because this item would not likely be available in the records of licensing boards.

TABLE II. Percent of missing data for some major inventory variables, 1977-78

<i>Variable</i>	<i>Percent nonresponse</i>
All Nurses	
Sex.....	5.4
Age.....	6.1
Employment status.....	6.8
Basic education.....	6.0
Location of basic nursing education.....	14.9
Highest education.....	5.8
Race.....	40.7
Nurses employed in nursing	
Field of employment.....	1.3
Type of position.....	1.7
Major clinical area.....	7.1

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