

# VITAL & HEALTH STATISTICS

## **Characteristics of Pharmacists United States**

---

Demographic and employment characteristics of licensed pharmacists in 1978-79 are described. Information is presented on their geographic distribution and supply, their practice settings, the number of hours and weeks worked, and the attraction of women and minorities into the profession. Information is also presented on those licensed pharmacists who are inactive in their profession.

---

**Data From the National Health Survey  
Series 14, No. 28**

---

DHHS Publication No. (PHS) 84-1823

---

U.S. Department of Health and Human  
Services  
Public Health Service  
National Center for Health Statistics  
Hyattsville, Md.  
January 1984

#### Copyright Information

All material appearing in this report is in the public domain and may be reproduced or copied without permission; citation as to source, however, is appreciated.

---

#### Suggested Citation

National Center for Health Statistics, P. H. Davis and G. G. Kapantais: Characteristics of pharmacists, United States. *Vital and Health Statistics*. Series 14, No. 28. DHHS Pub. No. (PHS) 84-1823. Public Health Service. Washington. U.S. Government Printing Office, Jan. 1984.

---

#### Library of Congress Cataloging in Publication Data

Davis, P. Hannah.

Characteristics of pharmacists, United States.

(Vital and health statistics. Series 14, Data from the national health survey; no. 28) (DHHS publication; no. (PHS) 84-1823)

Supt. of Docs. no.: HE 20.6209: 14/28

1. Pharmacists—Employment—United States. 2. Pharmacists—Supply and demand—United States. 3. Pharmacists—United States—Statistics. 4. United States—Statistics, Medical. I. Kapantais, Gloria. II. Title. III. Series. IV. Series: DHHS publication; no. (PHS) 84-1823.

RS67.U6D38 1983 331,7'616151'0973 83-600193  
ISBN 0-8406-0279-0

---

## **National Center for Health Statistics**

Manning Feinleib, M.D., Dr.P.H., *Director*

Robert A. Israel, *Deputy Director*

Jacob J. Feldman, Ph.D., *Associate Director for Analysis and Epidemiology*

Garrie J. Losee, *Associate Director for Data Processing and Services*

Alvan O. Zarate, Ph.D., *Assistant Director for International Statistics*

E. Earl Bryant, *Associate Director for Interview and Examination Statistics*

Robert L. Quave, *Acting Associate Director for Management*

Gail F. Fisher, Ph.D., *Acting Associate Director for Program Planning, Evaluation, and Coordination*

Monroe G. Sirken, Ph.D., *Associate Director for Research and Methodology*

Peter L. Hurley, *Associate Director for Vital and Health Care Statistics*

Alice Haywood, *Information Officer*

## **Vital and Health Care Statistics Program**

Peter L. Hurley, *Associate Director*

G. Gloria Kapantais, *Assistant to the Director for Data Policy, Planning, and Analysis*

---

The 1978-79 Survey of Licensed Pharmacists was financed in part by the Bureau of Health Professions, Health Resources Administration.

---

# Contents

|   |    |
|---|----|
| Introduction . . . . .  | 1  |
| Supply of pharmacists . . . . .   | 2  |
| Attraction of women and minorities into the profession . . . . .                            | 3  |
| Employment setting . . . . .  | 4  |
| Hours and weeks worked and services rendered as a partial measure of productivity . . . . . | 5  |
| The inactive pharmacist . . . . .   | 10 |
| References . . . . .  | 13 |
| List of detailed tables . . . . .   | 14 |

## Appendixes

|   |    |
|---|----|
| I. Technical notes on methods . . . . .                         | 33 |
| II. Survey questionnaire . . . . .                              | 38 |
| III. Definitions of certain terms used in this report . . . . . | 42 |

## Text figure

|   |   |
|---|---|
| Percent distribution of active pharmacists by age: United States, 1978-79 . . . . . | 2 |
|---|---|

## List of text tables

|  |   |
|--|---|
| A. Percents of active pharmacists under 30 years of age and 60 years of age and over and replacement ratios, by geographic regions: United States, 1978-79 . . . . .                                   | 2 |
| B. Number and percent distribution of active pharmacists by principal forms of employment, according to sex: United States, 1978-79 . . . . .  | 3 |
| C. Mean hours worked per week by active pharmacists and standard deviations, by sex and age: United States, 1978-79 . . . . .  | 3 |
| D. Number and percent distribution of active pharmacists by primary employment settings, according to sex: United States, 1978-79 . . . . .  | 4 |
| E. Number and percent distribution of active pharmacists by total hours worked per week, according to age: United States, 1978-79 . . . . .  | 6 |
| F. Percent distribution of active pharmacists by total hours worked per week, according to sex and age: United States, 1978-79 . . . . .   | 6 |
| G. Number and percent distribution of active pharmacists by total hours worked per week, according to principal forms of employment: United States, 1978-79 . . . . .                                  | 7 |
| H. Mean hours worked per week by active pharmacists, standard deviations, and percent distribution by employment settings, according to whether primary or secondary: United States, 1978-79 . . . . . | 7 |
| J. Mean hours worked per week by active pharmacists, and standard deviations, by race and primary activities performed, and number by race: United States, 1978-79 . . . . .                           | 8 |
| K. Number of active pharmacists by race, and percent distribution by primary activity, according to race: United States, 1978-79 . . . . .   | 8 |
| L. Number of active pharmacists by sex, and percent distribution by primary activity, according to sex: United States, 1978-79 . . . . .   | 9 |
| M. Number of active pharmacists by primary activity and percent distribution by age, according to primary activity: United States, 1978-79 . . . . .   | 9 |

# Contents

|  |    |
|--|----|
| N. Number and percent distribution of active pharmacists by selected weeks worked in year prior to interview, according to principal forms of employment: United States, 1978-79 . . . . . | 10 |
| O. Number and percent distribution of inactive pharmacists by age, according to sex: United States, 1978-79 . . . . .  | 11 |
| P. Active pharmacists, U.S. resident population, and active pharmacists per 100,000 people, by geographic region and division: United States, 1978-79 . . . . .                            | 11 |
| Q. Number and percent distribution of active pharmacists by age, according to geographic region: United States, 1978-79 . . . . .  | 12 |

---

## Symbols

|       |   |
|-------|---|
| - - - | 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   |

---

# Characteristics of Pharmacists

By P. Hannah Davis, formerly with the Division of Health Care Statistics, and G. Gloria Kapantais, Office of Vital and Health Care Statistics

## Introduction

Between May 1977 and June 1979, the National Center for Health Statistics conducted an inventory of all licensed pharmacists in the United States. The data were collected through two separate but parallel mechanisms.

The first was the Cooperative Health Statistics System.<sup>1</sup> Those States with a Cooperative Health Statistics System manpower component contract collected data on pharmacists and submitted to the National Center for Health Statistics a specified set of data elements, using standardized processing specifications. (For information on the Cooperative Health Statistics System and the data set, see appendix I.) The National Center for Health Statistics had an individual contract with each State in the Cooperative Health Statistics System, usually with the State health department. All contractors within the System developed their own questionnaires for distribution in their States. The questionnaires were required to include all of the items specified by the Center and usually had the wording and format suggested by the Center.

The second mechanism through which the data were collected used a single contractor, the American Association of Colleges of Pharmacy, to collect the same items in those States not collecting data through the Cooperative Health Statistics System. Identical questionnaires provided by the Center were mailed out in all of these States. A copy of this questionnaire appears in appendix II, with further definition of terms provided in appendix III. The questionnaire, a prototype of the individual questionnaires developed in the 23 Cooperative Health Statistics System States, was used to collect data in 27 States and the District of Columbia by the American Association of Colleges of Pharmacy. Similar data collection methodologies were used by both the Cooperative Health Statistics System State contractors and the American Association of Colleges of Pharmacy to ensure uniformity of data and to permit the statistics from both mechanisms to be merged into a single national data file.

To ensure accurate data a number of procedures for

editing and processing the data were performed. In addition, duplicate records of pharmacists holding licenses in more than one State were removed. This was necessary because pharmacists were surveyed and counted in each State in which they were licensed. The procedures for processing and editing the data and for removing duplicate records are discussed in appendix I.

States have license renewal dates at varying times of the year. In addition, some States have biennial license renewal cycles. These caused up to a 2-year delay in beginning the questionnaire mailout in some States. The questionnaire mailout spanned 2 years in order to coordinate each State's mailout with its license renewal period because it was thought that pharmacists would be more likely to complete and return questionnaires enclosed in the same envelope with license renewal forms.

Because of contractual obligations with the Center, some Cooperative Health Statistics System States submitted pharmacist data tapes for 2 consecutive years, each tape representing an annual data collection in their States. In these cases the later data tape was chosen for inclusion in the 1978-79 Survey of Licensed Pharmacists. The data collection period represented by this later tape was a date prior to June 1979, except for Oregon. Later tapes were selected not only because they provided more recent, up-to-date information, but also because they were usually of a higher quality because of the experience gained by the State contractor in data collection and in assembling at least one earlier tape for the Center.

It should be noted that although this report and the Survey of Licensed Pharmacists are labeled 1978-79, not all States collected data for the national file during these 2 years. The large majority (80 percent of the States) collected the data in 1978-79, while remaining data were collected during 1977 or 1980. The appendix table shows the particular year of each State's survey data.

# Supply of pharmacists

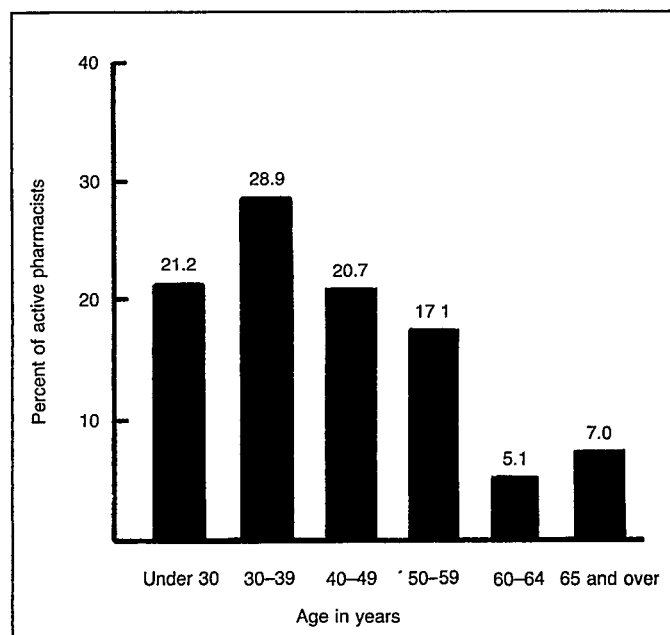
In 1978-79 there were 160,664 licensed pharmacists in the United States. The activity status of 27,417 of them was unknown; for those of known status 112,335 or 84 percent were known to be active, and 20,912 or 16 percent were known to be inactive (table 1).

As seen in table 2, the percent of active pharmacists out of the total number of licensed pharmacists drops as age increases. Ninety-five percent of pharmacists under 30 years of age were active; whereas only 79 percent of pharmacists 60-64 years of age were active. The largest decline occurred among female pharmacists, although at every age a smaller percent of licensed female pharmacists than of male pharmacists were active. Reasons for inactivity for both sexes are discussed later in this report.

Pharmacists between 30 and 59 years of age are often in their prime years of professional practice. Within these ages, 9 out of 10 licensed male pharmacists were active in the profession, compared with 8 out of 10 female pharmacists. Their activity rate was about 11 percent lower than that of males. A 1973-74 study of pharmacists showed that at that time approximately the same proportion of male pharmacists were active in their profession as in 1978-79, but only 6 out of 10 female pharmacists were active in 1973-74.<sup>2</sup>

The 1978-79 data show that 21 percent of active pharmacists were under 30 years of age, while 12 percent were 60 years and over (text figure). There seem to have been enough young pharmacists going into the profession to replace the older pharmacists who would be most likely to leave. In 1978-79, the largest group of pharmacists were 30-39 years of age (29 percent). Fifty percent of the active pharmacists responding in the survey were under 40 years of age.

Table A shows replacement ratios—the percent of pharmacists under 30 years of age divided by the percent 60 years of age and over. This ratio indicates whether there is a sufficient supply of pharmacists entering the profession (as measured by those under 30 years of age) to replace those most likely to be leaving (as measured by those 60 years and over). A value of 1.0 indicates that there are equal proportions of pharmacists under 30 years of age and 60 years and over. A value of less than 1.0 means that there is only that proportion of young pharmacists for every pharmacist 60 years of age and over. Conversely, a value greater than 1.0 indicates that there are proportionately more young pharmacists to replace those most likely to be leaving. A ratio greater than 1.0 indicates growth in the profession. In 1978-79, the Northeast had 1.12 pharmacists under 30 years of age for every pharmacist 60 years of age and over.



Text figure. Percent distribution of active pharmacists by age: United States, 1978-79

Thus, for every 8 pharmacists who were most likely to leave the profession within 5 years, 9 new pharmacists had recently entered the profession. The South had the largest ratio of young to old pharmacists—2.56 pharmacists under 30 years of age for every pharmacist 60 years and over. For each of the four regions, there was more than one pharmacist under 30 years of age for every pharmacist 60 years of age and over.

The age composition of active pharmacists in each State is presented in table 3.

Table A. Percents of active pharmacists under 30 years of age and 60 years of age and over and replacement ratios, by geographic regions: United States, 1978-79

| Geographic region | Active pharmacists    |                          | Replacement ratio <sup>1</sup> |
|-------------------|-----------------------|--------------------------|--------------------------------|
|                   | Under 30 years of age | 60 years of age and over |                                |
|                   | Percent               |                          |                                |
| Northeast . . . . | 18.3                  | 16.3                     | 1.12                           |
| North Central . . | 23.6                  | 12.8                     | 1.84                           |
| South . . . . .   | 23.0                  | 9.0                      | 2.56                           |
| West . . . . .    | 17.3                  | 11.5                     | 1.50                           |

<sup>1</sup>The percent of pharmacists under 30 years of age divided by the percent 60 years of age and over.

## Attraction of women and minorities into the profession

In recent years, the Federal government has been interested in assimilating women and minorities into various health professions, including pharmacy. The Comprehensive Health Manpower Training Act of 1971 (PL 92-157) is one vehicle the government has used to encourage the entry of women and minorities into the health field. Section 799A of the Act prohibited health profession schools, including schools of pharmacy, from discriminating against applicants for admission on the basis of sex. Section 772 of the Act authorizes special project grants to schools of pharmacy that increase admissions and enrollment of qualified minority or low income students. The impact of the Act is primarily seen in the 1978-79 statistics, having affected students in fiscal years 1972-74. Although the legislation is only one of many factors contributing to the entry of women and minorities into the pharmacy profession, it nevertheless played a role in their increased representation.

In 1976 two other Acts were passed related to increasing female and minority participation in health professions, including pharmacy. They are the Health Professions Assistance Act (PL 94-484) and the Indian Health Care Improvement Act (PL 94-437). The impact of these Acts is not discussed here because the legislation occurred too recently to affect the data collected in 1978-79.

### Women

Women have made moderate headway in moving into the pharmacy profession in the last 5 years. In 1978-79 there were 18,115 female pharmacists who were known to be active, accounting for 16 percent of the supply of active pharmacists of known sex (table 4).

In 1979 adult women (21 years of age and over) accounted for 53 percent of the U.S. adult resident population, and the participation rate for women 16 years of age and over in the civilian labor force was 52 percent.<sup>3</sup> When the proportion of women pharmacists are compared with their proportional representation in these areas of society, they continue to remain underrepresented in the profession despite large gains in recent years. Nevertheless, female representation is higher in pharmacy than in many other health professions. For example, in medicine women are 11 percent of the non-Federal physicians.<sup>4</sup> Only 4 percent of the active podiatrists<sup>5</sup> and 3 percent of the active optometrists are female.<sup>6</sup> Thus, although the proportion of women pharmacists is below the number of females in the general population and labor force, the profession has a higher female representation than many other health fields.

There is a large difference by sex in the principal form of employment of pharmacists (table B). The percent of female staff pharmacists is twice as large as the percent of males (69 versus 34 percent, respectively). Nearly 95 percent of women pharmacists are salaried (either as managers, assistant managers, or staff pharmacists); only two-thirds of the men are. ("Other" is excluded from the calculation since it is not known whether these pharmacists are salaried or self-employed.)

**Table B. Number and percent distribution of active pharmacists by principal forms of employment, according to sex: United States, 1978-79**

| Principal form of employment                             | Male   |                                   | Female |                                   |
|--|--------|-----------------------------------|--------|-----------------------------------|
|  | Number | Percent distribution <sup>1</sup> | Number | Percent distribution <sup>1</sup> |
| All principal forms of employment <sup>2</sup> . . . . . | 94,158 | 100.0                             | 18,115 | 100.0                             |
| Sole owner . . . . .                                     | 16,069 | 18.4                              | 421    | 2.5                               |
| Partner . . . . .  | 8,984  | 10.3                              | 474    | 2.8                               |
| Manager <sup>3</sup> . . . . .                           | 27,277 | 31.3                              | 3,531  | 21.2                              |
| Staff pharmacist . . . . .                               | 29,711 | 34.1                              | 11,440 | 68.8                              |
| Other <sup>4</sup> . . . . .                             | 5,191  | 6.0                               | 771    | 4.6                               |
| Unknown . . . . .  | 6,926  | ...                               | 1,478  | ...                               |

<sup>1</sup>Percents may not add to 100.0 because of rounding.

<sup>2</sup>Excludes 62 pharmacists of unknown sex.

<sup>3</sup>Includes assistant managers

<sup>4</sup>Includes volunteers.

There is also a difference by sex in the average number of hours worked by pharmacists. The average number of hours worked per week by female pharmacists is lower than that of males at every age (table C). The trend for males is one of slightly increasing hours per week from 44 to 48 hours until 50 years of age, after which the number of hours declines slightly and then rapidly descends at 65 years of age to 29 hours. For females, the lowest average number of hours worked (except for the 65 years and over age group) occurs between 30 and 49 years of age, which are the years in which mean hours worked increase for men. It is interesting to note that the standard deviations of mean hours increase consistently by age for males, indicating more variability in the hours worked as the age of the respondents increase. Thus, for the male pharmacists 65 years of age and over the relatively large standard deviation indicates that many may work a considerable number of hours more than or less than the average of 29 hours per week. For the younger pharmacists under 30 years of age the low standard deviation indicates much less variability and suggests that many are working close to the average of 44 hours per week. The coefficients of variation (the standard deviation divided by the mean) are higher for women than for men at every age (except 65 and over). This indicates greater proportional variability in their work schedules than in men's.

**Table C. Mean hours worked per week by active pharmacists and standard deviations, by sex and age: United States, 1978-79**

| Age                         | Male       |                    | Female     |                    |
|-----------------------------|------------|--------------------|------------|--------------------|
|                             | Mean hours | Standard deviation | Mean hours | Standard deviation |
| All ages . . . . .          | 44.9       | 12.2               | 35.8       | 12.6               |
| Under 30 years . . . . .    | 44.3       | 8.4                | 39.3       | 9.5                |
| 30-39 years . . . . .       | 46.4       | 10.1               | 32.6       | 13.7               |
| 40-49 years . . . . .       | 47.9       | 10.8               | 33.6       | 14.1               |
| 50-59 years . . . . .       | 46.8       | 11.3               | 34.9       | 13.4               |
| 60-64 years . . . . .       | 42.9       | 13.2               | 35.7       | 13.9               |
| 65 years and over . . . . . | 28.9       | 17.7               | 27.8       | 16.6               |



Summarizing, it appears that women pharmacists participate in the work force differently than men do. They are more likely than men to be salaried, and to work fewer hours per week. From 50 to 65 years of age their average hours increase slightly. They also have (proportional to the mean) more variability than men have in their hours worked, indicating a more diverse pattern of labor force participation. "The inactive pharmacist" section discusses one of the foremost reasons that women pharmacists sometimes do not participate in the labor force at all—homemaker responsibilities. These responsibilities may also account for the irregular participation in the work force of women pharmacists.

### Minorities

In 1979 there were 5,016 active minority pharmacists, who constituted 5 percent of the practicing profession (table 5). Nearly two-thirds of the minority pharmacists were Asian, and approximately one-third were black. Asians were represented in the profession by approximately twice the percent of their representation in the U.S. resident population.<sup>7</sup>

The number of pharmacists who indicated they were of Hispanic origin is shown by State in table 6. In 1978-79 nearly 2 percent of practicing pharmacists were of Hispanic descent. These pharmacists have an age distribution similar to that of pharmacists who were not Hispanic (table 7). However, pharmacists of Hispanic origin had a larger female representation than non-Hispanic pharmacists. Twenty-seven percent of the Hispanic pharmacists were women compared with 16 percent of the non-Hispanic pharmacists (table 8).

While approximately half the U.S. black population is located in the South,<sup>7</sup> two-thirds of the active black pharmacists received their pharmaceutical education there (table 9). Since only 31 percent of all active pharmacists graduated from pharmacy schools located in the South, black pharmacists had more than double the average proportion graduating from southern schools of pharmacy. American Indians also had a disproportionate percent of active pharmacists with southern alma maters—42 percent. They were also above average in the percent graduating from schools of pharmacy located in the West—29 percent compared with an average of 13 percent for all pharmacists. However, these percents coincide with the geographic distribution of American Indians, approximately half of whom are located in the West and one-quarter in the South.<sup>8</sup>

Asians had the highest proportional representation of graduates from western schools of pharmacy, 53 percent compared with the 13-percent average for all pharmacists. This is not unexpected since approximately 60 percent of the U.S. Asian population is located there.<sup>9</sup> Asians were also well above the average in foreign graduates, with 15 percent educated abroad, compared with only 1 percent for all pharmacists.

Pharmacists of Hispanic origin had their greatest representation in southern schools of pharmacy, from which 46 percent received their first pharmacy degrees. Their lowest representation in the United States, 7 percent, was from schools in the North Central. Approximately one-third of the Hispanic population is located in the South and 7 percent in the North Central.<sup>7</sup>

Ten percent of the Hispanic pharmacists received their basic professional education outside the United States, compared with 1 percent of all pharmacists. Although there was a high concentration of foreign trained graduates among Hispanic as well as among Asian pharmacists, altogether there were only 953 active pharmacists who stated in the 1978-79 survey that they were trained outside the continental United States. This low number alleviates concern about the effect of foreign training on pharmacists practicing in the United States and about the relevance of the curriculum in other countries to health problems here.

### Employment setting

In 1978-79, 38,417, or 39 percent of the pharmacists known to be active practiced in independent community pharmacies as their primary settings (table 10). The independent community pharmacy was the most popular work setting. The chain pharmacy, which 28,413 or 29 percent of the pharmacists cited as their primary practice setting, was the second most popular setting. Third was hospitals, with 25,119 or 26 percent of the pharmacists. These three employment settings accounted for 94 percent of all active pharmacists.

### Sex

There were differences in the employment settings of the pharmacists by sex. In 1978-79, 42 out of every 100 male pharmacists practiced in independent community pharmacies, compared with 26 per 100 female pharmacists (table

**Table D. Number and percent distribution of active pharmacists by primary employment settings, according to sex: United States, 1978-79**

| Primary employment setting                    | Both sexes | Male   |                                   | Female |                                   |
|---|------------|--------|-----------------------------------|--------|-----------------------------------|
|   |            | Number | Percent distribution <sup>1</sup> | Number | Percent distribution <sup>1</sup> |
| All settings <sup>2</sup> . . . . .           | 112,335    | 94,158 | 100.0                             | 18,115 | 100.0                             |
| Independent community pharmacy . . . . .      | 38,405     | 34,256 | 41.5                              | 4,149  | 26.4                              |
| Chain pharmacy . . . . .                      | 28,423     | 24,355 | 29.5                              | 4,068  | 25.8                              |
| Clinic or medical building pharmacy . . . . . | 3,968      | 3,090  | 3.7                               | 878    | 5.6                               |
| Nursing home . . . . .                        | 1,551      | 1,061  | 1.3                               | 490    | 3.1                               |
| Hospital . . . . .                            | 19,602     | 14,107 | 17.1                              | 5,495  | 34.9                              |
| Pharmaceutical manufacturer . . . . .         | 2,476      | 2,332  | 2.8                               | 144    | 0.9                               |
| College of pharmacy . . . . .                 | 1,288      | 1,099  | 1.3                               | 189    | 1.2                               |
| Other . . . . .                               | 2,553      | 2,219  | 2.7                               | 334    | 2.1                               |
| Unknown . . . . .                             | 14,007     | 11,639 | ...                               | 2,368  | ...                               |

<sup>1</sup>Percents may not add to 100.0 because of rounding.

<sup>2</sup>Excludes 62 pharmacists of unknown sex.

D). Female pharmacists were proportionally twice as prevalent in hospitals as males, 35 percent compared with only 17 percent. This is partially related to the fact that female pharmacists are generally younger than male pharmacists (85 percent of the women were under 50 years of age, compared with 68 percent of the men) and more younger pharmacists work in hospitals than do older pharmacists. Likewise, older pharmacists constituted larger proportions of those practicing in independent community pharmacies. The settings with regard to the age of the pharmacist are discussed in the next section. Women were also represented in greater proportions than men were in clinics or medical building pharmacies, and in nursing homes

### **Age**

The percent of pharmacists practicing in independent community pharmacies increased directly with age, beginning with 24 percent of the active pharmacists under 30 years of age and going up to 67 percent of those in the category 65 years of age and over (table 11). The opposite trend can be seen by age in chain pharmacies. There was a constant decrease in the proportion of pharmacists working in chain pharmacies as the age categories increased. For the "under 30" age group, 37 percent cited the chain pharmacy, while at the level of 65 years of age and over, only 15 percent did so. Hospitals were the second most popular setting for pharmacists under 30 years of age. Thirty percent practiced in one. This contrasts to the 14 percent of pharmacists 40-64 years of age who were employed in hospitals. Only 8 percent of the pharmacists who were 65 years of age and over worked in hospitals.

It is important to examine, for each practice setting, the percent of pharmacists who were in the age group 60 years and over, because they were the ones who within the next 5 years would be most likely to leave the profession. Overall, they made up 12 percent of the active pharmacists. They constituted 17 percent of the pharmacists working in independent community pharmacies. With the expansion of chain pharmacies at the expense of the independent community pharmacies and the eventual possible retirement of 1 in every 6 independent community pharmacists, it appears that independent community pharmacies may eventually close or be taken over by chain pharmacies.<sup>2</sup> If, on the other hand, a demand still exists for pharmacists in the independent community pharmacies, the free market mechanism should work in attracting young pharmacists to them.

Two other settings had at least 11 percent of the pharmacists in the potential retirement age group. They were nursing homes with 12 percent 60 years of age and over and clinics or medical building pharmacies, with 11 percent. However, for these two settings, there is a movement among young pharmacists into these practices. More than 50 percent of the pharmacists in both these settings were under 40 years of age. The percents drop considerably from 40 years of age to 59. As the proportion of the U.S. population who are of nursing home age continues to rise, the openings for new pharmacy graduates in nursing homes and in hospitals should continue to grow.

### **Race**

The independent community pharmacy was the primary setting for two-fifths of white pharmacists (table 12). Asians had the smallest relative proportion in this setting, 16 percent. However, they formed the largest proportion of any race in hospitals, with 42 percent. This is not surprising since women and younger pharmacists tend to practice in hospitals, and Asians have more female pharmacists and pharmacists under 30 years of age than any other race has.

Black Americans and American Indians had similar distributions by employment setting. Approximately one-fourth practiced in independent community pharmacies, 28 percent in chain pharmacies, and approximately 30 percent in hospitals and nursing homes.

There was no significant difference in the percent of pharmacists in independent community pharmacies by Hispanic descent (table 12). A slightly above average percent of pharmacists of Hispanic origin did indicate that they practiced in chain pharmacies.

### **Principal form of employment**

Table 13 indicates the principal forms of employment of active pharmacists by the States where they worked. In 1978-79, 64 percent of the workforce of pharmacists was composed of "employees." These were assistant managers, staff managers, and staff pharmacists. The approximately 5 percent of pharmacists who designated "other" (including volunteers) is not included in the percent for self-employed or salaried, since it is not known in which group they fit.

### **Hours and weeks worked and services rendered as a partial measure of productivity**

This section discusses hours worked per week, activities performed, and weeks worked during the 12-month period prior to interview. To make a complete and meaningful analysis of productivity, it would be necessary to include the topics of absenteeism, movement in and out of the labor force, number of patients or patrons served, and quality of care and/or services. Since data on these topics were not available from the 1978-79 survey, they are omitted from this report. Without a full discussion of all these factors, totally reliable conclusions regarding productivity by selected demographic characteristics cannot be reached. Nevertheless, the available data on age, sex, race, and employment setting can provide some valuable insight into their relationship with productivity. It is only necessary that caution be exercised when interpreting or generalizing the relationships between variables, since such correlations may be dependent on concomitant variables for which data are not available.

#### **Hours worked**

In 1978-79 pharmacists worked an average of 43 hours per week, compared with an average of 45 hours in an earlier 1973-74 study.<sup>2</sup> Men in 1978-79 worked 45 hours while women tended to practice more on a part-time basis, working 36 hours per week. The same pattern had been

**Table E. Number and percent distribution of active pharmacists by total hours worked per week, according to age: United States, 1978-79**

| Age                         | All active pharmacists | Total hours                       |        |              |         |
|-----------------------------|------------------------|-----------------------------------|--------|--------------|---------|
|                             |                        | 1-35                              | 36-45  | More than 45 | Unknown |
|                             |                        | Number                            |        |              |         |
| All ages . . . . .          | 112,335                | 13,453                            | 52,129 | 37,049       | 9,704   |
| Under 30 years . . . . .    | 23,604                 | 1,770                             | 14,704 | 5,225        | 1,905   |
| 30-39 years . . . . .       | 32,264                 | 3,030                             | 15,765 | 10,960       | 2,509   |
| 40-49 years . . . . .       | 23,096                 | 1,781                             | 9,232  | 10,153       | 1,930   |
| 50-59 years . . . . .       | 19,059                 | 1,727                             | 8,069  | 7,638        | 1,625   |
| 60-64 years . . . . .       | 5,649                  | 916                               | 2,443  | 1,728        | 562     |
| 65 years and over . . . . . | 7,844                  | 4,157                             | 1,741  | 1,261        | 685     |
| Unknown . . . . .           | 819                    | 72                                | 175    | 84           | 488     |
|                             |                        | Percent distribution <sup>1</sup> |        |              |         |
| All ages . . . . .          | 100.0                  | 13.1                              | 50.8   | 36.1         | ...     |
| Under 30 years . . . . .    | 100.0                  | 8.2                               | 67.8   | 24.1         | ...     |
| 30-39 years . . . . .       | 100.0                  | 10.2                              | 53.0   | 36.8         | ...     |
| 40-49 years . . . . .       | 100.0                  | 8.4                               | 43.6   | 48.0         | ...     |
| 50-59 years . . . . .       | 100.0                  | 9.9                               | 46.3   | 43.8         | ...     |
| 60-64 years . . . . .       | 100.0                  | 18.0                              | 48.0   | 34.0         | ...     |
| 65 years and over . . . . . | 100.0                  | 58.1                              | 24.3   | 17.6         | ...     |

<sup>1</sup>Percents may not add to 100.0 because of rounding.

**Table F. Percent distribution of active pharmacists by total hours worked per week, according to sex and age: United States, 1978-79**

| Sex and age                 | All active pharmacists | Total hours                       |       |              |
|-----------------------------|------------------------|-----------------------------------|-------|--------------|
|                             |                        | 1-35                              | 36-45 | More than 45 |
|                             |                        | Percent distribution <sup>1</sup> |       |              |
| <b>Male</b>                 |                        |                                   |       |              |
| All ages . . . . .          | 100.0                  | 9.6                               | 49.6  | 40.8         |
| Under 30 years . . . . .    | 100.0                  | 4.1                               | 66.1  | 29.8         |
| 30-39 years . . . . .       | 100.0                  | 4.0                               | 53.9  | 42.1         |
| 40-49 years . . . . .       | 100.0                  | 4.2                               | 43.5  | 52.2         |
| 50-59 years . . . . .       | 100.0                  | 6.9                               | 46.1  | 47.1         |
| 60-64 years . . . . .       | 100.0                  | 16.7                              | 48.1  | 35.2         |
| 65 years and over . . . . . | 100.0                  | 58.0                              | 24.3  | 17.8         |
| <b>Female</b>               |                        |                                   |       |              |
| All ages . . . . .          | 100.0                  | 31.4                              | 57.2  | 11.4         |
| Under 30 years . . . . .    | 100.0                  | 16.6                              | 71.3  | 12.1         |
| 30-39 years . . . . .       | 100.0                  | 43.0                              | 48.3  | 8.7          |
| 40-49 years . . . . .       | 100.0                  | 43.4                              | 44.4  | 12.1         |
| 50-59 years . . . . .       | 100.0                  | 38.4                              | 48.3  | 13.4         |
| 60-64 years . . . . .       | 100.0                  | 35.9                              | 47.2  | 16.9         |
| 65 years and over . . . . . | 100.0                  | 60.6                              | 25.8  | 13.6         |

<sup>1</sup>Percents may not add to 100.0 because of rounding.

revealed in the 1973-74 study, when men worked an average of 46 hours and women worked 34 hours.

Only about 1 in 8 pharmacists (13 percent) worked 35 hours or less per week. And nearly 3 in 8 (36 percent) worked 46 hours or more per week (table E). Thus, half the pharmacists worked 36 to 45 hours per week. Among pharmacists aged 40 to 49, nearly half (48 percent) worked more than 45 hours per week.

A larger percent of female than of male pharmacists practiced 36 to 45 hours per week (57 percent versus 50 percent). However, 41 percent of the men indicated that they worked more than 45 hours per week, whereas only

11 percent of the women worked that many hours (table F). This large difference in percents by sex in the 46-hour and over work week was true in each age category except for those 65 years and over, in which category 18 percent of the male pharmacists and 14 percent of the female pharmacists worked 46 hours or more per week. In the other age categories the differences in percents by sex ranged from an 18 percentage point difference in the under 30 years of age and in the 60-64 years of age groups to a 40 percentage point difference in the 40-49 years of age group. The work week of the male pharmacist was clearly longer than it was for the female pharmacist, at every age.

The most productive pharmacists in terms of hours worked per week were sole owners and partners, since 82 percent and 65 percent, respectively, worked 46 hours or more per week (table G). This compares with only 13 percent of the employee or staff pharmacists having a work week of this length. About 1 in every 4 staff pharmacists practiced less than a full work week (under 36 hours).

Male sole owners worked more hours per week than female sole owners did. Eighty-two percent of the men worked 46 hours or more compared with 63 percent of the women. Only 3 percent of the male sole owners worked 35 or fewer hours per week; for women it was 14 percent (table 24). Among staff pharmacists, 15 percent of the men and only 6 percent of the women had a work week of more than 45 hours. Nineteen percent of the male staff pharmacists and 38 percent of the women worked 35 or fewer hours. Employment as a staff pharmacist is one of the forms of practice in which women are able to work part time. Eight out of 10 female pharmacists working part-time were employed as staff pharmacists.

As mentioned earlier, pharmacists had a total average work week of 43 hours. On the average they spent 42 hours per week (table H), or 98 percent of their time in their primary practice setting, the work location in which they

**Table G. Number and percent distribution of active pharmacists by total hours worked per week, according to principal forms of employment: United States, 1978-79**

| Principal form of employment                | All active pharmacists | Total hours                       |        |              |         |
|---|------------------------|-----------------------------------|--------|--------------|---------|
|   |                        | 1-35                              | 36-45  | More than 45 | Unknown |
|   |                        | Number                            |        |              |         |
| All principal forms of employment . . . . . | 112,335                | 13,453                            | 52,129 | 37,049       | 9,704   |
| Sole owner . . . . .                        | 16,490                 | 541                               | 2,420  | 13,111       | 418     |
| Partner . . . . .                           | 9,458                  | 591                               | 2,654  | 6,045        | 168     |
| Manager <sup>1</sup> . . . . .              | 30,808                 | 1,417                             | 18,716 | 10,262       | 413     |
| Staff pharmacist . . . . .                  | 41,152                 | 9,600                             | 25,297 | 5,020        | 1,235   |
| Other <sup>2</sup> . . . . .                | 5,962                  | 976                               | 2,486  | 2,230        | 270     |
| Unknown . . . . .                           | 8,465                  | 328                               | 556    | 381          | 7,200   |
|   |                        | Percent distribution <sup>3</sup> |        |              |         |
| All principal forms of employment . . . . . | 100.0                  | 12.9                              | 50.9   | 36.2         | ...     |
| Sole owner . . . . .                        | 100.0                  | 3.4                               | 15.1   | 81.6         | ...     |
| Partner . . . . .                           | 100.0                  | 6.4                               | 28.6   | 65.1         | ...     |
| Manager <sup>1</sup> . . . . .              | 100.0                  | 4.7                               | 61.6   | 33.8         | ...     |
| Staff pharmacist . . . . .                  | 100.0                  | 24.0                              | 63.4   | 12.6         | ...     |
| Other <sup>2</sup> . . . . .                | 100.0                  | 17.2                              | 43.7   | 39.2         | ...     |

<sup>1</sup>Includes assistant managers.

<sup>2</sup>Includes volunteers

<sup>3</sup>Percents may not add to 100.0 because of rounding.

**Table H. Mean hours worked per week by active pharmacists, standard deviations, and percent distribution by employment settings, according to whether primary or secondary: United States, 1978-79**

| Employment setting                                  | Primary employment setting        |            |                    | Secondary employment setting      |                         |                    |
|---|-----------------------------------|------------|--------------------|-----------------------------------|-------------------------|--------------------|
|   | Percent distribution <sup>1</sup> | Mean hours | Standard deviation | Percent distribution <sup>1</sup> | Mean hours <sup>2</sup> | Standard deviation |
| All settings . . . . .                              | 100.0                             | 42.3       | 17.4               | 100.0                             | 7.8                     | 5.8                |
| Independent community pharmacy . . . . .            | 39.1                              | 44.2       | 15.5               | 17.3                              | 8.8                     | 5.5                |
| Chain pharmacy . . . . .                            | 28.9                              | 42.7       | 9.4                | 8.4                               | 9.7                     | 6.2                |
| Clinic or medical building pharmacy . . . . .       | 4.0                               | 39.4       | 12.2               | 7.1                               | 8.6                     | 6.4                |
| Nursing home . . . . .                              | 1.6                               | 35.9       | 12.4               | 37.1                              | 5.3                     | 5.0                |
| Hospital . . . . .                                  | 19.9                              | 39.1       | 8.3                | 15.2                              | 9.8                     | 6.8                |
| Pharmaceutical manufacturer . . . . .               | 2.5                               | 43.3       | 8.5                | 0.6                               | 8.5                     | 6.9                |
| College of pharmacy . . . . .                       | 1.3                               | 43.3       | 13.1               | 4.6                               | 11.1                    | 7.9                |
| Other . . . . .                                     | 2.6                               | 40.3       | 10.7               | 9.6                               | 8.5                     | 6.6                |
|   |                                   | Number     |                    |                                   |                         |                    |
| Number of active pharmacists <sup>3</sup> . . . . . | 112,335                           | ...        | ...                | 13,160                            | ...                     | ...                |

<sup>1</sup>Percents may not add to 100.0 because of rounding.

<sup>2</sup>Mean hours worked per week are calculated for pharmacists with a secondary employment setting. This excludes from the mean all pharmacists with only 1 practice setting. Therefore, the mean hours worked per week in the primary setting cannot be added to the mean hours worked per week in the secondary setting in order to obtain total hours worked per week.

<sup>3</sup>Includes 14,065 pharmacists with unknown employment settings.

spent the maximum hours in an average week (see survey questionnaire item 23b in appendix II, and see appendix III.) The remaining average of 1 hour was spent in their secondary practice setting (the work location in which they spent the second largest number of hours) and in any additional practice settings. Only 13 percent of the pharmacists had a secondary setting. Pharmacists who had one spent an average of 8 hours per week there. (This excludes the zero hours spent in a secondary setting by pharmacists with just one practice setting. Only pharmacists with a secondary setting are included in the average. Therefore, the 8 hours cannot be added to 42 hours in the primary setting to yield total average hours worked per week. One hour per week is the average length of time spent by all pharmacists in a secondary or additional practice setting. It includes the

zero hours spent in a secondary setting by the 87 percent of the pharmacists who had only one setting.)

The most popular secondary setting was the nursing home (table 15). Slightly more than one-third of the pharmacists with a secondary setting designated it as theirs. On the average, they spent 5 hours per week there.

Pharmacists whose primary setting was a college of pharmacy were most likely to have a secondary setting (table 15). Nearly 30 percent cited one, with 38 percent of them specifying a hospital. About one quarter of the pharmacists whose primary practice setting was a nursing home also had a secondary setting, which 25 percent of the time was the independent community pharmacy. Only 15 percent of the independent community pharmacists had a secondary setting, which was a nursing home in over half of the cases.

Pharmacists with more than one setting worked 6 hours longer per week than pharmacists with only one setting. The pharmacist who spent time in more than one setting had a 49-hour work week (with a standard deviation of 12) compared with his single-practice-setting colleagues, who worked 43 hours per week (also with a standard deviation of 12).

### Activities performed

The average pharmacist had a work week of 43 hours and spent 24 hours or 56 percent of it dispensing prescriptions (table J). Most of the remaining hours were spent providing information to patients and to prescribers (4 and 3 hours, respectively) and in administrative functions (7 hours). The large standard deviations associated with these mean hours indicate wide variability in the hours spent by pharmacists in these activities.

Table J indicates that, within each activity, differences in hours by race were negligible. In addition, there were

no significant differences in hours worked in each activity by race when employment settings were held constant.

As would be expected, the primary activity of pharmacists was dispensing prescriptions; 75 percent of the pharmacists reported this as their primary service (table K). The next most mentioned primary activity was administration, as reported by 13 percent. Black pharmacists had the largest representation in administration as a primary activity (16 percent), while 13 percent of the white pharmacists reported this as their primary activity.

The mean number of hours worked by pharmacists ranged from 42 hours in the West to 45 hours in the South (table 16). In the Northeast, white and black pharmacists worked 3 hours more per week than American Indians and Asians. Asians spent 3 hours more than black pharmacists dispensing prescriptions and 5 hours fewer in administrative work. Otherwise, the hours they spent in each activity were nearly identical. American Indians spent more hours than any other race did in providing information to prescribers and patients. This

**Table J. Mean hours worked per week by active pharmacists, and standard deviations, by race and primary activities performed, and number by race: United States, 1978-79**

| Primary activity                                    | All races  |                    | White      |                    | Black      |                    | American Indian |                    | Asian      |                    |
|---|------------|--------------------|------------|--------------------|------------|--------------------|-----------------|--------------------|------------|--------------------|
|   | Mean hours | Standard deviation | Mean hours | Standard deviation | Mean hours | Standard deviation | Mean hours      | Standard deviation | Mean hours | Standard deviation |
| All activities . . . . .                            | 43         | 13                 | 44         | 13                 | 43         | 11                 | 43              | 11                 | 42         | 10                 |
| Providing information to prescribers . . . . .      | 3          | 6                  | 3          | 5                  | 3          | 6                  | 3               | 6                  | 3          | 6                  |
| Administration . . . . .                            | 7          | 10                 | 8          | 10                 | 7          | 11                 | 7               | 9                  | 5          | 9                  |
| Providing information to patients . . . . .         | 4          | 5                  | 4          | 5                  | 5          | 6                  | 6               | 6                  | 5          | 5                  |
| Dispensing prescriptions . . . . .                  | 24         | 14                 | 24         | 14                 | 24         | 15                 | 22              | 14                 | 23         | 13                 |
| Teaching and/or research . . . . .                  | 1          | 6                  | 1          | 6                  | 2          | 7                  | 1               | 6                  | 2          | 6                  |
| Manufacturing . . . . .                             | 1          | 3                  | 1          | 3                  | 1          | 4                  | 1               | 4                  | 1          | 4                  |
| Retailing . . . . .                                 | 2          | 4                  | 2          | 4                  | 1          | 3                  | 1               | 4                  | 1          | 3                  |
| Other . . . . .                                     | 1          | 6                  | 1          | 6                  | 1          | 5                  | 1               | 6                  | 1          | 5                  |
| Number of active pharmacists <sup>1</sup> . . . . . | 112,335    |                    | 82,062     |                    | 1,571      |                    | 127             |                    | 2,847      |                    |

<sup>1</sup>Includes 80 pharmacists of other races, 10,040 pharmacists of unknown race, and 15,608 pharmacists with unknown primary activities.

**Table K. Number of active pharmacists by race, and percent distribution by primary activity, according to race: United States, 1978-79**

| Primary activity                               | All races <sup>1</sup> | White  | Black | American Indian | Asian | Other |
|--|------------------------|--------|-------|-----------------|-------|-------|
| Number   |                        |        |       |                 |       |       |
| Number of pharmacists <sup>2</sup> . . . . .   | 112,335                | 82,062 | 1,571 | 127             | 2,847 | 80    |
| Percent distribution <sup>3</sup>              |                        |        |       |                 |       |       |
| All activities . . . . .                       | 100.0                  | 100.0  | 100.0 | 100.0           | 100.0 | 100.0 |
| Providing information to prescribers . . . . . | 3.1                    | 2.9    | 4.1   | 3.9             | 4.6   | 5.0   |
| Administration . . . . .                       | 12.6                   | 12.9   | 16.0  | 11.8            | 9.6   | 16.2  |
| Providing information to patients . . . . .    | 2.8                    | 2.8    | 4.8   | 7.1             | 3.8   | 5.0   |
| Dispensing prescriptions . . . . .             | 74.9                   | 75.2   | 68.5  | 70.9            | 74.7  | 71.2  |
| Teaching and/or research . . . . .             | 2.5                    | 2.2    | 2.9   | 2.4             | 2.7   | 1.2   |
| Manufacturing . . . . .                        | 0.7                    | 0.7    | 1.1   | 0.8             | 0.9   | —     |
| Retailing . . . . .                            | 0.9                    | 0.9    | 0.4   | 0.8             | 0.5   | —     |
| Other . . . . .                                | 2.4                    | 2.4    | 2.3   | 2.4             | 3.1   | 1.2   |

<sup>1</sup>Includes pharmacists of unknown race.

<sup>2</sup>Includes 15,608 pharmacists with unknown primary activities.

<sup>3</sup>Percents may not add to 100.0 because of rounding.

may be have been because as minority pharmacists they functioned more as a resource for health care, serving partially in the capacity of physicians, having assumed an information disseminating and drug counseling function that otherwise would have been performed by physicians. This may have been especially true if these pharmacists practiced in an area where they served their own people. However, this difference in hours for providing information appears to be significant only in the Northeast.

A greater percent of male pharmacists indicated administrative functions as their primary activity than did female pharmacists (14 percent versus 8 percent). Conversely, 78 percent of the female pharmacists cited dispensing prescriptions as their primary activity compared with 74 percent of the men (table L). Aside from those two activities, there is no difference by sex in the activities represented as primary by pharmacists.

Providing information to patients and prescribers was an important activity for pharmacists. However, more pharmacists under 40 years of age said that providing information

was a primary activity than did older pharmacists (table M). Teaching and research were also more popular for pharmacists under 40 years of age than for older ones. Fifty-eight percent of the younger group were involved in these activities, while only 50 percent of the active pharmacists were under 40 years of age. Retailing and administrative functions, however, were less popular as primary activities for pharmacists under 40 years of age than they were for older practitioners.

This breakdown by age supports a trend that has been noted in recent literature, that pharmacists are emerging into more medically professional roles.<sup>10</sup> The data on age and activity indicate that younger pharmacists are less represented in retailing and administrative work and are more highly represented in the areas of providing information to prescribers and patients, and in research.

### Weeks worked

Only 10 percent of pharmacists indicated they worked less than 11 months (less than 48 weeks) a year (table 17). Four out of 5 pharmacists indicated they worked 52 weeks per year (including paid vacation and sick leave). There is little difference in the distribution of weeks worked for pharmacists between 30 and 64 years of age. However, pharmacists under 30 years of age tended to work fewer weeks, with slightly less than 3 out of 4 working the entire year. New graduates beginning practice part way through the year lower the average weeks worked for this age group. Pharmacists 65 years of age and over had the largest difference in weeks worked from their younger counterparts. Only 6 out of 10 of them worked all 52 weeks. They also had the largest proportion working less than 11 months per year. These differences are probably due to two factors. First, pharmacists retiring who are 65 years of age and over stop working part way through the year, thereby reducing the average weeks worked for the entire age group. Second, pharmacists in that age group may actually cut down on the weeks they work, even when continuing to work a full week. They may take longer vacations or limited leaves of absence.

**Table L. Number of active pharmacists by sex, and percent distribution by primary activity, according to sex: United States, 1978-79**

| Primary activity                          | Both sexes | Number                            |        |
|---|------------|-----------------------------------|--------|
|   |            | Male                              | Female |
| Number of active pharmacists <sup>1</sup> | 96,724     | 81,279                            | 15,445 |
|   |            | Percent distribution <sup>2</sup> |        |
| All activities                            | 100.0      | 100.0                             | 100.0  |
| Providing information to prescribers      | 3.1        | 3.1                               | 3.3    |
| Administration                            | 12.6       | 13.6                              | 7.6    |
| Providing information to patients         | 2.8        | 2.7                               | 3.8    |
| Dispensing prescriptions                  | 74.9       | 74.3                              | 78.3   |
| Teaching and/or research                  | 2.5        | 2.5                               | 2.2    |
| Manufacturing                             | 0.7        | 0.7                               | 0.7    |
| Retailing                                 | 0.9        | 1.0                               | 0.6    |
| Other                                     | 2.4        | 2.2                               | 3.6    |

<sup>1</sup>Excludes pharmacists of unknown sex and pharmacists with unknown primary activities.

<sup>2</sup>Percents may not add to 100.0 because of rounding.

**Table M. Number of active pharmacists by primary activity and percent distribution by age, according to primary activity: United States, 1978-79**

| Primary activity                     | All active pharmacists <sup>1</sup> | Age                               |             |             |             |             |                   |      |
|--------------------------------------|-------------------------------------|-----------------------------------|-------------|-------------|-------------|-------------|-------------------|------|
|                                      |                                     | Under 30 years                    | 30-39 years | 40-49 years | 50-59 years | 60-64 years | 65 years and over |      |
|                                      |                                     | Percent distribution <sup>2</sup> |             |             |             |             |                   |      |
| All activities                       | 96,424                              | 100.0                             | 21.6        | 29.5        | 20.6        | 16.8        | 4.8               | 6.7  |
| Providing information to prescribers | 3,015                               | 100.0                             | 25.9        | 29.0        | 18.3        | 16.4        | 5.1               | 5.3  |
| Administration                       | 12,192                              | 100.0                             | 11.9        | 33.7        | 26.1        | 18.6        | 4.8               | 5.0  |
| Providing information to patients    | 2,733                               | 100.0                             | 32.4        | 28.0        | 16.7        | 11.7        | 4.0               | 7.3  |
| Dispensing prescriptions             | 72,256                              | 100.0                             | 22.6        | 28.7        | 20.0        | 16.7        | 4.9               | 7.1  |
| Teaching and/or research             | 2,377                               | 100.0                             | 21.3        | 36.8        | 21.0        | 14.8        | 3.5               | 2.4  |
| Manufacturing                        | 684                                 | 100.0                             | 20.3        | 30.1        | 19.6        | 17.8        | 6.3               | 5.8  |
| Retailing                            | 839                                 | 100.0                             | 16.1        | 25.9        | 19.4        | 19.7        | 7.6               | 11.3 |
| Other                                | 2,328                               | 100.0                             | 26.4        | 28.5        | 17.0        | 17.6        | 5.0               | 5.4  |

<sup>1</sup>Excludes pharmacists of unknown age and pharmacists with unknown activities.

<sup>2</sup>Percents may not add to 100.0 because of rounding.

**Table N. Number and percent distribution of active pharmacists by selected weeks worked in year prior to interview, according to principal forms of employment: United States, 1978-79**

| Principal form of employment                | All active pharmacists | Weeks worked |        |        |         |
|---|------------------------|--------------|--------|--------|---------|
|   |                        | Less than 48 | 48-51  | 52     | Unknown |
| Number                                      |                        |              |        |        |         |
| All principal forms of employment . . . . . | 112,335                | 10,249       | 10,085 | 80,931 | 11,070  |
| Sole owner . . . . .                        | 16,490                 | 463          | 1,391  | 14,025 | 611     |
| Partner . . . . .                           | 9,458                  | 305          | 910    | 7,913  | 330     |
| Manager <sup>1</sup> . . . . .              | 30,808                 | 1,668        | 2,532  | 25,736 | 872     |
| Staff pharmacist . . . . .                  | 41,152                 | 6,401        | 4,424  | 28,474 | 1,853   |
| Volunteer . . . . .                         | 347                    | 166          | 40     | 93     | 48      |
| Other . . . . .                             | 5,615                  | 787          | 582    | 3,890  | 356     |
| Unknown . . . . .                           | 8,465                  | 459          | 206    | 800    | 7,000   |
| Percent distribution <sup>2</sup>           |                        |              |        |        |         |
| All principal forms of employment . . . . . | 100.0                  | 9.7          | 9.9    | 80.3   | ...     |
| Sole owner . . . . .                        | 100.0                  | 2.9          | 8.8    | 88.3   | ...     |
| Partner . . . . .                           | 100.0                  | 3.3          | 10.0   | 86.7   | ...     |
| Manager <sup>1</sup> . . . . .              | 100.0                  | 5.6          | 8.5    | 86.0   | ...     |
| Staff pharmacist . . . . .                  | 100.0                  | 16.3         | 11.3   | 72.4   | ...     |
| Volunteer . . . . .                         | 100.0                  | 55.5         | 13.4   | 31.1   | ...     |
| Other . . . . .                             | 100.0                  | 15.0         | 11.1   | 74.0   | ...     |

<sup>1</sup>Includes assistant managers.

<sup>2</sup>Percents may not add to 100.0 because of rounding.

Female pharmacists were more likely than male pharmacists were to work less than 11 months per year. Twenty percent worked less than 48 weeks compared with only 8 percent of the men. A difference by sex existed in all age groups. Approximately two-thirds of the female pharmacists worked full 52-week years. The percent increases gradually until 65 years of age.

Table N indicates that the number of weeks worked per year is related to the principal form of employment. Sole owners and partners worked at least 11 months per year (97 percent of each worked 48 weeks or more). Approximately 7 out of 8 indicated they worked all 52 weeks per year. Managers and assistant managers, although salaried, worked nearly as many weeks as sole owners and partners. Ninety-five percent of the managers and assistant managers worked at least 48 weeks per year, and 86 percent worked all 52 weeks.

### The inactive pharmacist

Inactive pharmacists were 16 percent of all licensed pharmacists of known activity status. They represent a potential source of manpower because they are trained and licensed and may at any time enter or return to the profession. There are additional pharmacists who were trained but who no longer are licensed and thus are not counted in the pool of potential pharmacists. These may include pharmacists who have given up their licenses because they are working in another field. Since the focus of this report is licensed pharmacists, the inactive pharmacists discussed in this section are all licensed.

The 20,912 known inactive pharmacists who were surveyed in 1978-79 are distributed by their State of residence and reason for inactivity in table 18.

In terms of potential pharmaceutical resources, 12 percent of the inactive pharmacists were seeking work in the profession. An additional 8 percent were homemakers. Less than half the inactive pharmacists (45 percent) said they were retired (table 19). The actual unemployment rate in the profession was less than 2 percent. That figure is based on the number of inactive pharmacists seeking work relative to the total number of licensed pharmacists. This is an especially low unemployment rate because it includes pharmacists who are in transition between jobs, new graduates seeking positions, and women who have decided to return to the labor force but who have not yet found employment in the profession.

Pharmacists under 30 years of age were the largest group seeking work in the profession. More than a quarter of them were either unemployed or working in another field, and, in either case, looking for work in the profession. For each age group between 30 and 60 years approximately 15 percent of the inactive pharmacists were seeking a position in pharmacy. For job hunters 60-64 years of age, the percent currently unemployed was comparable to the percents unemployed for those in the age categories between 30 and 60 years. The percent of those 60-64 years of age who were working in another field and seeking work in pharmacy dropped to half of the percents of the comparable groups in the lower age categories. Evidently, the unemployed pharmacist who was near retirement age still looked for work, but if he was working in another field, he was less likely to still be seeking a job as a pharmacist.

Fewer than half of the inactive pharmacists were 65 years of age or over (table O). Nearly one-fourth were under 40 years of age. Pharmacists under 40 years of age were inactive in the profession for the most part because they were working in other fields and were not seeking work

in pharmacy or because they were homemakers. The youngest pharmacists (under 30 years of age) also tended to be unemployed and seeking work in the profession. These were probably the newly licensed pharmacists just starting out and looking for a job. Nearly half of the inactive female pharmacists were under 40 years of age. Approximately half of them were inactive because they were homemakers. Homemaker responsibilities were virtually nonexistent as a reason for inactivity among male pharmacists.

At every age, a much higher percent of men than of women were employed in other fields and were not seeking work as pharmacists. The difference in the percents is striking.

**Table O. Number and percent distribution of inactive pharmacists by age, according to sex: United States, 1978-79**

| Age                               | Both sexes | Male   | Female | Sex unknown |
|-----------------------------------|------------|--------|--------|-------------|
| Number                            |            |        |        |             |
| All ages . . . . .                | 20,912     | 16,997 | 3,845  | 70          |
| Under 30 years . . . . .          | 1,371      | 713    | 654    | 4           |
| 30-39 years . . . . .             | 3,316      | 2,252  | 1,063  | 1           |
| 40-49 years . . . . .             | 2,673      | 2,025  | 645    | 3           |
| 50-59 years . . . . .             | 2,395      | 1,821  | 569    | 5           |
| 60-64 years . . . . .             | 1,478      | 1,274  | 203    | 1           |
| 65 years and over . . . . .       | 9,023      | 8,331  | 647    | 45          |
| Unknown . . . . .                 | 656        | 581    | 64     | 11          |
| Percent distribution <sup>1</sup> |            |        |        |             |
| All ages . . . . .                | 100.0      | 100.0  | 100.0  | ...         |
| Under 30 years . . . . .          | 6.8        | 4.3    | 17.3   | ...         |
| 30-39 years . . . . .             | 16.4       | 13.7   | 28.1   | ...         |
| 40-49 years . . . . .             | 13.2       | 12.3   | 17.1   | ...         |
| 50-59 years . . . . .             | 11.8       | 11.1   | 15.0   | ...         |
| 60-64 years . . . . .             | 7.3        | 7.8    | 5.4    | ...         |
| 65 years and over . . . . .       | 44.5       | 50.7   | 17.1   | ...         |

<sup>1</sup>Percents may not add to 100.0 because of rounding.

Almost 6 out of every 8 men 30-39 years of age were inactive for this reason, compared with 1 in 8 women. At 40-49 years of age, approximately 4.5 times as many men as women stated this as their reason for inactivity. Female pharmacists were more likely than male pharmacists were to be seeking work in the profession because they were unemployed rather than because they were working in other fields.

The distribution of inactive pharmacists by age was quite different for men than it was for women. One-half of the male pharmacists were 65 years of age or over compared with only 17 percent of the women. Conversely, nearly one-fifth of the inactive female pharmacists were under 30 years of age compared with 4 percent of the men. This disparity is partially related to the overall age composition of female pharmacists. Since two-thirds of all the licensed female practitioners (regardless of activity status) were under 40 years of age, it is not surprising that nearly half the inactive female pharmacists were also under 40. However, 42 percent of all the men were under 40 years of age (see table 2), and less than one-fifth of the inactive men were in that age group.

It appears that in the younger age groups, fewer female pharmacists worked in the profession than men did, either because they could not find employment or because they chose not to (for reasons such as being homemakers). In the older groups, it is not clear whether female pharmacists had a smaller percent inactive because they were working or because they had given up their licenses.

In tables P and Q the activity status for those pharmacists not reporting activity status is imputed by apportioning the 27,417 pharmacists with unknown activity status into categories in the same ratio as occurred among the 133,247 pharmacists whose activity status is known. Of the resulting 135,449 active pharmacists, the largest number was located

**Table P. Active pharmacists, U.S. resident population, and active pharmacists per 100,000 people, by geographic region and division: United States, 1978-79**

| Geographic region and division | Active pharmacists, 1978-79 <sup>1</sup> | U.S. resident population in thousands, 1978 <sup>2</sup> | Active pharmacists per 100,000 people, 1978-79 |
|--------------------------------|--|--|--|
| Total . . . . .                | 135,449                                  | 222,095  | 61.0   |
| Northeast . . . . .            | 31,426                                   | 49,244   | 63.8   |
| New England . . . . .          | 8,482                                    | 12,303   | 69.0   |
| Middle Atlantic . . . . .      | 22,944                                   | 36,942   | 62.1   |
| North Central . . . . .        | 35,695                                   | 58,538   | 61.0   |
| East North Central . . . . .   | 24,673                                   | 41,509   | 59.4   |
| West North Central . . . . .   | 11,022                                   | 17,028   | 64.7   |
| South . . . . .                | 43,932                                   | 73,003   | 60.2   |
| South Atlantic . . . . .       | 20,937                                   | 35,882   | 58.3   |
| East South Central . . . . .   | 8,845                                    | 14,395   | 61.4   |
| West South Central . . . . .   | 14,150                                   | 22,725   | 62.3   |
| West . . . . .                 | 24,142                                   | 41,311   | 58.4   |
| Mountain . . . . .             | 7,064                                    | 10,746   | 65.7   |
| Pacific . . . . .              | 17,078                                   | 30,565   | 55.9   |
| Foreign <sup>3</sup> . . . . . | 254                                      | ...  | ...  |

<sup>1</sup>Number of active pharmacists (112,335) adjusted to include corresponding proportion of pharmacists with unknown activity status (84.306 percent of 27,417 = 23,114 additional active pharmacists) Data entries increase proportionally.

<sup>2</sup>As of July 1. Data from U.S. Bureau of the Census: Preliminary estimates of the intercensal population of States: 1970 to 1980, Series 1, Washington

<sup>3</sup>Includes pharmacists working in U.S. territories and foreign countries.

NOTE: See appendix III for States included in each geographic region and division.



**Table Q. Number and percent distribution of active pharmacists by age, according to geographic region: United States, 1978-79**

| <i>Geographic region and age</i> | <i>Number</i>        | <i>Percent distribution</i> | <i>Geographic region and age</i> | <i>Number</i> | <i>Percent distribution</i> |
|----------------------------------|----------------------|-----------------------------|----------------------------------|---------------|-----------------------------|
| <b>All regions</b>               |                      |                             | <b>South</b>                     |               |                             |
| All ages . . . . .               | 135,449 <sup>1</sup> | ...                         | All ages . . . . .               | 43,932        | 100.0                       |
| <b>Northeast</b>                 |                      |                             | Under 30 years . . . . .         | 10,001        | 23.0                        |
| All ages . . . . .               | 31,426               | 100.0                       | 30-59 years . . . . .            | 29,561        | 68.0                        |
| Under 30 years . . . . .         | 5,689                | 18.3                        | 60 years and over . . . . .      | 3,913         | 9.0                         |
| 30-59 years . . . . .            | 20,385               | 65.4                        | Unknown . . . . .                | 457           | ...                         |
| 60 years and over . . . . .      | 5,089                | 16.3                        | <b>West</b>                      |               |                             |
| Unknown . . . . .                | 253                  | ...                         | All ages . . . . .               | 24,142        | 100.0                       |
| <b>North Central</b>             |                      |                             | Under 30 years . . . . .         | 4,149         | 17.3                        |
| All ages . . . . .               | 35,695               | 100.0                       | 30-59 years . . . . .            | 17,093        | 71.2                        |
| Under 30 years . . . . .         | 8,399                | 23.6                        | 60 years and over . . . . .      | 2,749         | 11.5                        |
| 30-59 years . . . . .            | 22,620               | 63.6                        | Unknown . . . . .                | 151           | ...                         |
| 60 years and over . . . . .      | 4,564                | 12.8                        | Foreign <sup>2</sup> . . . . .   | 254           | ...                         |
| Unknown . . . . .                | 113                  | ...                         |                                  |               |                             |

<sup>1</sup>Number of active pharmacists (112,335) adjusted to include corresponding proportion of pharmacists with unknown activity status (84.306 percent of 27,417 = 23,114 additional active pharmacists.)

<sup>2</sup>Includes pharmacists working in U.S. territories and foreign countries.

NOTE: See appendix III for States included in each geographic region.

in the South (43,932). Despite this large number, the South remained slightly below the national average of 61 active pharmacists per 100,000 population (table P). Of the divisions, New England had the highest ratio of active pharmacists per 100,000 population (69.0), while the Pacific had the lowest ratio (55.9).

Differences in the age composition of active pharmacists

in the four regions of the United States are shown in table Q. The Northeast had the largest proportion of pharmacists 60 years of age and over, while the South had the smallest proportion of pharmacists this age. The South and North Central regions had the most young pharmacists (under 30 years of age).

# References

- <sup>1</sup>National 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
- <sup>2</sup>Bureau of Health Manpower: *Pharmacy Manpower Resources*. DHEW Pub. No. (HRA) 78-36. Health Resources Administration.
- <sup>3</sup>U.S. Bureau of the Census: *Statistical Abstract of the United States, 1980* (101st edition). Washington. U.S. Government Printing Office. 1980, tables 33 and 654, pp. 29 and 395.
- <sup>4</sup>Center for Health Services Research and Development: *Physician Distribution and Medical Licensure in the U.S., 1979*. Chicago. American Medical Association, 1980.
- <sup>5</sup>National Center for Health Statistics, P.H. Zytznick, K.W. Stant, and J.P. Barbano: Podiatry workforce, characteristics of the provision of patient care, United States, 1974. *Vital and Health Statistics*. Series 14-No. 22. DHEW Pub. No. (PHS) 79-1817. Public Health Service. Washington. U.S. Government Printing Office, Aug. 1979.
- <sup>6</sup>National Center for Health Statistics: 1978-79 National Survey of Optometrists. Division of Health Care Statistics. Unpublished data.
- <sup>7</sup>U.S. Bureau of the Census: 1980 Census of Population, *Supplementary Report, Race of Population by States, 1980*. PC80-51-3. Washington. U.S. Government Printing Office, 1981.
- <sup>8</sup>U.S. Bureau of the Census: 1980 Census of Population, *Supplementary Report, Race of Population by States, 1980*. PC80-51-3. Washington. U.S. Government Printing Office, 1981, table 1.
- <sup>9</sup>U.S. Bureau of the Census: *Statistical Abstract of the United States, 1980* (101st edition). Washington. U.S. Government Printing Office, 1980, table 45, p 38.
- <sup>10</sup>Medicine: More than just pill counters. *Time* 118, (15):95, Oct. 12, 1981.
- <sup>11</sup>National Center for Health Statistics, R. Biggar: *Procedures for Unduplication of Pharmacy and Optometry Data*. Working Paper Series. No. 9. Public Health Service, Feb. 1982.
- <sup>12</sup>National Center for Health Statistics: Data on Licensed Pharmacists, by State, 1977-80. DHHS Pub. No. (PHS) 82-1153. Public Health Service. Washington. U.S. Government Printing Office, Sept. and Oct. 1981.

# List of detailed tables

|   |    |  |    |
|---|----|--|----|
| 1. Number of licensed pharmacists, by activity status and work State: United States, 1978-79 . . . . .  | 15 | 12. Number and percent distribution of active pharmacists by primary employment setting, according to race and Hispanic origin: United States, 1978-79 . . . . .                                   | 24 |
| 2. Number and percent distribution of licensed pharmacists by activity status, according to sex and age: United States, 1978-79 . . . . .   | 16 | 13. Number of active pharmacists, by principal forms of employment and work State: United States, 1978-79 . . . . .  | 25 |
| 3. Number of active pharmacists, by age and work State: United States, 1978-79 . . . . .  | 17 | 14. Number and percent distribution of active pharmacists by total hours worked per week, according to principal forms of employment and sex: United States, 1978-79 . . . . .                     | 26 |
| 4. Number of active pharmacists, by sex and work State: United States, 1978-79 . . . . .  | 18 | 15. Number and percent distribution of active pharmacists by secondary employment settings, according to primary employment settings: United States, 1978-79 . . . . .                             | 27 |
| 5. Number of active pharmacists, by race and work State: United States, 1978-79 . . . . .   | 19 | 16. Mean hours worked per week by active pharmacists, and standard deviations, by race, geographic region (with number of pharmacists), and activities performed: United States, 1978-79 . . . . . | 28 |
| 6. Number of active pharmacists, by Hispanic origin and work State: United States, 1978-79 . . . . .  | 20 | 17. Number and percent distribution of active pharmacists by selected weeks worked in year prior to interview, according to sex and age: United States, 1978-79 . . . . .                          | 29 |
| 7. Number and percent distribution of active pharmacists by age, according to race and Hispanic origin: United States, 1978-79 . . . . .  | 21 | 18. Number of inactive pharmacists, by reason for inactivity and State of residence: United States, 1978-79 . . . . .  | 30 |
| 8. Number and percent distribution of active pharmacists by sex, according to race and Hispanic origin: United States, 1978-79 . . . . .  | 22 | 19. Number and percent distribution of inactive pharmacists by reason for inactivity, according to sex and age: United States, 1978-79 . . . . .   | 31 |
| 9. Number and percent distribution of active pharmacists by geographic region of pharmacy school of graduation, according to race and Hispanic origin: United States, 1978-79 . . . . . | 22 |  |    |
| 10. Number of active pharmacists, by employment setting and work State: United States, 1978-79 . . . . .  | 23 |  |    |
| 11. Number and percent distribution of active pharmacists by primary employment setting, according to age: United States, 1978-79 . . . . .   | 24 |  |    |

**Table 1. Number of licensed pharmacists, by activity status and work State: United States, 1978-79**

| <i>Work State<sup>1</sup></i>  | <i>All<br/>licensed<br/>pharmacists</i> | <i>Activity status</i> |                 |                |
|--------------------------------|---|------------------------|-----------------|----------------|
|                                |   | <i>Active</i>          | <i>Inactive</i> | <i>Unknown</i> |
| All areas . . . . .            | 160,664                                 | 112,335                | 20,912          | 27,417         |
| Alabama . . . . .              | 2,495                                   | 2,327                  | 144             | 24             |
| Alaska . . . . .               | 232                                     | 124                    | 32              | 76             |
| Arizona . . . . .              | 2,189                                   | 1,627                  | 498             | 64             |
| Arkansas . . . . .             | 1,686                                   | 1,426                  | 246             | 14             |
| California . . . . .           | 14,631                                  | 7,898                  | 1,643           | 5,090          |
| Colorado . . . . .             | 2,414                                   | 1,502                  | 394             | 518            |
| Connecticut . . . . .          | 2,605                                   | 1,790                  | 358             | 457            |
| Delaware . . . . .             | 375                                     | 205                    | 36              | 134            |
| District of Columbia . . . . . | 732                                     | 555                    | 56              | 121            |
| Florida . . . . .              | 6,856                                   | 4,414                  | 1,251           | 1,191          |
| Georgia . . . . .              | 3,956                                   | 2,462                  | 340             | 1,154          |
| Hawaii . . . . .               | 400                                     | 258                    | 43              | 99             |
| Idaho . . . . .                | 716                                     | 474                    | 101             | 141            |
| Illinois . . . . .             | 8,002                                   | 4,996                  | 832             | 2,174          |
| Indiana . . . . .              | 3,892                                   | 3,065                  | 416             | 411            |
| Iowa . . . . .                 | 2,265                                   | 1,666                  | 285             | 314            |
| Kansas . . . . .               | 1,581                                   | 1,193                  | 250             | 138            |
| Kentucky . . . . .             | 2,393                                   | 1,799                  | 196             | 398            |
| Louisiana . . . . .            | 3,108                                   | 1,655                  | 279             | 1,174          |
| Maine . . . . .                | 647                                     | 537                    | 88              | 22             |
| Maryland . . . . .             | 3,234                                   | 2,075                  | 450             | 709            |
| Massachusetts . . . . .        | 5,144                                   | 4,263                  | 827             | 54             |
| Michigan . . . . .             | 6,861                                   | 5,986                  | 809             | 66             |
| Minnesota . . . . .            | 2,939                                   | 2,527                  | 347             | 65             |
| Mississippi . . . . .          | 1,697                                   | 1,501                  | 185             | 11             |
| Missouri . . . . .             | 3,708                                   | 2,952                  | 701             | 55             |
| Montana . . . . .              | 699                                     | 474                    | 131             | 94             |
| Nebraska . . . . .             | 1,472                                   | 1,203                  | 257             | 12             |
| Nevada . . . . .               | 493                                     | 327                    | 69              | 97             |
| New Hampshire . . . . .        | 571                                     | 408                    | 84              | 79             |
| New Jersey . . . . .           | 5,800                                   | 3,568                  | 797             | 1,435          |
| New Mexico . . . . .           | 875                                     | 709                    | 136             | 30             |
| New York . . . . .             | 13,435                                  | 7,584                  | 1,879           | 3,972          |
| North Carolina . . . . .       | 3,269                                   | 2,912                  | 319             | 38             |
| North Dakota . . . . .         | 604                                     | 424                    | 104             | 76             |
| Ohio . . . . .                 | 6,501                                   | 4,202                  | 618             | 1,681          |
| Oklahoma . . . . .             | 2,464                                   | 1,474                  | 302             | 688            |
| Oregon . . . . .               | 1,988                                   | 1,396                  | 228             | 364            |
| Pennsylvania . . . . .         | 8,943                                   | 5,990                  | 1,479           | 1,474          |
| Rhode Island . . . . .         | 857                                     | 704                    | 149             | 4              |
| South Carolina . . . . .       | 2,054                                   | 1,818                  | 215             | 21             |
| South Dakota . . . . .         | 611                                     | 409                    | 93              | 109            |
| Tennessee . . . . .            | 3,213                                   | 2,577                  | 309             | 327            |
| Texas . . . . .                | 9,380                                   | 6,514                  | 1,088           | 1,778          |
| Utah . . . . .                 | 1,004                                   | 787                    | 161             | 56             |
| Vermont . . . . .              | 307                                     | 211                    | 36              | 60             |
| Virginia . . . . .             | 3,177                                   | 2,633                  | 448             | 96             |
| Washington . . . . .           | 3,141                                   | 2,569                  | 467             | 105            |
| West Virginia . . . . .        | 1,082                                   | 920                    | 136             | 26             |
| Wisconsin . . . . .            | 3,224                                   | 2,747                  | 447             | 30             |
| Wyoming . . . . .              | 396                                     | 244                    | 61              | 91             |
| U.S. territories . . . . .     | 106                                     | 89                     | 17              | ...            |
| Foreign countries . . . . .    | 240                                     | 165                    | 75              | ...            |

<sup>1</sup>For inactive pharmacists the work State is the place of residence. For pharmacists of unknown activity status the work State is the State of residence, mail, or licensure.

**Table 2. Number and percent distribution of licensed pharmacists by activity status, according to sex and age: United States, 1978-79**

| Age                         | <i>All licensed pharmacists</i> |                        |          |         | <i>Male</i> |                        |          |         | <i>Female</i> |                        |          |         | <i>Sex unknown</i> |                        |          |         |
|-----------------------------|---------------------------------|------------------------|----------|---------|-------------|------------------------|----------|---------|---------------|------------------------|----------|---------|--------------------|------------------------|----------|---------|
|                             | Total                           | <i>Activity status</i> |          |         | Total       | <i>Activity status</i> |          |         | Total         | <i>Activity status</i> |          |         | Total              | <i>Activity status</i> |          |         |
|                             |                                 | Active                 | Inactive | Unknown |             | Active                 | Inactive | Unknown |               | Active                 | Inactive | Unknown |                    | Active                 | Inactive | Unknown |
| Number                      |                                 |                        |          |         |             |                        |          |         |               |                        |          |         |                    |                        |          |         |
| All ages . . . . .          | 160,664                         | 112,335                | 20,912   | 27,417  | 133,474     | 94,158                 | 16,997   | 22,319  | 26,147        | 18,115                 | 3,845    | 4,187   | 1,043              | 62                     | 70       | 911     |
| Under 30 years . . . . .    | 24,975                          | 23,604                 | 1,371    | -       | 16,644      | 15,931                 | 713      | -       | 8,318         | 7,664                  | 654      | -       | 13                 | 9                      | 4        | -       |
| 30-39 years . . . . .       | 35,580                          | 32,264                 | 3,316    | -       | 29,337      | 27,085                 | 2,252    | -       | 6,223         | 5,160                  | 1,063    | -       | 20                 | 19                     | 1        | -       |
| 40-49 years . . . . .       | 25,769                          | 23,096                 | 2,673    | -       | 25,569      | 20,544                 | 2,025    | -       | 3,185         | 2,540                  | 645      | -       | 15                 | 12                     | 3        | -       |
| 50-59 years . . . . .       | 21,454                          | 19,059                 | 2,395    | -       | 18,976      | 17,155                 | 1,821    | -       | 2,465         | 1,896                  | 569      | -       | 13                 | 8                      | 5        | -       |
| 60-64 years . . . . .       | 7,127                           | 5,649                  | 1,478    | -       | 6,525       | 5,251                  | 1,274    | -       | 600           | 397                    | 203      | -       | 2                  | 1                      | 1        | -       |
| 65 years and over . . . . . | 16,867                          | 7,844                  | 9,023    | -       | 15,832      | 7,501                  | 8,331    | -       | 989           | 342                    | 647      | -       | 46                 | 1                      | 45       | -       |
| Unknown . . . . .           | 28,892                          | 819                    | 656      | 27,417  | 23,591      | 691                    | 581      | 22,319  | 4,367         | 116                    | 64       | 4,187   | 934                | 12                     | 11       | 911     |
| Percent distribution        |                                 |                        |          |         |             |                        |          |         |               |                        |          |         |                    |                        |          |         |
| All ages . . . . .          | 100.0                           | 84.3                   | 15.7     | ...     | 100.0       | 84.7                   | 15.3     | ...     | 100.0         | 82.5                   | 17.5     | ...     | 100.0              | 47.0                   | 53.0     | ...     |
| Under 30 years . . . . .    | 100.0                           | 94.5                   | 5.5      | ...     | 100.0       | 95.7                   | 4.3      | ...     | 100.0         | 92.1                   | 7.9      | ...     | 100.0              | 69.2                   | 30.8     | ...     |
| 30-39 years . . . . .       | 100.0                           | 90.7                   | 9.3      | ...     | 100.0       | 92.3                   | 7.7      | ...     | 100.0         | 82.9                   | 17.1     | ...     | 100.0              | 95.0                   | 5.0      | ...     |
| 40-49 years . . . . .       | 100.0                           | 89.6                   | 10.4     | ...     | 100.0       | 91.0                   | 9.0      | ...     | 100.0         | 79.7                   | 20.3     | ...     | 100.0              | 80.0                   | 20.0     | ...     |
| 50-59 years . . . . .       | 100.0                           | 88.8                   | 11.2     | ...     | 100.0       | 90.4                   | 9.6      | ...     | 100.0         | 76.9                   | 23.1     | ...     | 100.0              | 61.5                   | 38.5     | ...     |
| 60-64 years . . . . .       | 100.0                           | 79.3                   | 20.7     | ...     | 100.0       | 80.5                   | 19.5     | ...     | 100.0         | 66.2                   | 33.8     | ...     | 100.0              | 50.0                   | 50.0     | ...     |
| 65 years and over . . . . . | 100.0                           | 46.5                   | 53.5     | ...     | 100.0       | 47.4                   | 52.6     | ...     | 100.0         | 34.6                   | 65.4     | ...     | 100.0              | 2.2                    | 97.8     | ...     |
| Unknown . . . . .           | 100.0                           | 55.5                   | 44.5     | ...     | 100.0       | 54.3                   | 45.7     | ...     | 100.0         | 64.4                   | 35.6     | ...     | 100.0              | 52.2                   | 47.8     | ...     |

**Table 3. Number of active pharmacists, by age and work State: United States, 1978-79**

| Work State           | All<br>active<br>pharmacists | Age               |                |                |                |                |                      | Unknown |
|----------------------|------------------------------|-------------------|----------------|----------------|----------------|----------------|----------------------|---------|
|                      |                              | Under 30<br>years | 30-39<br>years | 40-49<br>years | 50-59<br>years | 60-64<br>years | 65 years<br>and over |         |
| All areas            | 112,335                      | 23,604            | 32,264         | 23,096         | 19,059         | 5,649          | 7,844                | 819     |
| Alabama              | 2,327                        | 506               | 767            | 488            | 416            | 66             | 55                   | 29      |
| Alaska               | 124                          | 30                | 45             | 23             | 19             | 1              | 5                    | 1       |
| Arizona              | 1,627                        | 274               | 423            | 324            | 343            | 107            | 149                  | 7       |
| Arkansas             | 1,426                        | 302               | 496            | 256            | 242            | 40             | 89                   | 1       |
| California           | 7,898                        | 1,344             | 2,584          | 1,829          | 1,315          | 369            | 395                  | 62      |
| Colorado             | 1,502                        | 199               | 496            | 278            | 295            | 119            | 109                  | 6       |
| Connecticut          | 1,790                        | 372               | 396            | 427            | 317            | 110            | 142                  | 26      |
| Delaware             | 205                          | 26                | 50             | 69             | 41             | 9              | 7                    | 3       |
| District of Columbia | 555                          | 86                | 153            | 108            | 123            | 35             | 49                   | 1       |
| Florida              | 4,414                        | 468               | 1,055          | 1,108          | 935            | 272            | 361                  | 215     |
| Georgia              | 2,462                        | 607               | 891            | 463            | 354            | 78             | 63                   | 6       |
| Hawaii               | 258                          | 44                | 89             | 54             | 44             | 11             | 12                   | 4       |
| Idaho                | 474                          | 85                | 134            | 105            | 111            | 21             | 17                   | 1       |
| Illinois             | 4,996                        | 1,069             | 1,536          | 949            | 744            | 263            | 416                  | 19      |
| Indiana              | 3,065                        | 629               | 886            | 588            | 590            | 200            | 165                  | 7       |
| Iowa                 | 1,666                        | 494               | 503            | 272            | 222            | 84             | 85                   | 6       |
| Kansas               | 1,193                        | 295               | 306            | 233            | 203            | 46             | 117                  | 3       |
| Kentucky             | 1,799                        | 558               | 496            | 327            | 284            | 46             | 84                   | 4       |
| Louisiana            | 1,655                        | 528               | 576            | 254            | 206            | 36             | 46                   | 9       |
| Maine                | 537                          | 163               | 129            | 96             | 76             | 18             | 39                   | 16      |
| Maryland             | 2,075                        | 335               | 626            | 444            | 357            | 146            | 154                  | 13      |
| Massachusetts        | 4,263                        | 878               | 914            | 898            | 762            | 315            | 384                  | 112     |
| Michigan             | 5,986                        | 1,490             | 1,433          | 1,214          | 1,088          | 297            | 458                  | 6       |
| Minnesota            | 2,527                        | 558               | 726            | 496            | 425            | 129            | 157                  | 36      |
| Mississippi          | 1,501                        | 389               | 516            | 236            | 224            | 53             | 78                   | 5       |
| Missouri             | 2,952                        | 747               | 790            | 500            | 398            | 133            | 382                  | 2       |
| Montana              | 474                          | 103               | 142            | 88             | 86             | 26             | 24                   | 5       |
| Nebraska             | 1,203                        | 265               | 364            | 223            | 165            | 84             | 100                  | 2       |
| Nevada               | 327                          | 74                | 96             | 59             | 41             | 30             | 23                   | 4       |
| New Hampshire        | 408                          | 111               | 126            | 82             | 38             | 14             | 32                   | 5       |
| New Jersey           | 3,568                        | 443               | 883            | 994            | 648            | 216            | 377                  | 7       |
| New Mexico           | 709                          | 172               | 211            | 119            | 109            | 37             | 57                   | 4       |
| New York             | 7,584                        | 1,097             | 1,986          | 1,852          | 1,321          | 481            | 835                  | 12      |
| North Carolina       | 2,912                        | 699               | 898            | 558            | 514            | 106            | 123                  | 14      |
| North Dakota         | 424                          | 124               | 125            | 80             | 61             | 13             | 19                   | 2       |
| Ohio                 | 4,202                        | 969               | 1,077          | 927            | 757            | 212            | 249                  | 11      |
| Oklahoma             | 1,474                        | 351               | 548            | 220            | 212            | 60             | 79                   | 4       |
| Oregon               | 1,396                        | 232               | 447            | 316            | 236            | 87             | 77                   | 1       |
| Pennsylvania         | 5,990                        | 1,210             | 1,380          | 1,286          | 1,119          | 331            | 648                  | 16      |
| Rhode Island         | 704                          | 221               | 117            | 160            | 116            | 41             | 46                   | 3       |
| South Carolina       | 1,818                        | 528               | 562            | 295            | 275            | 62             | 95                   | 1       |
| South Dakota         | 409                          | 131               | 93             | 93             | 51             | 20             | 20                   | 1       |
| Tennessee            | 2,577                        | 619               | 859            | 463            | 353            | 99             | 133                  | 51      |
| Texas                | 6,514                        | 1,557             | 2,292          | 1,188          | 971            | 233            | 255                  | 18      |
| Utah                 | 787                          | 109               | 225            | 176            | 187            | 43             | 40                   | 7       |
| Vermont              | 211                          | 41                | 69             | 38             | 30             | 14             | 14                   | 5       |
| Virginia             | 2,633                        | 656               | 789            | 526            | 422            | 102            | 125                  | 13      |
| Washington           | 2,569                        | 420               | 692            | 553            | 575            | 174            | 145                  | 10      |
| West Virginia        | 920                          | 269               | 258            | 152            | 160            | 37             | 43                   | 1       |
| Wisconsin            | 2,747                        | 610               | 845            | 511            | 415            | 104            | 258                  | 4       |
| Wyoming              | 244                          | 74                | 78             | 46             | 27             | 9              | 7                    | 3       |
| U.S. territories     | 89                           | 9                 | 23             | 23             | 21             | 4              | 1                    | 8       |
| Foreign countries    | 165                          | 34                | 63             | 39             | 15             | 6              | 1                    | 7       |

**Table 4. Number of active pharmacists, by sex and work State: United States, 1978-79**

| <i>Work State</i>              | <i>All active pharmacists</i> | <i>Male</i> | <i>Female</i> | <i>Sex unknown</i> |
|--------------------------------|-------------------------------|-------------|---------------|--------------------|
| All areas . . . . .            | 112,335                       | 94,158      | 18,115        | 62                 |
| Alabama . . . . .              | 2,327                         | 1,992       | 335           | -                  |
| Alaska . . . . .               | 124                           | 92          | 32            | -                  |
| Arizona . . . . .              | 1,627                         | 1,369       | 256           | 2                  |
| Arkansas . . . . .             | 1,426                         | 1,262       | 164           | -                  |
| California . . . . .           | 7,898                         | 6,534       | 1,358         | 6                  |
| Colorado . . . . .             | 1,502                         | 1,224       | 277           | 1                  |
| Connecticut . . . . .          | 1,790                         | 1,488       | 302           | -                  |
| Delaware . . . . .             | 205                           | 166         | 39            | -                  |
| District of Columbia . . . . . | 555                           | 421         | 132           | 2                  |
| Florida . . . . .              | 4,414                         | 3,782       | 621           | 11                 |
| Georgia . . . . .              | 2,462                         | 2,049       | 410           | 3                  |
| Hawaii . . . . .               | 258                           | 196         | 62            | -                  |
| Idaho . . . . .                | 474                           | 398         | 76            | -                  |
| Illinois . . . . .             | 4,996                         | 4,173       | 820           | 3                  |
| Indiana . . . . .              | 3,065                         | 2,512       | 551           | 2                  |
| Iowa . . . . .                 | 1,666                         | 1,370       | 295           | 1                  |
| Kansas . . . . .               | 1,193                         | 1,031       | 160           | 2                  |
| Kentucky . . . . .             | 1,799                         | 1,529       | 268           | 2                  |
| Louisiana . . . . .            | 1,655                         | 1,338       | 316           | 1                  |
| Maine . . . . .                | 537                           | 475         | 62            | -                  |
| Maryland . . . . .             | 2,075                         | 1,719       | 355           | 1                  |
| Massachusetts . . . . .        | 4,263                         | 3,691       | 572           | -                  |
| Michigan . . . . .             | 5,986                         | 4,991       | 995           | -                  |
| Minnesota . . . . .            | 2,527                         | 2,135       | 391           | 1                  |
| Mississippi . . . . .          | 1,501                         | 1,305       | 196           | -                  |
| Missouri . . . . .             | 2,952                         | 2,542       | 409           | 1                  |
| Montana . . . . .              | 474                           | 398         | 76            | -                  |
| Nebraska . . . . .             | 1,203                         | 1,003       | 200           | -                  |
| Nevada . . . . .               | 327                           | 283         | 44            | -                  |
| New Hampshire . . . . .        | 408                           | 358         | 50            | -                  |
| New Jersey . . . . .           | 3,568                         | 3,138       | 429           | 1                  |
| New Mexico . . . . .           | 709                           | 610         | 97            | 2                  |
| New York . . . . .             | 7,584                         | 6,741       | 843           | -                  |
| North Carolina . . . . .       | 2,912                         | 2,393       | 515           | 4                  |
| North Dakota . . . . .         | 424                           | 334         | 90            | -                  |
| Ohio . . . . .                 | 4,202                         | 3,478       | 723           | 1                  |
| Oklahoma . . . . .             | 1,474                         | 1,232       | 242           | -                  |
| Oregon . . . . .               | 1,396                         | 1,094       | 301           | 1                  |
| Pennsylvania . . . . .         | 5,990                         | 5,031       | 958           | 1                  |
| Rhode Island . . . . .         | 704                           | 560         | 144           | -                  |
| South Carolina . . . . .       | 1,818                         | 1,508       | 310           | -                  |
| South Dakota . . . . .         | 409                           | 305         | 104           | -                  |
| Tennessee . . . . .            | 2,577                         | 2,138       | 436           | 3                  |
| Texas . . . . .                | 6,514                         | 5,319       | 1,192         | 3                  |
| Utah . . . . .                 | 787                           | 703         | 84            | -                  |
| Vermont . . . . .              | 211                           | 185         | 26            | -                  |
| Virginia . . . . .             | 2,633                         | 2,099       | 533           | 1                  |
| Washington . . . . .           | 2,569                         | 1,985       | 580           | 4                  |
| West Virginia . . . . .        | 920                           | 745         | 175           | -                  |
| Wisconsin . . . . .            | 2,747                         | 2,370       | 377           | -                  |
| Wyoming . . . . .              | 244                           | 181         | 62            | 1                  |
| U.S. territories . . . . .     | 89                            | 61          | 27            | 1                  |
| Foreign countries . . . . .    | 165                           | 122         | 43            | -                  |

Table 5. Number of active pharmacists, by race and work State: United States, 1978-79

| <i>Work State</i>              | <i>All active pharmacists</i> | <i>White</i> | <i>Black</i> | <i>American Indian</i> | <i>Asian</i> | <i>Other</i> | <i>Race unknown</i> |
|--------------------------------|-------------------------------|--------------|--------------|------------------------|--------------|--------------|---------------------|
| All areas . . . . .            | 112,335                       | 90,422       | 1,730        | 144                    | 3,048        | 94           | 16,897              |
| Alabama . . . . .              | 2,327                         | 2,230        | 36           | 2                      | 7            | -            | 52                  |
| Alaska . . . . .               | 124                           | 101          | -            | 1                      | 4            | -            | 18                  |
| Arizona . . . . .              | 1,627                         | 1,502        | 11           | 3                      | 39           | 1            | 71                  |
| Arkansas . . . . .             | 1,426                         | 1,310        | 9            | 1                      | 10           | -            | 96                  |
| California . . . . .           | 7,898                         | 5,671        | 116          | 25                     | 1,408        | 24           | 654                 |
| Colorado . . . . .             | 1,502                         | 1,344        | 7            | 4                      | 34           | 1            | 112                 |
| Connecticut . . . . .          | 1,790                         | 1,640        | 14           | 1                      | 6            | 1            | 128                 |
| Delaware . . . . .             | 205                           | 163          | 1            | -                      | 4            | 1            | 36                  |
| District of Columbia . . . . . | 555                           | 266          | 173          | -                      | 28           | 1            | 87                  |
| Florida . . . . .              | 4,414                         | 179          | 4            | -                      | 2            | -            | 4,229               |
| Georgia . . . . .              | 2,462                         | 2,215        | 47           | 1                      | 23           | -            | 176                 |
| Hawaii . . . . .               | 258                           | 104          | -            | 1                      | 119          | -            | 34                  |
| Idaho . . . . .                | 474                           | 435          | -            | 1                      | 7            | -            | 31                  |
| Illinois . . . . .             | 4,996                         | 4,433        | 140          | 2                      | 177          | 3            | 241                 |
| Indiana . . . . .              | 3,065                         | 2,825        | 36           | 1                      | 22           | -            | 181                 |
| Iowa . . . . .                 | 1,666                         | 1,548        | 2            | -                      | 10           | 1            | 105                 |
| Kansas . . . . .               | 1,193                         | 1,112        | 2            | 4                      | 6            | 3            | 66                  |
| Kentucky . . . . .             | 1,799                         | 1,708        | 9            | 2                      | 1            | -            | 79                  |
| Louisiana . . . . .            | 1,655                         | 1,456        | 89           | 4                      | 31           | 1            | 74                  |
| Maine . . . . .                | 537                           | 501          | 1            | -                      | -            | -            | 35                  |
| Maryland . . . . .             | 2,075                         | 1,784        | 64           | 1                      | 54           | 1            | 171                 |
| Massachusetts . . . . .        | 4,263                         | 3,489        | 13           | 3                      | 35           | 11           | 712                 |
| Michigan . . . . .             | 5,986                         | 5,004        | 141          | 9                      | 79           | 3            | 750                 |
| Minnesota . . . . .            | 2,527                         | 2,419        | 5            | 2                      | 16           | -            | 85                  |
| Mississippi . . . . .          | 1,501                         | 1,424        | 28           | -                      | 22           | 1            | 26                  |
| Missouri . . . . .             | 2,952                         | 2,758        | 78           | 5                      | 20           | 1            | 90                  |
| Montana . . . . .              | 474                           | 448          | -            | 1                      | -            | -            | 25                  |
| Nebraska . . . . .             | 1,203                         | 1,151        | 5            | -                      | 10           | -            | 37                  |
| Nevada . . . . .               | 327                           | 268          | -            | 1                      | 11           | -            | 47                  |
| New Hampshire . . . . .        | 408                           | 351          | -            | -                      | 2            | -            | 55                  |
| New Jersey . . . . .           | 3,568                         | 3,173        | 47           | 2                      | 40           | -            | 306                 |
| New Mexico . . . . .           | 709                           | 598          | 2            | 3                      | 12           | 1            | 93                  |
| New York . . . . .             | 7,584                         | 6,754        | 98           | 2                      | 334          | 8            | 388                 |
| North Carolina . . . . .       | 2,912                         | 2,748        | 36           | 3                      | 12           | -            | 113                 |
| North Dakota . . . . .         | 424                           | 402          | -            | 1                      | -            | -            | 21                  |
| Ohio . . . . .                 | 4,202                         | 3,892        | 61           | 3                      | 38           | 1            | 207                 |
| Oklahoma . . . . .             | 1,474                         | 1,333        | 13           | 25                     | 9            | -            | 94                  |
| Oregon . . . . .               | 1,396                         | 1,280        | 2            | 4                      | 63           | 6            | 41                  |
| Pennsylvania . . . . .         | 5,990                         | 142          | 5            | -                      | 5            | -            | 5,838               |
| Rhode Island . . . . .         | 704                           | 665          | 3            | 1                      | 8            | -            | 27                  |
| South Carolina . . . . .       | 1,818                         | 1,749        | 32           | -                      | 8            | -            | 29                  |
| South Dakota . . . . .         | 409                           | 380          | -            | 1                      | 2            | -            | 26                  |
| Tennessee . . . . .            | 2,577                         | 2,397        | 24           | 2                      | 19           | 1            | 134                 |
| Texas . . . . .                | 6,514                         | 5,711        | 278          | 13                     | 125          | 11           | 376                 |
| Utah . . . . .                 | 787                           | 665          | -            | -                      | 23           | -            | 99                  |
| Vermont . . . . .              | 211                           | 194          | -            | -                      | 1            | -            | 16                  |
| Virginia . . . . .             | 2,633                         | 2,445        | 65           | 2                      | 22           | -            | 99                  |
| Washington . . . . .           | 2,569                         | 2,174        | 15           | 5                      | 110          | 7            | 258                 |
| West Virginia . . . . .        | 920                           | 895          | 4            | -                      | 1            | -            | 20                  |
| Wisconsin . . . . .            | 2,747                         | 2,653        | 8            | 2                      | 18           | 3            | 63                  |
| Wyoming . . . . .              | 244                           | 222          | -            | -                      | 1            | -            | 21                  |
| U.S. territories . . . . .     | 89                            | 28           | 5            | -                      | 1            | 2            | 53                  |
| Foreign countries . . . . .    | 165                           | 83           | 1            | -                      | 9            | -            | 72                  |



Table 6. Number of active pharmacists, by Hispanic origin and work State: United States, 1978-79

| <i>Work State</i>              | <i>All active pharmacists</i> | <i>Hispanic</i> | <i>Non-Hispanic</i> | <i>Origin unknown</i> |
|--------------------------------|-------------------------------|-----------------|---------------------|-----------------------|
| All areas . . . . .            | 112,335                       | 1,671           | 86,481              | 24,183                |
| Alabama . . . . .              | 2,327                         | 13              | 2,275               | 39                    |
| Alaska . . . . .               | 124                           | -               | 103                 | 21                    |
| Arizona . . . . .              | 1,627                         | 56              | 1,456               | 115                   |
| Arkansas . . . . .             | 1,426                         | -               | 1,326               | 100                   |
| California . . . . .           | 7,898                         | 210             | 6,998               | 690                   |
| Colorado . . . . .             | 1,502                         | 26              | 1,362               | 114                   |
| Connecticut . . . . .          | 1,790                         | 10              | 1,657               | 123                   |
| Delaware . . . . .             | 205                           | 2               | 187                 | 16                    |
| District of Columbia . . . . . | 555                           | 7               | 466                 | 82                    |
| Florida . . . . .              | 4,414                         | 227             | 2,480               | 1,707                 |
| Georgia . . . . .              | 2,462                         | 16              | 2,279               | 167                   |
| Hawaii . . . . .               | 258                           | -               | 222                 | 36                    |
| Idaho . . . . .                | 474                           | 2               | 438                 | 34                    |
| Illinois . . . . .             | 4,996                         | 37              | 4,683               | 276                   |
| Indiana . . . . .              | 3,065                         | 15              | 2,829               | 221                   |
| Iowa . . . . .                 | 1,666                         | 4               | 1,547               | 115                   |
| Kansas . . . . .               | 1,193                         | 8               | 1,116               | 69                    |
| Kentucky . . . . .             | 1,799                         | 5               | 1,721               | 73                    |
| Louisiana . . . . .            | 1,655                         | 40              | 1,542               | 73                    |
| Maine . . . . .                | 537                           | 3               | 503                 | 31                    |
| Maryland . . . . .             | 2,075                         | 12              | 1,895               | 168                   |
| Massachusetts . . . . .        | 4,263                         | 3               | 3,555               | 705                   |
| Michigan . . . . .             | 5,986                         | 2               | 119                 | 5,865                 |
| Minnesota . . . . .            | 2,527                         | 1               | 41                  | 2,485                 |
| Mississippi . . . . .          | 1,501                         | 8               | 1,468               | 25                    |
| Missouri . . . . .             | 2,952                         | 21              | 2,838               | 93                    |
| Montana . . . . .              | 474                           | 1               | 444                 | 29                    |
| Nebraska . . . . .             | 1,203                         | 5               | 1,157               | 41                    |
| Nevada . . . . .               | 327                           | 6               | 276                 | 45                    |
| New Hampshire . . . . .        | 408                           | 3               | 353                 | 52                    |
| New Jersey . . . . .           | 3,568                         | 18              | 3,332               | 218                   |
| New Mexico . . . . .           | 709                           | 86              | 528                 | 95                    |
| New York . . . . .             | 7,584                         | 135             | 7,120               | 329                   |
| North Carolina . . . . .       | 2,912                         | 4               | 2,778               | 130                   |
| North Dakota . . . . .         | 424                           | 1               | 394                 | 29                    |
| Ohio . . . . .                 | 4,202                         | 20              | 3,989               | 193                   |
| Oklahoma . . . . .             | 1,474                         | 12              | 1,368               | 94                    |
| Oregon . . . . .               | 1,396                         | -               | 94                  | 1,302                 |
| Pennsylvania . . . . .         | 5,990                         | 71              | 5,708               | 211                   |
| Rhode Island . . . . .         | 704                           | 1               | 671                 | 32                    |
| South Carolina . . . . .       | 1,818                         | -               | 30                  | 1,788                 |
| South Dakota . . . . .         | 409                           | -               | 377                 | 32                    |
| Tennessee . . . . .            | 2,577                         | 5               | 2,449               | 123                   |
| Texas . . . . .                | 6,514                         | 523             | 5,611               | 380                   |
| Utah . . . . .                 | 787                           | 4               | 665                 | 118                   |
| Vermont . . . . .              | 211                           | 2               | 195                 | 14                    |
| Virginia . . . . .             | 2,633                         | -               | 98                  | 2,535                 |
| Washington . . . . .           | 2,569                         | 13              | 2,475               | 81                    |
| West Virginia . . . . .        | 920                           | 5               | 896                 | 19                    |
| Wisconsin . . . . .            | 2,747                         | -               | 31                  | 2,716                 |
| Wyoming . . . . .              | 244                           | 5               | 217                 | 22                    |
| U.S. territories . . . . .     | 89                            | 22              | 28                  | 39                    |
| Foreign countries . . . . .    | 165                           | 1               | 91                  | 73                    |

**Table 7. Number and percent distribution of active pharmacists by age, according to race and Hispanic origin: United States, 1978-79**

| Race and Hispanic origin          | Total   | Age               |                |                |                |                |                      | Unknown |
|-----------------------------------|---------|-------------------|----------------|----------------|----------------|----------------|----------------------|---------|
|                                   |         | Under 30<br>years | 30-39<br>years | 40-49<br>years | 50-59<br>years | 60-64<br>years | 65 years<br>and over |         |
| Number                            |         |                   |                |                |                |                |                      |         |
| All active pharmacists . . . . .  | 112,335 | 23,604            | 32,264         | 23,096         | 19,059         | 5,649          | 7,844                | 819     |
| Race                              |         |                   |                |                |                |                |                      |         |
| White . . . . .                   | 90,422  | 18,683            | 26,299         | 18,564         | 15,436         | 4,637          | 6,638                | 165     |
| Black . . . . .                   | 1,730   | 344               | 577            | 346            | 325            | 60             | 78                   | -       |
| American Indian . . . . .         | 144     | 33                | 42             | 25             | 30             | 7              | 7                    | -       |
| Asian . . . . .                   | 3,048   | 941               | 1,230          | 502            | 288            | 59             | 28                   | -       |
| Other . . . . .                   | 94      | 27                | 42             | 10             | 12             | 1              | 2                    | -       |
| Unknown . . . . .                 | 16,897  | 3,576             | 4,074          | 3,649          | 2,968          | 885            | 1,091                | 654     |
| Hispanic origin                   |         |                   |                |                |                |                |                      |         |
| Hispanic . . . . .                | 1,671   | 368               | 480            | 399            | 313            | 49             | 61                   | 1       |
| Non-Hispanic . . . . .            | 86,481  | 17,572            | 25,175         | 17,872         | 14,824         | 4,490          | 6,399                | 149     |
| Unknown . . . . .                 | 24,183  | 5,664             | 6,609          | 4,825          | 3,922          | 1,110          | 1,384                | 669     |
| Percent distribution <sup>1</sup> |         |                   |                |                |                |                |                      |         |
| All active pharmacists . . . . .  | 100.0   | 21.2              | 28.9           | 20.7           | 17.1           | 5.1            | 7.0                  | ...     |
| Race                              |         |                   |                |                |                |                |                      |         |
| White . . . . .                   | 100.0   | 20.7              | 29.1           | 20.6           | 17.1           | 5.1            | 7.4                  | ...     |
| Black . . . . .                   | 100.0   | 19.9              | 33.4           | 20.0           | 18.8           | 3.5            | 4.5                  | ...     |
| American Indian . . . . .         | 100.0   | 22.9              | 29.2           | 17.4           | 20.8           | 4.9            | 4.9                  | ...     |
| Asian . . . . .                   | 100.0   | 30.9              | 40.4           | 16.5           | 9.4            | 1.9            | 0.9                  | ...     |
| Other . . . . .                   | 100.0   | 28.7              | 44.7           | 10.6           | 12.8           | 1.1            | 2.1                  | ...     |
| Hispanic origin                   |         |                   |                |                |                |                |                      |         |
| Hispanic . . . . .                | 100.0   | 22.0              | 28.7           | 23.9           | 18.7           | 2.9            | 3.6                  | ...     |
| Non-Hispanic . . . . .            | 100.0   | 20.4              | 29.2           | 20.7           | 17.2           | 5.2            | 7.4                  | ...     |

<sup>1</sup>Percents may not add to 100.0 because of rounding.

**Table 8. Number and percent distribution of active pharmacists by sex, according to race and Hispanic origin: United States, 1978-79**

| Race and Hispanic origin | Total   | Male   | Female | Sex     |
|--------------------------|---------|--------|--------|---------|
|                          |         |        |        | unknown |
| Number                   |         |        |        |         |
| All active pharmacists   | 112,335 | 94,158 | 18,115 | 62      |
| Race                     |         |        |        |         |
| White                    | 90,422  | 76,672 | 13,750 | -       |
| Black                    | 1,730   | 1,212  | 518    | -       |
| American Indian          | 144     | 127    | 17     | -       |
| Asian                    | 3,048   | 2,099  | 949    | -       |
| Other                    | 94      | 77     | 17     | -       |
| Unknown                  | 16,897  | 13,971 | 2,864  | 62      |
| Hispanic origin          |         |        |        |         |
| Hispanic                 | 1,671   | 1,224  | 447    | -       |
| Non-Hispanic             | 86,481  | 72,892 | 13,586 | 3       |
| Unknown                  | 24,183  | 20,042 | 4,082  | 59      |
| Percent distribution     |         |        |        |         |
| All active pharmacists   | 100.0   | 83.9   | 16.1   | ...     |
| Race                     |         |        |        |         |
| White                    | 100.0   | 84.8   | 15.2   | ...     |
| Black                    | 100.0   | 70.1   | 29.9   | ...     |
| American Indian          | 100.0   | 88.2   | 11.8   | ...     |
| Asian                    | 100.0   | 68.9   | 31.1   | ...     |
| Other                    | 100.0   | 81.9   | 18.1   | ...     |
| Hispanic origin          |         |        |        |         |
| Hispanic                 | 100.0   | 73.2   | 26.8   | ...     |
| Non-Hispanic             | 100.0   | 84.3   | 15.7   | ...     |

**Table 9. Number and percent distribution of active pharmacists by geographic region of pharmacy school of graduation, according to race and Hispanic origin: United States, 1978-79**

| Race and Hispanic origin          | Total   | Geographic region of pharmacy school |        |           |               |                |                 | Unknown |
|-----------------------------------|---------|--------------------------------------|--------|-----------|---------------|----------------|-----------------|---------|
|                                   |         | South                                | West   | Northeast | North Central | U.S. territory | Foreign country |         |
| Number                            |         |                                      |        |           |               |                |                 |         |
| All active pharmacists            | 112,335 | 31,280                               | 13,126 | 25,350    | 33,041        | 52             | 901             | 8,585   |
| Race                              |         |                                      |        |           |               |                |                 |         |
| White                             | 90,422  | 27,198                               | 11,183 | 18,018    | 30,516        | 29             | 295             | 3,183   |
| Black                             | 1,730   | 1,128                                | 62     | 170       | 327           | 1              | 7               | 35      |
| American Indian                   | 144     | 60                                   | 41     | 10        | 31            | -              | -               | 2       |
| Asian                             | 3,048   | 359                                  | 1,615  | 199       | 403           | -              | 448             | 24      |
| Other                             | 94      | 19                                   | 34     | 16        | 16            | -              | 8               | 1       |
| Unknown                           | 16,897  | 2,516                                | 191    | 6,937     | 1,748         | 22             | 143             | 5,340   |
| Hispanic                          | 1,671   | 720                                  | 364    | 196       | 104           | 36             | 157             | 94      |
| Non-Hispanic                      | 86,481  | 25,907                               | 11,254 | 23,920    | 21,517        | 4              | 727             | 3,152   |
| Unknown                           | 24,183  | 4,653                                | 1,508  | 1,234     | 11,420        | 12             | 17              | 5,339   |
| Percent distribution <sup>1</sup> |         |                                      |        |           |               |                |                 |         |
| All active pharmacists            | 100.0   | 30.7                                 | 12.9   | 24.9      | 32.4          | 0.1            | 1.0             | ...     |
| Race                              |         |                                      |        |           |               |                |                 |         |
| White                             | 100.0   | 31.2                                 | 12.8   | 20.6      | 35.0          | 0.0            | 0.3             | ...     |
| Black                             | 100.0   | 66.6                                 | 3.7    | 10.0      | 19.3          | 0.1            | 0.4             | ...     |
| American Indian                   | 100.0   | 42.2                                 | 28.9   | 7.0       | 21.8          | -              | -               | ...     |
| Asian                             | 100.0   | 11.9                                 | 53.4   | 6.6       | 13.3          | -              | 14.8            | ...     |
| Other                             | 100.0   | 20.4                                 | 36.6   | 17.2      | 17.2          | -              | 8.6             | ...     |
| Hispanic                          | 100.0   | 45.7                                 | 23.1   | 12.4      | 6.6           | 2.3            | 10.0            | ...     |
| Non-Hispanic                      | 100.0   | 31.1                                 | 13.5   | 28.7      | 25.8          | -              | -               | ...     |

<sup>1</sup>Percents may not add to 100.0 because of rounding.

**Table 10. Number of active pharmacists, by employment setting and work State: United States, 1978-79**

| <i>Work State</i>              | <i>All active pharmacists</i> | <i>Independent community pharmacy</i> | <i>Chain pharmacy</i> | <i>Hospital</i> | <i>Pharmaceutical manufacturer</i> | <i>Other</i> | <i>Unknown</i> |
|--------------------------------|-------------------------------|---------------------------------------|-----------------------|-----------------|------------------------------------|--------------|----------------|
| All areas . . . . .            | 112,335                       | 38,417                                | 28,413                | 25,119          | 2,477                              | 3,844        | 14,065         |
| Alabama . . . . .              | 2,327                         | 1,142                                 | 580                   | 335             | 20                                 | 51           | 199            |
| Alaska . . . . .               | 124                           | 28                                    | 30                    | 40              | -                                  | 4            | 22             |
| Arizona . . . . .              | 1,627                         | 216                                   | 435                   | 364             | 19                                 | 41           | 552            |
| Arkansas . . . . .             | 1,426                         | 706                                   | 269                   | 308             | 5                                  | 40           | 98             |
| California . . . . .           | 7,898                         | 2,091                                 | 1,908                 | 2,720           | 149                                | 277          | 753            |
| Colorado . . . . .             | 1,502                         | 511                                   | 402                   | 380             | 23                                 | 28           | 158            |
| Connecticut . . . . .          | 1,790                         | 900                                   | 323                   | 314             | 34                                 | 59           | 160            |
| Delaware . . . . .             | 205                           | 40                                    | 88                    | 33              | 14                                 | 6            | 24             |
| District of Columbia . . . . . | 555                           | 88                                    | 109                   | 195             | 5                                  | 63           | 95             |
| Florida . . . . .              | 4,414                         | 1,279                                 | 1,294                 | 879             | 44                                 | 98           | 820            |
| Georgia . . . . .              | 2,462                         | 945                                   | 638                   | 529             | 35                                 | 85           | 230            |
| Hawaii . . . . .               | 258                           | 34                                    | 81                    | 90              | 4                                  | 7            | 42             |
| Idaho . . . . .                | 474                           | 196                                   | 137                   | 88              | 5                                  | 12           | 36             |
| Illinois . . . . .             | 4,996                         | 1,720                                 | 1,300                 | 1,386           | 167                                | 91           | 332            |
| Indiana . . . . .              | 3,065                         | 809                                   | 1,097                 | 568             | 279                                | 86           | 226            |
| Iowa . . . . .                 | 1,666                         | 706                                   | 381                   | 376             | 17                                 | 63           | 123            |
| Kansas . . . . .               | 1,193                         | 497                                   | 294                   | 256             | 16                                 | 32           | 98             |
| Kentucky . . . . .             | 1,799                         | 748                                   | 481                   | 397             | 20                                 | 44           | 109            |
| Louisiana . . . . .            | 1,655                         | 614                                   | 475                   | 368             | 34                                 | 56           | 108            |
| Maine . . . . .                | 537                           | 204                                   | 154                   | 83              | 1                                  | 7            | 88             |
| Maryland . . . . .             | 2,075                         | 521                                   | 724                   | 448             | 23                                 | 179          | 180            |
| Massachusetts . . . . .        | 4,263                         | 1,791                                 | 725                   | 767             | 66                                 | 123          | 791            |
| Michigan . . . . .             | 5,986                         | 1,961                                 | 1,538                 | 1,454           | 203                                | 111          | 719            |
| Minnesota . . . . .            | 2,527                         | 968                                   | 494                   | 500             | 34                                 | 51           | 480            |
| Mississippi . . . . .          | 1,501                         | 692                                   | 246                   | 232             | 13                                 | 21           | 297            |
| Missouri . . . . .             | 2,952                         | 1,129                                 | 811                   | 754             | 79                                 | 93           | 86             |
| Montana . . . . .              | 474                           | 204                                   | 115                   | 94              | 4                                  | 20           | 37             |
| Nebraska . . . . .             | 1,203                         | 485                                   | 227                   | 239             | 14                                 | 57           | 181            |
| Nevada . . . . .               | 327                           | 83                                    | 122                   | 64              | 2                                  | 5            | 51             |
| New Hampshire . . . . .        | 408                           | 171                                   | 92                    | 73              | 3                                  | 7            | 62             |
| New Jersey . . . . .           | 3,568                         | 1,702                                 | 576                   | 538             | 324                                | 127          | 301            |
| New Mexico . . . . .           | 709                           | 252                                   | 157                   | 154             | 7                                  | 34           | 105            |
| New York . . . . .             | 7,584                         | 3,214                                 | 1,431                 | 1,805           | 351                                | 271          | 512            |
| North Carolina . . . . .       | 2,912                         | 1,089                                 | 964                   | 523             | 46                                 | 55           | 235            |
| North Dakota . . . . .         | 424                           | 182                                   | 66                    | 125             | 5                                  | 19           | 27             |
| Ohio . . . . .                 | 4,202                         | 1,350                                 | 1,491                 | 949             | 88                                 | 111          | 213            |
| Oklahoma . . . . .             | 1,474                         | 529                                   | 393                   | 364             | 12                                 | 53           | 123            |
| Oregon . . . . .               | 1,396                         | 496                                   | 365                   | 325             | 10                                 | 44           | 156            |
| Pennsylvania . . . . .         | 5,990                         | 523                                   | 1,109                 | 1,086           | 66                                 | 635          | 2,571          |
| Rhode Island . . . . .         | 704                           | 256                                   | 125                   | 158             | 8                                  | 24           | 133            |
| South Carolina . . . . .       | 1,818                         | 770                                   | 498                   | 295             | 21                                 | 72           | 162            |
| South Dakota . . . . .         | 409                           | 189                                   | 64                    | 108             | 4                                  | 15           | 29             |
| Tennessee . . . . .            | 2,577                         | 1,011                                 | 652                   | 570             | 38                                 | 87           | 219            |
| Texas . . . . .                | 6,514                         | 2,073                                 | 2,194                 | 1,442           | 85                                 | 166          | 554            |
| Utah . . . . .                 | 787                           | 186                                   | 204                   | 146             | 14                                 | 55           | 182            |
| Vermont . . . . .              | 211                           | 115                                   | 37                    | 35              | 2                                  | 3            | 19             |
| Virginia . . . . .             | 2,633                         | 748                                   | 982                   | 550             | 21                                 | 64           | 268            |
| Washington . . . . .           | 2,569                         | 679                                   | 500                   | 493             | 14                                 | 88           | 795            |
| West Virginia . . . . .        | 920                           | 336                                   | 296                   | 208             | 2                                  | 29           | 49             |
| Wisconsin . . . . .            | 2,747                         | 1,108                                 | 677                   | 795             | 8                                  | 48           | 111            |
| Wyoming . . . . .              | 244                           | 116                                   | 54                    | 33              | 1                                  | 17           | 23             |
| U.S. territories . . . . .     | 89                            | 6                                     | 3                     | 23              | 5                                  | 2            | 50             |
| Foreign countries . . . . .    | 165                           | 8                                     | 5                     | 60              | 13                                 | 8            | 71             |

**Table 11. Number and percent distribution of active pharmacists by primary employment setting, according to age: United States, 1978-79**

| Primary employment setting          | All active pharmacists | Age            |             |             |             |             |       | 65 years and over | Unknown |
|-------------------------------------|------------------------|----------------|-------------|-------------|-------------|-------------|-------|-------------------|---------|
|                                     |                        | Under 30 years | 30-39 years | 40-49 years | 50-59 years | 60-64 years |       |                   |         |
| Number                              |                        |                |             |             |             |             |       |                   |         |
| All settings                        | 112,335                | 23,604         | 32,264      | 23,096      | 19,059      | 5,649       | 7,844 | 819               |         |
| Independent community pharmacy      | 38,408                 | 4,994          | 9,235       | 9,300       | 8,045       | 2,426       | 4,279 | 129               |         |
| Chain pharmacy                      | 28,423                 | 7,755          | 9,086       | 5,439       | 3,993       | 1,063       | 990   | 97                |         |
| Clinic or medical building pharmacy | 3,968                  | 834            | 1,241       | 814         | 647         | 179         | 245   | 8                 |         |
| Nursing home                        | 1,551                  | 447            | 458         | 270         | 185         | 61          | 128   | 2                 |         |
| Hospital                            | 19,603                 | 6,306          | 6,980       | 2,743       | 2,320       | 649         | 538   | 67                |         |
| Pharmaceutical manufacturer         | 2,476                  | 206            | 682         | 775         | 582         | 158         | 67    | 6                 |         |
| College of pharmacy                 | 1,288                  | 294            | 457         | 224         | 217         | 56          | 36    | 4                 |         |
| Other                               | 2,553                  | 349            | 718         | 653         | 527         | 162         | 138   | 6                 |         |
| Unknown                             | 14,065                 | 2,419          | 3,407       | 2,878       | 2,543       | 895         | 1,423 | 500               |         |
| Percent distribution <sup>1</sup>   |                        |                |             |             |             |             |       |                   |         |
| All settings                        | 100.0                  | 100.0          | 100.0       | 100.0       | 100.0       | 100.0       | 100.0 | ...               |         |
| Independent community pharmacy      | 39.1                   | 23.6           | 32.0        | 46.0        | 48.7        | 51.0        | 66.6  | ...               |         |
| Chain pharmacy                      | 28.9                   | 36.6           | 31.5        | 26.9        | 24.2        | 22.4        | 15.4  | ...               |         |
| Clinic or medical building pharmacy | 4.0                    | 3.9            | 4.3         | 4.0         | 3.9         | 3.8         | 3.8   | ...               |         |
| Nursing home                        | 1.6                    | 2.1            | 1.6         | 1.3         | 1.1         | 1.3         | 2.0   | ...               |         |
| Hospital                            | 19.9                   | 29.8           | 24.2        | 13.6        | 14.0        | 13.6        | 8.4   | ...               |         |
| Pharmaceutical manufacturer         | 2.5                    | 1.0            | 2.4         | 3.8         | 3.5         | 3.3         | 1.0   | ...               |         |
| College of pharmacy                 | 1.3                    | 1.4            | 1.6         | 1.1         | 1.3         | 1.2         | 0.6   | ...               |         |
| Other                               | 2.6                    | 1.6            | 2.5         | 3.2         | 3.2         | 3.4         | 2.2   | ...               |         |

<sup>1</sup>Percents may not add to 100.0 because of rounding.

**Table 12. Number and percent distribution of active pharmacists by primary employment setting, according to race and Hispanic origin: United States, 1978-79**

| Primary employment setting          | All active pharmacists | Race   |       |                 |       |       |         | Hispanic origin |              |         |
|-------------------------------------|------------------------|--------|-------|-----------------|-------|-------|---------|-----------------|--------------|---------|
|                                     |                        | White  | Black | American Indian | Asian | Other | Unknown | Hispanic        | Non-Hispanic | Unknown |
| Number                              |                        |        |       |                 |       |       |         |                 |              |         |
| All settings                        | 112,335                | 90,422 | 1,730 | 144             | 3,048 | 94    | 16,897  | 1,671           | 86,481       | 24,183  |
| Independent community pharmacy      | 38,408                 | 35,110 | 401   | 36              | 476   | 20    | 2,365   | 486             | 31,044       | 6,878   |
| Chain pharmacy                      | 28,423                 | 24,200 | 451   | 39              | 790   | 25    | 2,918   | 516             | 22,592       | 5,335   |
| Clinic or medical building pharmacy | 3,968                  | 3,341  | 151   | 10              | 234   | 8     | 224     | 88              | 3,198        | 682     |
| Nursing home                        | 1,551                  | 667    | 3     | 3               | 31    | -     | 847     | 18              | 1,347        | 186     |
| Hospital                            | 19,603                 | 16,379 | 486   | 38              | 1,223 | 32    | 1,445   | 343             | 15,564       | 3,696   |
| Pharmaceutical manufacturer         | 2,476                  | 2,298  | 36    | 4               | 48    | -     | 90      | 20              | 2,040        | 416     |
| College of pharmacy                 | 1,288                  | 1,052  | 38    | 2               | 37    | -     | 159     | 16              | 1,058        | 214     |
| Other                               | 2,553                  | 1,759  | 35    | 3               | 47    | -     | 709     | 32              | 2,238        | 283     |
| Unknown                             | 14,065                 | 5,616  | 129   | 9               | 162   | 9     | 8,140   | 152             | 7,420        | 6,493   |
| Percent distribution <sup>1</sup>   |                        |        |       |                 |       |       |         |                 |              |         |
| All settings                        | 100.0                  | 100.0  | 100.0 | 100.0           | 100.0 | 100.0 | ...     | 100.0           | 100.0        | ...     |
| Independent community pharmacy      | 39.1                   | 41.4   | 25.0  | 26.7            | 16.5  | 23.5  | ...     | 32.0            | 39.3         | ...     |
| Chain pharmacy                      | 28.9                   | 28.5   | 28.2  | 28.9            | 27.4  | 29.4  | ...     | 34.0            | 28.6         | ...     |
| Clinic or medical building pharmacy | 4.0                    | 3.9    | 9.4   | 7.4             | 8.1   | 9.4   | ...     | 5.8             | 4.0          | ...     |
| Nursing Home                        | 1.6                    | 0.8    | 0.2   | 2.2             | 1.1   | -     | ...     | 1.2             | 1.7          | ...     |
| Hospital                            | 19.9                   | 19.3   | 30.4  | 28.2            | 42.4  | 37.6  | ...     | 22.6            | 19.7         | ...     |
| Pharmaceutical manufacturer         | 2.5                    | 2.7    | 2.2   | 3.0             | 1.7   | -     | ...     | 1.3             | 2.6          | ...     |
| College of pharmacy                 | 1.3                    | 1.2    | 2.4   | 1.5             | 1.3   | -     | ...     | 1.1             | 1.3          | ...     |
| Other                               | 2.6                    | 2.1    | 2.2   | 2.2             | 1.6   | -     | ...     | 2.1             | 2.8          | ...     |

<sup>1</sup>Percents may not add to 100.0 because of rounding.

**Table 13. Number of active pharmacists, by principal forms of employment and work State: United States, 1978-79**

| <i>Work State</i>              | <i>All active pharmacists</i> | <i>Sole owner</i> | <i>Partner</i> | <i>Assistant manager</i> | <i>Manager</i> | <i>Staff pharmacist</i> | <i>Other<sup>1</sup></i> | <i>Employment unknown</i> |
|--------------------------------|-------------------------------|-------------------|----------------|--------------------------|----------------|-------------------------|--------------------------|---------------------------|
| All areas . . . . .            | 112,335                       | 16,490            | 9,458          | 21,295                   | 9,513          | 41,152                  | 5,962                    | 8,465                     |
| Alabama . . . . .              | 2,327                         | 406               | 231            | 311                      | 147            | 983                     | 61                       | 188                       |
| Alaska . . . . .               | 124                           | 15                | 4              | 33                       | 8              | 43                      | 5                        | 16                        |
| Arizona . . . . .              | 1,627                         | 147               | 38             | 357                      | 138            | 653                     | 68                       | 226                       |
| Arkansas . . . . .             | 1,426                         | 309               | 163            | 246                      | 85             | 448                     | 72                       | 103                       |
| California . . . . .           | 7,898                         | 1,000             | 521            | 1,437                    | 463            | 3,461                   | 405                      | 611                       |
| Colorado . . . . .             | 1,502                         | 209               | 110            | 293                      | 81             | 642                     | 56                       | 111                       |
| Connecticut . . . . .          | 1,790                         | 270               | 160            | 275                      | 117            | 764                     | 87                       | 117                       |
| Delaware . . . . .             | 205                           | 26                | 9              | 48                       | 11             | 80                      | 17                       | 14                        |
| District of Columbia . . . . . | 555                           | 29                | 19             | 90                       | 51             | 243                     | 53                       | 70                        |
| Florida . . . . .              | 4,414                         | 547               | 300            | 963                      | 415            | 1,300                   | 225                      | 664                       |
| Georgia . . . . .              | 2,462                         | 404               | 260            | 443                      | 329            | 720                     | 131                      | 175                       |
| Hawaii . . . . .               | 258                           | 16                | 2              | 75                       | 9              | 109                     | 15                       | 32                        |
| Idaho . . . . .                | 474                           | 84                | 63             | 84                       | 24             | 165                     | 23                       | 31                        |
| Illinois . . . . .             | 4,996                         | 719               | 464            | 914                      | 427            | 2,044                   | 211                      | 217                       |
| Indiana . . . . .              | 3,065                         | 305               | 219            | 734                      | 459            | 887                     | 301                      | 160                       |
| Iowa . . . . .                 | 1,666                         | 315               | 177            | 282                      | 72             | 643                     | 86                       | 91                        |
| Kansas . . . . .               | 1,193                         | 247               | 121            | 226                      | 88             | 396                     | 53                       | 62                        |
| Kentucky . . . . .             | 1,799                         | 286               | 255            | 352                      | 201            | 534                     | 104                      | 67                        |
| Louisiana . . . . .            | 1,655                         | 302               | 128            | 331                      | 113            | 597                     | 105                      | 79                        |
| Maine . . . . .                | 537                           | 93                | 37             | 104                      | 13             | 221                     | 15                       | 54                        |
| Maryland . . . . .             | 2,075                         | 168               | 133            | 401                      | 220            | 843                     | 173                      | 137                       |
| Massachusetts . . . . .        | 4,263                         | 599               | 191            | 721                      | 265            | 1,418                   | 167                      | 902                       |
| Michigan . . . . .             | 5,986                         | 750               | 440            | 197                      | 714            | 2,233                   | 88                       | 664                       |
| Minnesota . . . . .            | 2,527                         | 250               | 64             | 336                      | 94             | 1,131                   | 451                      | 201                       |
| Mississippi . . . . .          | 1,501                         | 374               | 189            | 205                      | 88             | 526                     | 62                       | 57                        |
| Missouri . . . . .             | 2,952                         | 481               | 231            | 675                      | 322            | 1,038                   | 99                       | 106                       |
| Montana . . . . .              | 474                           | 99                | 37             | 80                       | 33             | 175                     | 26                       | 24                        |
| Nebraska . . . . .             | 1,203                         | 230               | 103            | 174                      | 71             | 416                     | 75                       | 134                       |
| Nevada . . . . .               | 327                           | 40                | 14             | 73                       | 13             | 138                     | 5                        | 44                        |
| New Hampshire . . . . .        | 408                           | 62                | 28             | 68                       | 21             | 169                     | 13                       | 47                        |
| New Jersey . . . . .           | 3,568                         | 635               | 371            | 642                      | 223            | 1,240                   | 268                      | 189                       |
| New Mexico . . . . .           | 709                           | 118               | 34             | 137                      | 45             | 254                     | 33                       | 88                        |
| New York . . . . .             | 7,584                         | 1,120             | 1,015          | 1,333                    | 464            | 2,845                   | 492                      | 315                       |
| North Carolina . . . . .       | 2,912                         | 422               | 340            | 742                      | 328            | 840                     | 95                       | 145                       |
| North Dakota . . . . .         | 424                           | 102               | 17             | 67                       | 35             | 153                     | 31                       | 19                        |
| Ohio . . . . .                 | 4,202                         | 505               | 323            | 983                      | 638            | 1,397                   | 203                      | 153                       |
| Oklahoma . . . . .             | 1,474                         | 258               | 129            | 333                      | 153            | 445                     | 69                       | 87                        |
| Oregon . . . . .               | 1,396                         | 206               | 113            | 227                      | 66             | 634                     | 90                       | 60                        |
| Pennsylvania . . . . .         | 5,990                         | 1,111             | 489            | 1,320                    | 712            | 1,788                   | 380                      | 190                       |
| Rhode Island . . . . .         | 704                           | 71                | 49             | 121                      | 39             | 300                     | 29                       | 95                        |
| South Carolina . . . . .       | 1,818                         | 262               | 175            | 337                      | 199            | 566                     | 118                      | 161                       |
| South Dakota . . . . .         | 409                           | 100               | 34             | 63                       | 22             | 144                     | 24                       | 22                        |
| Tennessee . . . . .            | 2,577                         | 454               | 287            | 397                      | 281            | 898                     | 68                       | 192                       |
| Texas . . . . .                | 6,514                         | 958               | 477            | 1,385                    | 445            | 2,586                   | 301                      | 362                       |
| Utah . . . . .                 | 787                           | 127               | 44             | 140                      | 41             | 332                     | 66                       | 37                        |
| Vermont . . . . .              | 211                           | 39                | 30             | 42                       | 10             | 70                      | 5                        | 15                        |
| Virginia . . . . .             | 2,633                         | 270               | 234            | 505                      | 302            | 1,081                   | 113                      | 128                       |
| Washington . . . . .           | 2,569                         | 366               | 170            | 332                      | 115            | 899                     | 139                      | 548                       |
| West Virginia . . . . .        | 920                           | 140               | 83             | 240                      | 97             | 300                     | 35                       | 25                        |
| Wisconsin . . . . .            | 2,747                         | 393               | 316            | 421                      | 168            | 1,239                   | 111                      | 99                        |
| Wyoming . . . . .              | 244                           | 47                | 15             | 42                       | 21             | 85                      | 16                       | 18                        |
| U.S. territories . . . . .     | 89                            | 2                 | 2              | 20                       | 5              | 9                       | 3                        | 48                        |
| Foreign countries . . . . .    | 165                           | 2                 | -              | 38                       | 12             | 27                      | 21                       | 65                        |

<sup>1</sup>Includes volunteers.

**Table 14. Number and percent distribution of active pharmacists by total hours worked per week, according to principal forms of employment and sex: United States, 1978-79**

| Principal form of employment and sex | Total hours            |        |        |              |         |
|--------------------------------------|------------------------|--------|--------|--------------|---------|
|                                      | All active pharmacists | 1-35   | 36-45  | More than 45 | Unknown |
| Number                               |                        |        |        |              |         |
| All principal forms of employment    |                        |        |        |              |         |
| Both sexes                           | 112,335                | 13,453 | 52,129 | 37,049       | 9,704   |
| Male                                 | 94,158                 | 8,323  | 42,787 | 35,193       | 7,855   |
| Female                               | 18,115                 | 5,128  | 9,341  | 1,855        | 1,791   |
| Sex unknown                          | 62                     | 2      | 1      | 1            | 58      |
| Sole owner                           |                        |        |        |              |         |
| Both sexes                           | 16,490                 | 541    | 2,420  | 13,111       | 418     |
| Male                                 | 16,069                 | 483    | 2,330  | 12,855       | 401     |
| Female                               | 421                    | 58     | 90     | 256          | 17      |
| Sex unknown                          | -                      | -      | -      | -            | -       |
| Partner                              |                        |        |        |              |         |
| Both sexes                           | 9,458                  | 591    | 2,654  | 6,045        | 168     |
| Male                                 | 8,984                  | 444    | 2,534  | 5,854        | 152     |
| Female                               | 474                    | 147    | 120    | 191          | 16      |
| Sex unknown                          | -                      | -      | -      | -            | -       |
| Manager <sup>1</sup>                 |                        |        |        |              |         |
| Both sexes                           | 30,808                 | 1,417  | 18,716 | 10,262       | 413     |
| Male                                 | 27,277                 | 1,019  | 16,227 | 9,671        | 360     |
| Female                               | 3,531                  | 398    | 2,489  | 591          | 53      |
| Sex unknown                          | -                      | -      | -      | -            | -       |
| Staff pharmacist                     |                        |        |        |              |         |
| Both sexes                           | 41,152                 | 9,600  | 25,297 | 5,020        | 1,235   |
| Male                                 | 29,711                 | 5,396  | 19,038 | 4,398        | 879     |
| Female                               | 11,440                 | 4,204  | 6,259  | 622          | 355     |
| Sex unknown                          | 1                      | -      | -      | -            | 1       |
| Other <sup>2</sup>                   |                        |        |        |              |         |
| Both sexes                           | 5,962                  | 976    | 2,486  | 2,230        | 270     |
| Male                                 | 5,191                  | 735    | 2,166  | 2,055        | 235     |
| Female                               | 771                    | 241    | 320    | 175          | 35      |
| Sex unknown                          | -                      | -      | -      | -            | -       |
| Employment unknown                   |                        |        |        |              |         |
| Both sexes                           | 8,465                  | 328    | 553    | 381          | 7,200   |
| Male                                 | 6,926                  | 246    | 492    | 360          | 5,828   |
| Female                               | 1,478                  | 80     | 63     | 20           | 1,315   |
| Sex unknown                          | 61                     | 2      | 1      | 1            | 57      |
| Percent distribution <sup>3</sup>    |                        |        |        |              |         |
| All principal forms of employment    |                        |        |        |              |         |
| Both sexes                           | 100.0                  | 13.1   | 50.8   | 36.1         | ...     |
| Male                                 | 100.0                  | 8.6    | 49.6   | 40.8         | ...     |
| Female                               | 100.0                  | 31.4   | 57.2   | 11.4         | ...     |
| Sole owner                           |                        |        |        |              |         |
| Both sexes                           | 100.0                  | 3.4    | 15.1   | 81.6         | ...     |
| Male                                 | 100.0                  | 3.1    | 14.9   | 82.1         | ...     |
| Female                               | 100.0                  | 14.4   | 22.3   | 63.4         | ...     |
| Partner                              |                        |        |        |              |         |
| Both sexes                           | 100.0                  | 6.4    | 28.6   | 65.1         | ...     |
| Male                                 | 100.0                  | 5.0    | 28.7   | 66.3         | ...     |
| Female                               | 100.0                  | 32.1   | 26.2   | 41.7         | ...     |
| Manager <sup>1</sup>                 |                        |        |        |              |         |
| Both sexes                           | 100.0                  | 4.7    | 61.6   | 33.8         | ...     |
| Male                                 | 100.0                  | 3.8    | 60.3   | 35.9         | ...     |
| Female                               | 100.0                  | 11.4   | 71.6   | 17.0         | ...     |

See footnotes at end of table.

**Table 14. Number and percent distribution of active pharmacists by total hours worked per week, according to principal forms of employment and sex: United States, 1978-79—Con.**

| Principal form of employment and sex | All active pharmacists | Total hours                       |       |              |     | Unknown |
|--------------------------------------|------------------------|-----------------------------------|-------|--------------|-----|---------|
|                                      |                        | 1-35                              | 36-45 | More than 45 |     |         |
| Staff pharmacist                     |                        | Percent distribution <sup>3</sup> |       |              |     |         |
| Both sexes                           | 100.0                  | 24.1                              | 63.4  | 12.6         | ... |         |
| Male                                 | 100.0                  | 18.7                              | 66.0  | 15.2         | ... |         |
| Female                               | 100.0                  | 37.9                              | 56.5  | 5.6          | ... |         |
| Other <sup>2</sup>                   |                        |                                   |       |              |     |         |
| Both sexes                           | 100.0                  | 17.2                              | 43.7  | 39.2         | ... |         |
| Male                                 | 100.0                  | 14.8                              | 43.7  | 41.5         | ... |         |
| Female                               | 100.0                  | 32.7                              | 43.5  | 23.8         | ... |         |

<sup>1</sup>Includes assistant managers.

<sup>2</sup>Includes volunteers.

<sup>3</sup>Percents may not add to 100.0 because of rounding.

**Table 15. Number and percent distribution of active pharmacists by secondary employment settings, according to primary employment settings: United States, 1978-79**

| Primary employment setting          | All active pharmacists | Secondary employment setting |                                |                |                                     |              |          |                             |                     |       |
|-------------------------------------|------------------------|------------------------------|--------------------------------|----------------|-------------------------------------|--------------|----------|-----------------------------|---------------------|-------|
|                                     |                        | None or unknown              | Independent community pharmacy | Chain pharmacy | Clinic or medical building pharmacy | Nursing home | Hospital | Pharmaceutical manufacturer | College of pharmacy | Other |
| Number                              |                        |                              |                                |                |                                     |              |          |                             |                     |       |
| All settings                        | 112,335                | 99,943                       | 2,262                          | 1,183          | 937                                 | 4,878        | 2,194    | 75                          | 616                 | 1,247 |
| Independent community pharmacy      | 38,417                 | 32,932                       | ...                            | 386            | 301                                 | 3,168        | 1,557    | 25                          | 69                  | 379   |
| Chain pharmacy                      | 28,413                 | 26,207                       | 480                            | 79             | 176                                 | 881          | 330      | 13                          | 38                  | 209   |
| Clinic or medical building pharmacy | 3,970                  | 3,071                        | 169                            | 108            | ...                                 | 299          | 202      | 6                           | 46                  | 69    |
| Nursing home                        | 1,551                  | 1,146                        | 101                            | 40             | 29                                  | ...          | 66       | 2                           | 12                  | 155   |
| Hospital                            | 19,598                 | 16,574                       | 1,118                          | 388            | 200                                 | 427          | 193      | 14                          | 393                 | 291   |
| Pharmaceutical manufacturer         | 2,477                  | 2,205                        | 155                            | 52             | 5                                   | 2            | 28       | ...                         | 9                   | 21    |
| College of pharmacy                 | 1,290                  | 919                          | 92                             | 31             | 27                                  | 19           | 142      | 5                           | ...                 | 55    |
| Other                               | 2,554                  | 1,824                        | 147                            | 99             | 199                                 | 82           | 76       | 10                          | 49                  | 68    |
| Unknown                             | 14,065                 | 14,065                       | ...                            | ...            | ...                                 | ...          | ...      | ...                         | ...                 | ...   |
| Percent distribution <sup>1</sup>   |                        |                              |                                |                |                                     |              |          |                             |                     |       |
| All settings                        | 100.0                  | ...                          | 16.9                           | 8.8            | 7.0                                 | 36.4         | 16.4     | 0.6                         | 4.6                 | 9.3   |
| Independent community pharmacy      | 100.0                  | ...                          | ..                             | 7.0            | 5.5                                 | 57.8         | 21.1     | 0.5                         | 1.3                 | 6.9   |
| Chain pharmacy                      | 100.0                  | ...                          | 21.8                           | 3.6            | 8.0                                 | 40.0         | 15.0     | 0.6                         | 1.7                 | 9.5   |
| Clinic or medical building pharmacy | 100.0                  | ...                          | 18.8                           | 12.0           | ...                                 | 33.3         | 22.5     | 0.7                         | 5.1                 | 7.7   |
| Nursing home                        | 100.0                  | ...                          | 24.9                           | 9.9            | 7.2                                 | ...          | 16.3     | 0.5                         | 3.0                 | 38.3  |
| Hospital                            | 100.0                  | ...                          | 37.0                           | 12.8           | 6.6                                 | 14.1         | 6.4      | 0.5                         | 13.0                | 9.6   |
| Pharmaceutical manufacturer         | 100.0                  | ...                          | 57.0                           | 19.1           | 1.8                                 | 0.7          | 10.3     | ...                         | 3.3                 | 7.7   |
| College of pharmacy                 | 100.0                  | ...                          | 24.8                           | 8.4            | 7.3                                 | 5.1          | 38.3     | 1.4                         | ...                 | 14.8  |
| Other                               | 100.0                  | ...                          | 20.1                           | 13.6           | 27.3                                | 11.2         | 10.4     | 1.4                         | 6.7                 | 9.3   |

<sup>1</sup>Percents may not add to 100.0 because of rounding.



**Table 16. Mean hours worked per week by active pharmacists, and standard deviations, by race, geographic region (with number of pharmacists), and activities performed: United States, 1978-79**

| Geographic region<br>and activity              | All races     |                       | White         |                       | Black         |                       | American Indian |                       | Asian         |                       |
|--|---------------|-----------------------|---------------|-----------------------|---------------|-----------------------|-----------------|-----------------------|---------------|-----------------------|
|  | Mean<br>hours | Standard<br>deviation | Mean<br>hours | Standard<br>deviation | Mean<br>hours | Standard<br>deviation | Mean<br>hours   | Standard<br>deviation | Mean<br>hours | Standard<br>deviation |
| <b>Northeast<br/>(23,994 pharmacists)</b>      |               |                       |               |                       |               |                       |                 |                       |               |                       |
| All activities . . . . .                       | 43            | 13                    | 43            | 13                    | 43            | 12                    | 40              | 17                    | 40            | 7                     |
| Providing information to prescribers . . . . . | 3             | ---                   | 3             | 6                     | 3             | 7                     | 7               | 19                    | 3             | 6                     |
| Administration . . . . .                       | 8             | ---                   | 8             | 11                    | 8             | 13                    | 2               | 4                     | 3             | 6                     |
| Providing information to patients . . . . .    | 4             | ---                   | 4             | 6                     | 5             | 5                     | 7               | 9                     | 5             | 5                     |
| Dispensing prescriptions . . . . .             | 22            | ---                   | 22            | 14                    | 20            | 15                    | 21              | 15                    | 24            | 12                    |
| Teaching and/or research . . . . .             | 2             | ---                   | 2             | 7                     | 2             | 8                     | 0               | 1                     | 2             | 8                     |
| Manufacturing . . . . .                        | 1             | ---                   | 1             | 4                     | 1             | 5                     | 1               | 2                     | 2             | 5                     |
| Retailing . . . . .                            | 2             | ---                   | 2             | 6                     | 2             | 5                     | 2               | 2                     | 1             | 2                     |
| Other . . . . .                                | 1             | ---                   | 1             | 6                     | 2             | 7                     | 0               | 0                     | 1             | 3                     |
| <b>North Central<br/>(30,042 pharmacists)</b>  |               |                       |               |                       |               |                       |                 |                       |               |                       |
| All activities . . . . .                       | 43            | 13                    | 43            | 13                    | 44            | 12                    | 42              | 10                    | 42            | 9                     |
| Providing information to prescribers . . . . . | 3             | ---                   | 3             | 5                     | 3             | 6                     | 4               | 4                     | 3             | 5                     |
| Administration . . . . .                       | 8             | ---                   | 8             | 11                    | 9             | 13                    | 9               | 11                    | 6             | 10                    |
| Providing information to patients . . . . .    | 4             | ---                   | 4             | 5                     | 4             | 6                     | 5               | 5                     | 4             | 6                     |
| Dispensing prescriptions . . . . .             | 24            | ---                   | 24            | 14                    | 25            | 15                    | 18              | 12                    | 23            | 13                    |
| Teaching and/or research . . . . .             | 1             | ---                   | 1             | 6                     | 1             | 4                     | -               | 1                     | 3             | 8                     |
| Manufacturing . . . . .                        | 1             | ---                   | 1             | 3                     | 1             | 5                     | 2               | 8                     | 1             | 4                     |
| Retailing . . . . .                            | 2             | ---                   | 2             | 4                     | 1             | 3                     | 1               | 2                     | 1             | 2                     |
| Other . . . . .                                | 1             | ---                   | 1             | 5                     | 1             | 4                     | 1               | 2                     | 1             | 5                     |
| <b>South<br/>(35,689 pharmacists)</b>          |               |                       |               |                       |               |                       |                 |                       |               |                       |
| All activities . . . . .                       | 45            | 12                    | 45            | 12                    | 43            | 11                    | 45              | 10                    | 43            | 10                    |
| Providing information to prescribers . . . . . | 2             | ---                   | 2             | 5                     | 3             | 6                     | 3               | 5                     | 3             | 5                     |
| Administration . . . . .                       | 7             | ---                   | 7             | 10                    | 6             | 10                    | 7               | 9                     | 4             | 8                     |
| Providing information to patients . . . . .    | 4             | ---                   | 5             | 5                     | 5             | 6                     | 6               | 5                     | 5             | 6                     |
| Dispensing prescriptions . . . . .             | 26            | ---                   | 26            | 14                    | 24            | 14                    | 25              | 14                    | 26            | 13                    |
| Teaching and/or research . . . . .             | 2             | ---                   | 1             | 5                     | 2             | 7                     | 1               | 4                     | 2             | 6                     |
| Manufacturing . . . . .                        | 1             | ---                   | 1             | 3                     | 1             | 3                     | -               | 1                     | 1             | 4                     |
| Retailing . . . . .                            | 2             | ---                   | 2             | 4                     | 1             | 3                     | 2               | 5                     | 1             | 2                     |
| Other . . . . .                                | 1             | ---                   | 1             | 6                     | 1             | 6                     | 1               | 3                     | 1             | 5                     |
| <b>West<br/>(17,611 pharmacists)</b>           |               |                       |               |                       |               |                       |                 |                       |               |                       |
| All activities . . . . .                       | 42            | 13                    | 42            | 13                    | 42            | 12                    | 42              | 13                    | 41            | 10                    |
| Providing information to prescribers . . . . . | 3             | ---                   | 3             | 6                     | 4             | 7                     | 4               | 5                     | 3             | 5                     |
| Administration . . . . .                       | 7             | ---                   | 7             | 10                    | 7             | 10                    | 5               | 8                     | 5             | 9                     |
| Providing information to patients . . . . .    | 5             | ---                   | 5             | 5                     | 5             | 6                     | 5               | 6                     | 5             | 5                     |
| Dispensing prescriptions . . . . .             | 22            | ---                   | 23            | 13                    | 21            | 15                    | 21              | 14                    | 22            | 13                    |
| Teaching and/or research . . . . .             | 1             | ---                   | 1             | 6                     | 1             | 5                     | 3               | 10                    | 1             | 5                     |
| Manufacturing . . . . .                        | 1             | ---                   | 1             | 3                     | 1             | 3                     | 1               | 2                     | 1             | 3                     |
| Retailing . . . . .                            | 2             | ---                   | 2             | 4                     | 1             | 2                     | 1               | 1                     | 1             | 3                     |
| Other . . . . .                                | 2             | ---                   | 2             | 7                     | 1             | 6                     | 3               | 10                    | 2             | 6                     |

**Table 17. Number and percent distribution of active pharmacists by selected weeks worked in year prior to interview, according to sex and age: United States, 1978-79**

| Sex and age                 | All active pharmacists | Weeks worked                      |        |        |         |
|-----------------------------|------------------------|-----------------------------------|--------|--------|---------|
|                             |                        | Less than 48                      | 48-51  | 52     | Unknown |
| <b>Both sexes</b>           |                        | Number                            |        |        |         |
| All ages . . . . .          | 112,335                | 10,249                            | 10,085 | 80,931 | 11,070  |
| Under 30 years . . . . .    | 23,604                 | 3,358                             | 2,336  | 15,547 | 2,363   |
| 30-39 years . . . . .       | 32,264                 | 2,240                             | 2,784  | 24,285 | 2,955   |
| 40-49 years . . . . .       | 23,096                 | 1,142                             | 1,938  | 17,891 | 2,125   |
| 50-59 years . . . . .       | 19,059                 | 1,032                             | 1,598  | 14,690 | 1,739   |
| 60-64 years . . . . .       | 5,649                  | 486                               | 482    | 4,096  | 585     |
| 65 years and over . . . . . | 7,844                  | 1,945                             | 916    | 4,238  | 745     |
| Age unknown . . . . .       | 819                    | 46                                | 31     | 184    | 558     |
| <b>Male</b>                 |                        |                                   |        |        |         |
| All ages . . . . .          | 94,158                 | 7,030                             | 8,081  | 70,004 | 9,043   |
| Under 30 years . . . . .    | 15,931                 | 1,823                             | 1,487  | 11,073 | 1,548   |
| 30-39 years . . . . .       | 27,085                 | 1,278                             | 2,219  | 21,139 | 2,449   |
| 40-49 years . . . . .       | 20,544                 | 791                               | 1,645  | 16,287 | 1,821   |
| 50-59 years . . . . .       | 17,155                 | 803                               | 1,371  | 13,452 | 1,529   |
| 60-64 years . . . . .       | 5,251                  | 437                               | 448    | 3,836  | 530     |
| 65 years and over . . . . . | 7,501                  | 1,859                             | 885    | 4,056  | 701     |
| Age unknown . . . . .       | 691                    | 39                                | 26     | 161    | 465     |
| <b>Female</b>               |                        |                                   |        |        |         |
| All ages . . . . .          | 18,115                 | 3,218                             | 2,004  | 10,926 | 1,967   |
| Under 30 years . . . . .    | 7,664                  | 1,535                             | 849    | 4,474  | 806     |
| 30-39 years . . . . .       | 5,160                  | 961                               | 565    | 3,146  | 488     |
| 40-49 years . . . . .       | 2,540                  | 351                               | 293    | 1,604  | 292     |
| 50-59 years . . . . .       | 1,896                  | 229                               | 227    | 1,238  | 202     |
| 60-64 years . . . . .       | 397                    | 49                                | 34     | 260    | 54      |
| 65 years and over . . . . . | 342                    | 86                                | 31     | 181    | 44      |
| Age unknown . . . . .       | 116                    | 7                                 | 5      | 23     | 81      |
| <b>Sex unknown</b>          |                        |                                   |        |        |         |
| All ages . . . . .          | 62                     | 1                                 | -      | 1      | 60      |
| <b>Both sexes</b>           |                        | Percent distribution <sup>1</sup> |        |        |         |
| All ages . . . . .          | 100.0                  | 10.1                              | 10.0   | 79.9   | ...     |
| Under 30 years . . . . .    | 100.0                  | 15.8                              | 11.0   | 73.2   | ...     |
| 30-39 years . . . . .       | 100.0                  | 7.6                               | 9.5    | 82.9   | ...     |
| 40-49 years . . . . .       | 100.0                  | 5.4                               | 9.2    | 85.3   | ...     |
| 50-59 years . . . . .       | 100.0                  | 6.0                               | 9.2    | 84.8   | ...     |
| 60-64 years . . . . .       | 100.0                  | 9.6                               | 9.5    | 80.9   | ...     |
| 65 years and over . . . . . | 100.0                  | 27.4                              | 12.9   | 59.7   | ...     |
| <b>Male</b>                 |                        |                                   |        |        |         |
| All ages . . . . .          | 100.0                  | 8.2                               | 9.5    | 82.3   | ...     |
| Under 30 years . . . . .    | 100.0                  | 12.7                              | 10.3   | 77.0   | ...     |
| 30-39 years . . . . .       | 100.0                  | 5.2                               | 9.0    | 85.8   | ...     |
| 40-49 years . . . . .       | 100.0                  | 4.2                               | 8.8    | 87.0   | ...     |
| 50-59 years . . . . .       | 100.0                  | 5.1                               | 8.8    | 86.1   | ...     |
| 60-64 years . . . . .       | 100.0                  | 9.3                               | 9.5    | 81.2   | ...     |
| 65 years and over . . . . . | 100.0                  | 27.3                              | 13.0   | 59.6   | ...     |
| <b>Female</b>               |                        |                                   |        |        |         |
| All ages . . . . .          | 100.0                  | 19.9                              | 12.4   | 67.7   | ...     |
| Under 30 years . . . . .    | 100.0                  | 22.4                              | 12.4   | 65.2   | ...     |
| 30-39 years . . . . .       | 100.0                  | 20.6                              | 12.1   | 67.3   | ...     |
| 40-49 years . . . . .       | 100.0                  | 15.6                              | 13.0   | 71.4   | ...     |
| 50-59 years . . . . .       | 100.0                  | 13.5                              | 13.4   | 73.1   | ...     |
| 60-64 years . . . . .       | 100.0                  | 14.3                              | 9.9    | 75.8   | ...     |
| 65 years and over . . . . . | 100.0                  | 28.9                              | 10.4   | 60.7   | ...     |

<sup>1</sup>Percents may not add to 100.0 because of rounding.

**Table 18. Number of inactive pharmacists, by reason for inactivity and State of residence: United States, 1978-79**

| State of residence   | All inactive pharmacists | Retired | Reason for inactivity    |   |                          |                              |       |           |       |         |
|----------------------|--------------------------|---------|--------------------------|---|--------------------------|------------------------------|-------|-----------|-------|---------|
|                      |                          |         | Unemployed               |   | Working in another field |                              |       | Homemaker | Other | Unknown |
|                      |                          |         | Seeking work in pharmacy | Not seeking work in pharmacy <sup>1</sup> | Seeking work in pharmacy | Not seeking work in pharmacy |       |           |       |         |
| All areas            | 20,912                   | 7,879   | 1,469                    | 272                                       | 576                      | 4,587                        | 1,397 | 1,322     | 3,410 |         |
| Alabama              | 144                      | 24      | 12                       | 6   | 7                        | 48                           | 9     | 6         | 32    |         |
| Alaska               | 32                       | 10      | 2                        | 1   | 1                        | 11                           | 2     | 2         | 3     |         |
| Arizona              | 498                      | 237     | 35                       | 4   | 10                       | 73                           | 16    | 21        | 102   |         |
| Arkansas             | 246                      | 119     | 7                        | 1   | 8                        | 47                           | 4     | 20        | 40    |         |
| California           | 1,643                    | 620     | 93                       | 36  | 53                       | 367                          | 109   | 121       | 244   |         |
| Colorado             | 394                      | 192     | 25                       | 6   | 5                        | 72                           | 17    | 21        | 56    |         |
| Connecticut          | 358                      | 140     | 29                       | 6   | 14                       | 74                           | 28    | 17        | 50    |         |
| Delaware             | 36                       | 12      | 1                        | -   | -                        | 9                            | 10    | 1         | 3     |         |
| District of Columbia | 56                       | 25      | 2                        | 1   | 3                        | 12                           | 2     | 2         | 9     |         |
| Florida              | 1,251                    | 564     | 86                       | 9   | 21                       | 144                          | 49    | 54        | 324   |         |
| Georgia              | 340                      | 102     | 29                       | 3   | 9                        | 85                           | 29    | 33        | 50    |         |
| Hawaii               | 43                       | 19      | 3                        | 1   | 1                        | 10                           | 2     | 2         | 5     |         |
| Idaho                | 101                      | 36      | 4                        | 2   | 2                        | 29                           | 8     | 6         | 14    |         |
| Illinois             | 832                      | 343     | 49                       | 7   | 23                       | 171                          | 77    | 44        | 118   |         |
| Indiana              | 416                      | 136     | 13                       | 8   | 11                       | 98                           | 52    | 28        | 70    |         |
| Iowa                 | 285                      | 115     | 16                       | 5   | 9                        | 55                           | 19    | 14        | 52    |         |
| Kansas               | 250                      | 86      | 10                       | 5   | 2                        | 54                           | 21    | 20        | 52    |         |
| Kentucky             | 196                      | 87      | 10                       | 2   | 4                        | 38                           | 19    | 14        | 22    |         |
| Louisiana            | 279                      | 101     | 9                        | 3   | 8                        | 80                           | 22    | 31        | 25    |         |
| Maine                | 88                       | 35      | 3                        | 1   | 1                        | 16                           | 8     | 5         | 19    |         |
| Maryland             | 450                      | 138     | 23                       | 2   | 13                       | 149                          | 20    | 38        | 67    |         |
| Massachusetts        | 827                      | 360     | 57                       | -   | 20                       | 180                          | 21    | 62        | 127   |         |
| Michigan             | 809                      | 12      | -                        | -   | -                        | 29                           | 6     | 7         | 755   |         |
| Minnesota            | 347                      | 101     | 34                       | 5   | 12                       | 75                           | 27    | 47        | 46    |         |
| Mississippi          | 185                      | 55      | 8                        | -   | 5                        | 51                           | 17    | 18        | 31    |         |
| Missouri             | 701                      | 316     | 50                       | 4   | 15                       | 138                          | 25    | -         | 153   |         |
| Montana              | 131                      | 61      | 9                        | 3   | 2                        | 26                           | 11    | 5         | 14    |         |
| Nebraska             | 257                      | 104     | 12                       | 7   | 13                       | 71                           | 18    | 17        | 15    |         |
| Nevada               | 69                       | 31      | 6                        | 1   | 3                        | 6                            | 6     | 2         | 14    |         |
| New Hampshire        | 84                       | 38      | 4                        | 1   | 2                        | 10                           | 5     | 1         | 23    |         |
| New Jersey           | 797                      | 295     | 69                       | 13  | 17                       | 217                          | 56    | 33        | 97    |         |
| New Mexico           | 136                      | 38      | 7                        | -   | 4                        | 29                           | 1     | 5         | 52    |         |
| New York             | 1,879                    | 932     | 240                      | 17  | 54                       | 379                          | 81    | 67        | 109   |         |
| North Carolina       | 319                      | 88      | 13                       | 15  | 15                       | 69                           | 40    | 55        | 24    |         |
| North Dakota         | 104                      | 20      | 11                       | 2   | 7                        | 30                           | 7     | 9         | 18    |         |
| Ohio                 | 618                      | 218     | 66                       | 12  | 7                        | 138                          | 89    | 35        | 53    |         |
| Oklahoma             | 302                      | 111     | 7                        | 7   | 10                       | 82                           | 16    | 17        | 52    |         |
| Oregon               | 228                      | 60      | 26                       | 3   | 9                        | 70                           | 26    | 17        | 17    |         |
| Pennsylvania         | 1,479                    | 648     | 101                      | 26  | 57                       | 392                          | 116   | 103       | 36    |         |
| Rhode Island         | 149                      | 45      | 23                       | 3   | 10                       | 28                           | 11    | 4         | 25    |         |
| South Carolina       | 215                      | 64      | 18                       | -   | 6                        | 67                           | 15    | 35        | 10    |         |
| South Dakota         | 93                       | 38      | 8                        | 1   | 1                        | 17                           | 5     | 7         | 16    |         |
| Tennessee            | 309                      | 85      | 25                       | -   | 8                        | 79                           | 37    | 26        | 49    |         |
| Texas                | 1,088                    | 332     | 50                       | 27  | 35                       | 323                          | 84    | 91        | 146   |         |
| Utah                 | 161                      | 49      | 10                       | 3   | -                        | 51                           | 5     | 13        | 30    |         |
| Vermont              | 36                       | 19      | 3                        | -   | 2                        | 4                            | 3     | 1         | 4     |         |
| Virginia             | 448                      | 147     | 37                       | 4   | 13                       | 121                          | 36    | 59        | 31    |         |
| Washington           | 467                      | 151     | 43                       | 5   | 26                       | 112                          | 53    | 29        | 48    |         |
| West Virginia        | 136                      | 65      | 5                        | 1   | 3                        | 25                           | 15    | 17        | 5     |         |
| Wisconsin            | 447                      | 209     | 53                       | 1   | 12                       | 84                           | 33    | 24        | 31    |         |
| Wyoming              | 61                       | 25      | 4                        | -   | 1                        | 16                           | 3     | 3         | 9     |         |
| U.S. territories     | 17                       | 3       | 1                        | -   | -                        | 5                            | 2     | 1         | 5     |         |
| Foreign countries    | 75                       | 18      | 8                        | 2   | 2                        | 21                           | 4     | 12        | 8     |         |

<sup>1</sup>In a few States this was phrased as "in training in pharmacy."

**Table 19. Number and percent distribution of inactive pharmacists by reason for inactivity, according to sex and age: United States, 1978-79**

| Sex and age                   | All inactive pharmacists | Reason for inactivity             |                          |   |                          |                              |           |           |       |         |
|-------------------------------|--------------------------|-----------------------------------|--------------------------|---|--------------------------|------------------------------|-----------|-----------|-------|---------|
|                               |                          | Retired                           | Unemployed               |   | Working in another field |                              |           | Homemaker | Other | Unknown |
|                               |                          |                                   | Seeking work in pharmacy | Not seeking work in pharmacy <sup>1</sup> | Seeking work in pharmacy | Not seeking work in pharmacy | Homemaker |           |       |         |
| <b>Both sexes<sup>2</sup></b> |                          | Number                            |                          |   |                          |                              |           |           |       |         |
| All ages . . . . .            | 20,912                   | 7,879                             | 1,469                    | 272                                       | 576                      | 4,587                        | 1,397     | 1,322     | 3,410 |         |
| Under 30 years . . . . .      | 1,371                    | 9                                 | 247                      | 72  | 70                       | 263                          | 224       | 267       | 219   |         |
| 30-39 years . . . . .         | 3,316                    | 17                                | 281                      | 54  | 148                      | 1,510                        | 553       | 304       | 449   |         |
| 40-49 years . . . . .         | 2,673                    | 56                                | 218                      | 52  | 126                      | 1,278                        | 300       | 235       | 408   |         |
| 50-59 years . . . . .         | 2,395                    | 305                               | 257                      | 43  | 126                      | 875                          | 214       | 247       | 327   |         |
| 60-64 years . . . . .         | 1,478                    | 663                               | 131                      | 15  | 36                       | 268                          | 41        | 120       | 204   |         |
| 65 years and over . . . . .   | 9,023                    | 6,403                             | 326                      | 35  | 68                       | 313                          | 52        | 138       | 1,688 |         |
| Age unknown . . . . .         | 656                      | 425                               | 9                        | 1   | 2                        | 80                           | 13        | 11        | 115   |         |
| <b>Male</b>                   |                          |                                   |                          |   |                          |                              |           |           |       |         |
| All ages . . . . .            | 16,997                   | 7,282                             | 1,045                    | 194                                       | 476                      | 4,187                        | 35        | 1,033     | 2,745 |         |
| Under 30 years . . . . .      | 713                      | 7                                 | 118                      | 46  | 49                       | 203                          | 3         | 167       | 120   |         |
| 30-39 years . . . . .         | 2,252                    | 11                                | 154                      | 34  | 128                      | 1,396                        | 8         | 220       | 301   |         |
| 40-49 years . . . . .         | 2,025                    | 41                                | 141                      | 35  | 106                      | 1,196                        | 4         | 194       | 308   |         |
| 50-59 years . . . . .         | 1,821                    | 249                               | 197                      | 33  | 98                       | 783                          | 5         | 214       | 242   |         |
| 60-64 years . . . . .         | 1,274                    | 601                               | 117                      | 11  | 32                       | 240                          | 2         | 104       | 167   |         |
| 65 years and over . . . . .   | 8,331                    | 5,984                             | 310                      | 34  | 62                       | 292                          | 12        | 127       | 1,510 |         |
| Age unknown . . . . .         | 581                      | 389                               | 8                        | 1   | 1                        | 77                           | 1         | 7         | 97    |         |
| <b>Female</b>                 |                          |                                   |                          |   |                          |                              |           |           |       |         |
| All ages . . . . .            | 3,845                    | 586                               | 424                      | 78  | 99                       | 400                          | 1,362     | 289       | 607   |         |
| Under 30 years . . . . .      | 654                      | 2                                 | 129                      | 26  | 21                       | 60                           | 221       | 100       | 95    |         |
| 30-39 years . . . . .         | 1,063                    | 6                                 | 127                      | 20  | 20                       | 114                          | 545       | 84        | 147   |         |
| 40-49 years . . . . .         | 645                      | 15                                | 77                       | 17  | 20                       | 82                           | 296       | 41        | 97    |         |
| 50-59 years . . . . .         | 569                      | 56                                | 60                       | 10  | 28                       | 92                           | 209       | 33        | 81    |         |
| 60-64 years . . . . .         | 203                      | 62                                | 14                       | 4   | 4                        | 28                           | 39        | 16        | 36    |         |
| 65 years and over . . . . .   | 647                      | 415                               | 16                       | 1   | 6                        | 21                           | 40        | 11        | 137   |         |
| Age unknown . . . . .         | 64                       | 30                                | 1                        | -   | -                        | 3                            | 12        | 4         | 14    |         |
| <b>Both sexes<sup>2</sup></b> |                          | Percent distribution <sup>3</sup> |                          |   |                          |                              |           |           |       |         |
| All ages . . . . .            | 100.0                    | 45.0                              | 8.4                      | 1.6                                       | 3.3                      | 26.2                         | 8.0       | 7.6       | ...   |         |
| Under 30 years . . . . .      | 100.0                    | 0.8                               | 21.4                     | 6.2                                       | 6.1                      | 22.8                         | 19.4      | 23.2      | ...   |         |
| 30-39 years . . . . .         | 100.0                    | 0.6                               | 9.8                      | 1.9                                       | 5.2                      | 52.7                         | 19.3      | 10.6      | ...   |         |
| 40-49 years . . . . .         | 100.0                    | 2.5                               | 9.6                      | 2.3                                       | 5.6                      | 56.4                         | 13.2      | 10.4      | ...   |         |
| 50-59 years . . . . .         | 100.0                    | 14.8                              | 12.4                     | 2.1                                       | 6.1                      | 42.3                         | 10.4      | 12.0      | ...   |         |
| 60-64 years . . . . .         | 100.0                    | 52.0                              | 10.3                     | 1.2                                       | 2.8                      | 21.0                         | 3.2       | 9.4       | ...   |         |
| 65 years and over . . . . .   | 100.0                    | 87.3                              | 4.4                      | 0.5                                       | 0.9                      | 4.3                          | 0.7       | 1.9       | ...   |         |
| <b>Male</b>                   |                          |                                   |                          |   |                          |                              |           |           |       |         |
| All ages . . . . .            | 100.0                    | 51.1                              | 7.3                      | 1.4                                       | 3.3                      | 29.4                         | 0.2       | 7.2       | ...   |         |
| Under 30 years . . . . .      | 100.0                    | 1.2                               | 19.9                     | 7.8                                       | 8.3                      | 34.2                         | 0.5       | 28.2      | ...   |         |
| 30-39 years . . . . .         | 100.0                    | 0.6                               | 7.9                      | 1.7                                       | 6.6                      | 71.6                         | 0.4       | 11.3      | ...   |         |
| 40-49 years . . . . .         | 100.0                    | 2.4                               | 8.2                      | 2.0                                       | 6.2                      | 69.7                         | 0.2       | 11.3      | ...   |         |
| 50-59 years . . . . .         | 100.0                    | 15.8                              | 12.5                     | 2.1                                       | 6.2                      | 49.6                         | 0.3       | 13.6      | ...   |         |
| 60-64 years . . . . .         | 100.0                    | 54.3                              | 10.6                     | 1.0                                       | 2.9                      | 21.7                         | 0.2       | 9.4       | ...   |         |
| 65 years and over . . . . .   | 100.0                    | 87.7                              | 4.5                      | 0.5                                       | 0.9                      | 4.3                          | 0.2       | 1.9       | ...   |         |
| <b>Female</b>                 |                          |                                   |                          |   |                          |                              |           |           |       |         |
| All ages . . . . .            | 100.0                    | 18.1                              | 13.1                     | 2.4                                       | 3.1                      | 12.4                         | 42.1      | 8.9       | ...   |         |
| Under 30 years . . . . .      | 100.0                    | 0.4                               | 23.1                     | 4.6                                       | 3.8                      | 10.7                         | 39.5      | 17.9      | ...   |         |
| 30-39 years . . . . .         | 100.0                    | 0.7                               | 13.9                     | 2.2                                       | 2.2                      | 12.4                         | 59.5      | 9.2       | ...   |         |
| 40-49 years . . . . .         | 100.0                    | 2.7                               | 14.0                     | 3.1                                       | 3.6                      | 15.0                         | 54.0      | 7.5       | ...   |         |
| 50-59 years . . . . .         | 100.0                    | 11.5                              | 12.3                     | 2.0                                       | 5.7                      | 18.8                         | 42.8      | 6.8       | ...   |         |
| 60-64 years . . . . .         | 100.0                    | 37.1                              | 8.4                      | 2.4                                       | 2.4                      | 16.8                         | 23.4      | 9.6       | ...   |         |
| 65 years and over . . . . .   | 100.0                    | 81.4                              | 3.1                      | 0.2                                       | 1.2                      | 4.1                          | 7.8       | 2.2       | ...   |         |

<sup>1</sup>In a few States this was phrased as "in training in pharmacy."

<sup>2</sup>Includes 70 inactive pharmacists of unknown sex.

<sup>3</sup>Percents may not add to 100.0 because of rounding.

# Appendixes

## Contents

|  |    |
|--|----|
| I. Technical notes on methods . . . . .  | 33 |
| Cooperative Health Statistics System . . . . .   | 33 |
| Minimum data set . . . . .   | 34 |
| Response rate . . . . .  | 34 |
| Data editing and processing procedures . . . . .   | 35 |
| Removing duplicate records . . . . .   | 35 |
| Period of data collection . . . . .  | 36 |
| Consistency of data between NCHS national and State reports and reports published by individual States . . . . . | 36 |
| II. Survey questionnaire . . . . .   | 38 |
| III. Definitions of certain terms used in this report . . . . .  | 42 |

## Appendix table

|   |    |
|---|----|
| Year of data collection, contractor conducting Survey of Licensed Pharmacists, and response rate, by State: |    |
| United States, 1978-79 . . . . .  | 33 |

# Appendix I

## Technical notes on methods

### Cooperative Health Statistics System

In response to a need for demographic and practice data on health professions personnel, the National Center for Health Statistics established the manpower component of the Cooperative Health Statistics System (CHSS). This system was designed to decentralize the collection of data from the Federal to the State level. The data were then to be transferred from each State in the system to the Center. CHSS 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 it provided data on pharmacists for those States that were participating in the system at the time of the 1978-79 Survey of Licensed Pharmacists. The remaining States' data were collected via a contract with the American Association of Colleges of Pharmacy (AACP). The appendix table shows the contractor used in each State.

**Appendix table. Year of data collection, contractor conducting Survey of Licensed Pharmacists, and response rate, by State: United States, 1978-79**

| <i>State</i>                   | <i>Data collection year</i> | <i>Contractor<sup>1</sup></i> | <i>Percent response rate<sup>2</sup></i> |
|--------------------------------|-----------------------------|-------------------------------|--|
| All States . . . . .           | ...                         | ...                           | 84                                       |
| Alabama . . . . .              | 1978                        | CHSS                          | 91                                       |
| Alaska . . . . .               | 1979                        | AACP                          | 82                                       |
| Arizona . . . . .              | 1979                        | CHSS                          | 82                                       |
| Arkansas . . . . .             | 1979                        | CHSS                          | 93                                       |
| California . . . . .           | 1979                        | AACP                          | 69                                       |
| Colorado . . . . .             | 1978                        | AACP                          | 85                                       |
| Connecticut . . . . .          | 1978                        | AACP                          | 85                                       |
| Delaware . . . . .             | 1978                        | AACP                          | 82                                       |
| District of Columbia . . . . . | 1978                        | AACP                          | 89                                       |
| Florida . . . . .              | 1978                        | CHSS                          | 79                                       |
| Georgia . . . . .              | 1979                        | AACP                          | 75                                       |
| Hawaii . . . . .               | 1978                        | AACP                          | 89                                       |
| Idaho . . . . .                | 1977                        | AACP                          | 87                                       |
| Illinois . . . . .             | 1978                        | AACP                          | 77                                       |
| Indiana . . . . .              | 1979                        | AACP                          | 93                                       |
| Iowa . . . . .                 | 1978                        | AACP                          | 89                                       |
| Kansas . . . . .               | 1977                        | AACP                          | 92                                       |
| Kentucky . . . . .             | 1977                        | AACP                          | 86                                       |
| Louisiana . . . . .            | 1979                        | AACP                          | 63                                       |
| Maine . . . . .                | 1978                        | CHSS                          | 90                                       |
| Maryland . . . . .             | 1979                        | AACP                          | 84                                       |
| Massachusetts . . . . .        | 1978                        | CHSS                          | 100                                      |
| Michigan . . . . .             | 1978                        | CHSS                          | 92                                       |
| Minnesota . . . . .            | 1978                        | CHSS                          | 95                                       |
| Mississippi . . . . .          | 1979                        | CHSS                          | 86                                       |
| Missouri . . . . .             | 1978                        | CHSS                          | 96                                       |
| Montana . . . . .              | 1978                        | AACP                          | 92                                       |
| Nebraska . . . . .             | 1979                        | CHSS                          | 97                                       |
| Nevada . . . . .               | 1978                        | AACP                          | 97                                       |
| New Hampshire . . . . .        | 1978                        | CHSS                          | 88                                       |
| New Jersey . . . . .           | 1978                        | AACP                          | 82                                       |
| New Mexico . . . . .           | 1978                        | AACP                          | 93                                       |
| New York . . . . .             | 1977                        | AACP                          | 76                                       |
| North Carolina . . . . .       | 1978                        | CHSS                          | 98                                       |
| North Dakota . . . . .         | 1978                        | AACP                          | 94                                       |
| Ohio . . . . .                 | 1978                        | AACP                          | 80                                       |
| Oklahoma . . . . .             | 1979                        | AACP                          | 79                                       |
| Oregon . . . . .               | 1980                        | CHSS                          | 79                                       |

See footnotes at end of table.

Appendix table. Year of data collection, contractor conducting Survey of Licensed Pharmacists, and response rate, by State: United States, 1978-79—Con.

| State                    | Data collection year | Contractor <sup>1</sup> | Percent response rate <sup>2</sup> |
|--------------------------|----------------------|-------------------------|------------------------------------|
| Pennsylvania . . . . .   | 1978                 | CHSS                    | 81                                 |
| Rhode Island . . . . .   | 1978                 | CHSS                    | 93                                 |
| South Carolina . . . . . | 1978                 | CHSS                    | 100                                |
| South Dakota . . . . .   | 1977                 | AACP                    | 90                                 |
| Tennessee . . . . .      | 1978                 | CHSS                    | 89                                 |
| Texas . . . . .          | 1979                 | AACP                    | 83                                 |
| Utah . . . . .           | 1979                 | CHSS                    | 75                                 |
| Vermont . . . . .        | 1978                 | AACP                    | 89                                 |
| Virginia . . . . .       | 1978                 | CHSS                    | 97                                 |
| Washington . . . . .     | 1978                 | CHSS                    | 90                                 |
| West Virginia . . . . .  | 1979                 | CHSS                    | 99                                 |
| Wisconsin . . . . .      | 1978                 | CHSS                    | 84                                 |
| Wyoming . . . . .        | 1978                 | AACP                    | 84                                 |

<sup>1</sup>CHSS — the Cooperative Health Statistics System.  
<sup>2</sup>AACP — the American Association of Colleges of Pharmacy.  
<sup>2</sup>Prior to the removal of duplicate records.

### Minimum data set

As part of CHSS, a uniform minimum data set was developed by the Center in consultation with other producers and users of health manpower data. The minimum data set consisted of a core of basic data on 13 health occupations. For each occupation there was to be an additional occupation-specific set of data elements included in the minimum data set. Pharmacy was one of the occupations for which an additional data set was developed.

For the 1978-79 Survey of Licensed Pharmacists this minimum data set for pharmacists was the basis for the development of the data collection instrument. Data items on the individual questionnaires developed by each State participating in 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 in approximately half the States' questionnaires departed from the Center's 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 items for which data were already available from their State licensing board records. They were also allowed to include on their questionnaires other questions for their own information which were not part of the minimum data set. All the minimum data set items were included in the questionnaire used for data collection by AACP, which appears in appendix II. The use of the minimum data set as the basis for all questionnaires resulted in data that could be merged to produce a national file of pharmacists.

### Response rate

An important factor in the validity of the data is the response rate. The lower the response rate, the more chance there is for bias to be injected into the survey results since the respondents may not be representative of the entire group of pharmacists. For this survey, the individual CHSS contractors provided the Center with the questionnaire response rates

for each of their States. These are provided in the appendix table.

### Questionnaire mailout

In each State the contractor (either the AACP or CHSS State agency) worked in collaboration with the State licensing board to send the questionnaires to all licensed pharmacists. In most States the questionnaires were mailed with license renewal applications sent out by the State licensing board. The completed questionnaires were returned to the contractor, where they were coded (and also keytaped, in CHSS States). Followup questionnaires to nonrespondents were mailed out directly by the contractors. Followup mailings were supposed to occur until an 80-percent response rate in each State was reached. As many as four mailings were made to nonrespondents in some States in an effort to achieve the 80-percent response rate. The overall questionnaire response rate was 84 percent (appendix table).

### Calculation

The questionnaire response rate for each State is based on the number of respondents (out of the universe that received questionnaires) who returned a questionnaire after completing one or more items called for in the data collection instrument. In some CHSS States, information that was part of the minimum data set, already available in State licensing board records, was not required to be asked for on the questionnaire but was provided directly from the existing records. Because of this data, records of nonrespondents contained data that otherwise would have been missing. When data are available on nonrespondents, the data are used in this report without distinction for response status. Thus, while a CHSS State's response rate is based on the number of returned questionnaires containing one or more completed data items, in reality there may be additional records with usable data that are not counted toward the response rate.

In States where data were collected through AACP there is also a slight adjustment of the definition of the response rate. The universe that received questionnaires constitutes

the denominator of the response rate calculation. However, that number is not the same as the actual total number of licensed pharmacists in the States involved. In States where data were collected through AACP the contractor was not notified of new addresses. As a result, a very small number of licensed pharmacists did not receive copies of the questionnaire. The response rate then in non-CHSS States is not based on the entire universe of licensed pharmacists, as it is in CHSS States, where contractors were notified of address changes and the rosters remained up-to-date. In non-CHSS States the response rate is a function of the number of licensed pharmacists who received questionnaires. However, even if some pharmacists were excluded from the response-rate calculation because they did not receive questionnaires, they remain on the State roster as licensed pharmacists and are counted in this report.

It is impossible to reflect accurately the true universe of licensed pharmacists because a very small fraction of pharmacists died during the data collection period. This attrition, however, is theoretically offset by the small number of newly licensed pharmacists who missed being surveyed.

### **Item nonresponse**

If some pharmacists are known to be active but no other information about them is available, they appear in the unknown cells of the variables in question in the tables on active pharmacists. If a datum is missing in a table and the pharmacists are active, they appear in the "unknown" column or row for that variable only. To save space in a few of the tables, the number of pharmacists who belong in an "unknown" column or row are footnoted rather than listed in the table.

For records where there were item nonresponses but sufficient other data from which to impute missing data, imputations were performed. These imputations were limited to the following data items: year of birth, year of graduation, sex, Hispanic origin, academic degree held in pharmacy, and activity status. These are discussed more extensively in the next section, "Data editing and processing procedures." There was no extrapolation made from records having data, to fill in other records missing those data items.

### **Data editing and processing procedures**

As the survey in each State was completed, a data tape was created. At the National Center for Health Statistics all data on the tape were subjected to computer range and logic test procedures, which were set up to flag inconsistencies and errors. The mistakes flagged were corrected through procedures established to handle common problems among States, through ad hoc routines to correct specific problems, or by contacting the contractor for clarification or even for resubmittal of the data.

Range tests were used to check that the codes for data were correct. For example, a zip code of 00000 was not acceptable. Either the correct code would be found and inserted or a missing data code would be used. Logic tests were

used to check for consistency between data items. When a pharmacist's weekly hours spent in each activity or employment setting (see appendix II, questionnaire items 23a, 23b, and 23) did not add to the total hours worked per week or did not agree with each other, the items were flagged as inconsistencies. The hours were corrected in some cases by proportionally adjusting the detail of activity or employment setting. If, however, the sum of the hours by activity matched the corresponding sum of hours by employment setting, the total hours were changed to equal the sum of the detailed hours. Similarly, a person whose year of birth was given as 1940 could not have a year of graduation of 1950. One of the variables would be adjusted using other available information such as years active in pharmacy practice. If no determination could be made, missing data codes were substituted for these data items.

Missing information for year of birth, year of graduation, sex, Hispanic origin, academic degree held in pharmacy, and activity status were imputed from other known data within the record. When year of birth was missing, it was derived from a formula using year of graduation and type of first degree held. If year of graduation was missing but year of birth was available, and the pharmacist held a first basic pharmacy degree, year of graduation was imputed using the average age at graduation for pharmacists in the file. On the rare occasion that sex was missing, it was determined from first name. If there was no first name or the name was ambiguous, it remained missing. When Hispanic origin was asked on the questionnaire and respondents answered race and left Hispanic origin blank, it was imputed that they were not of Hispanic origin. It was imputed that pharmacists had or did not have a first basic degree in pharmacy when the item "first degree held" was inconsistent with other data items. The determination of whether or not a pharmacist held a degree was based on year and school of graduation and year of birth. When activity status was missing, it was imputed on the basis of the respondent's age, of weeks worked during the past year, and/or of whether or not the respondent named a primary location of work.

### **Removing duplicate records**

The 51 State tapes (including the District of Columbia) submitted through CHSS and AACP, when merged into a national data file, contained the total number of pharmacist 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 is not acceptable. Thus, it was necessary to remove duplicate records of pharmacists licensed in more than one State and to derive a national data file in which each pharmacist would be counted only once.

Before passage of the Privacy Act of 1974 (PL 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 protect 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. All manpower questionnaires had to comply with Section 7(b) above. Second, many State CHSS contractors were totally prohibited from asking for social security numbers by executive decree or through State legislative action. The net effect of the Privacy Act was to make it virtually impossible to collect or to use social security numbers as a means for purging the pharmacy file of duplicate records. Therefore, an alternative method to remove duplicate records was devised.

A unique identifier for each record was produced by extracting selected data from the record. The data were drawn from variables that remain relatively constant. The most valuable variables used in this process were name, date of birth, year of graduation, school name, residence, and work location. The identifiers that resulted from this linkup of variables were then computer matched. The computer matching process was done using four different sorts of the records. These sorts were required to assure that even records with miscoded, erroneous, or missing data would be matched with another record from the same individual. Thus, even though date of birth, use of first name, and so forth are subject to errors due to interpretation of handwriting, keypunching, and so forth, the procedures for deletion allowed these records to be linked with others in the file if such matching records existed.

The computer comparisons of records with matching identifiers resulted in the detection of duplicate and even multiple records of the same pharmacists. These extraneous records were deleted. The record chosen to be kept for each pharmacist was the one from the State in which he or she was working. If that datum was missing or the pharmacist was working in more than one State, other criteria for selecting the record to retain were used. This process resulted in the creation of the "unduplicated" file.<sup>11</sup> The total number of pharmacist records prior to the removal of duplicate and multiple records was 207,169. The "unduplication" process yielded a total of 160,664 records, one for each licensed pharmacist, regardless of the number of States in which licenses were held.

---

NOTE: A list of references follows the text.

## Period of data collection

As may be seen in the appendix table, 30 States and the District of Columbia, or 61 percent, had data collections occurring during 1978; and 14 States, or 27 percent, in 1979. Five of the remaining States' data collection occurred in 1977, and only one State had a 1980 data collection.

The year of each State's data collection shown in the appendix table represents the time during which the bulk of a State's data collection occurred. This is the year in which the respondent completed the questionnaire, and it is usually the year in which the license was due to be renewed. If the license renewal deadline was in January of the following year, the year of that State's data collection was still considered to be the earlier year, since usually the questionnaires were filled out in November and December, and the data provided on the questionnaire represented the pharmacist in the earlier year.

The year of data collection for each State was used in calculating the pharmacist's age as it appears in the age tables throughout this report. For example, a pharmacist from New York with a year of birth of 1939 would be counted as 38 years old (New York's year of data collection was 1977), whereas a pharmacist in California with the same year of birth would be counted as 40 years old (California's year of data collection was 1979). The calculation was done this way because it is important to match a pharmacist's characteristics with his actual age at the time he provided the information for the questionnaire.

## Consistency of data between NCHS national and State reports and reports published by individual States

This report contains data on all licensed pharmacists in the Nation. The text and tables generally deal with all known active pharmacists. This subset of pharmacists was obtained after editing and processing each State's data, merging them into a national file, and removing duplicate records. The data for each State that appear in the detailed tables in this report differ from the data included in the 1978-79 pharmacist State reports published by the National Center for Health Statistics, using the same original data.<sup>12</sup> The data in the State reports were edited and processed in the same way as the data for the national report, but the State reports included only pharmacists who were active and working in the State of licensure or inactive with an in-State mailing address. The data for the national report include pharmacists who remain after duplicate records were removed. This results in different numbers of pharmacists in the same State.

Furthermore, while the State reports placed all pharmacists according to the criterion that they be working in their licensure States, the national report allocated pharmacists

by work States (including military personnel who might not have been licensed in the State in which they were working), as defined in appendix III. Thus, variation exists between the national and State reports published by the National Center for Health Statistics. In addition, some of the CHSS States have published their own individual State reports describing the results of their data collections. Again, although the

original data are the same, the editing and processing differ, the descriptive constraints on the data may differ, and the State focuses only on pharmacists licensed therein, not by work State as in this report. Furthermore, the States may have collected additional data items on the pharmacists that were not submitted to the Center. Therefore, they may have data analyses for their State for which no national data exist.

# Appendix II

## Survey questionnaire

HRA-T57  
12-76

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
Health Resources Administration  
National Center for Health Statistics

O.M.B. No. 68-S-76025  
APPROVAL EXPIRES 3/31/79

### PHARMACY MANPOWER INFORMATION PROJECT

AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

NATIONAL ASSOCIATION OF BOARDS OF PHARMACY

- INFORMATION RESTRICTIONS:** This survey is being conducted under the authority of the following legislation:
- Health Services Research, Health Statistics and Medical Libraries Act of 1974 (P.L. 93-353) Sec. 306(b)(1)(e), 42 U.S. Code 242k; Sec. 308(a)(2)(B), 42 U.S. Code 242m
  - Comprehensive Health-Manpower Training Act of 1971 (P.L. 92-157, Sec. 772) 42 U.S. Code 295f-2
  - Emergency Health Personnel Act Amendments of 1972 (P.L. 92-585) Sec. 329(b)(1), 42 U.S. Code 254b
  - National Health Planning and Resources Development Act of 1974 (P.L. 93-641) Sec 1513(b)(1)(D), 42 U.S. Code 3001-2, Sec. 1522(b)(7)(A), 42 U.S. Code 242d

All the information you supply will be made available to the State Licensing Board in which you are currently licensed. Data *without* individual identifiers such as name or address will be made available in non-aggregated form to agencies within the Department of Health, Education, and Welfare. Any additional or further release of information or publication will be in the form of aggregated statistical data in which individuals are grouped into categories such as age. Return of this questionnaire acknowledges your agreement to the uses, and releases by NCHS as described herein.

**Those of you licensed in more than one State will be receiving more than one copy of this questionnaire. Would you please complete the entire questionnaire from those States in which you are currently residing or working. In all other States, only complete items 1 through 8.**

THANK YOU FOR YOUR PARTICIPATION

|  |   |   |                                      |
|--|---|---|--------------------------------------|
| DO NOT WRITE IN THIS SPACE   | <b>PART I: The information in this section will be published or released only in summary form such that individuals will be combined into groups.</b> |   | DO NOT WRITE IN THIS SPACE           |
| <b>1. NAME</b>   |   |   |                                      |
| <b>1a.</b> <input type="text" value="21-40"/> Last   |   | <b>1b. Generational Identifier:</b> (Circle one if applicable)<br>SR    JR    III |                                      |
| <b>1c.</b> <input type="text" value="44-59"/> First  |   | <b>1d. Middle Initial</b> <input type="text" value="60"/>                         |                                      |
| <b>2. PREVIOUS NAME:</b> If your name has been changed due to court order, marriage, divorce, etc., please provide the name under which you were previously licensed in the State for which you are completing this form, in questions 2a.-2d.<br><br>(NOTE: The word "STATE" throughout this form refers to any of the fifty States, D.C., or territories.) |   |   |                                      |
| <b>2a.</b> <input type="text" value="61-80"/> Last   |   | <b>2b. Generational Identifier:</b> (Circle one if applicable)<br>SR    JR    III |                                      |
| <b>2c.</b> <input type="text" value="84-99"/> First  |   | <b>2d. Middle Initial</b> <input type="text" value="100"/>                        |                                      |
| <b>3. MAILING ADDRESS</b>  |   |   |                                      |
| <b>3a.</b> <input type="text" value="101-150"/> Street Address<br><input type="text" value="Street Address--Continue"/>  |   |   |                                      |
| <b>3b.</b> <input type="text" value="151-166"/> City Name  |   | <b>3c.</b> <input type="text" value="State or Foreign Country"/>                  |                                      |
| <b>3d. ZIP Code</b> <input type="text" value="169-173"/>   |   |   |                                      |
|  |   |   | <input type="text" value="167-168"/> |

DO NOT WRITE IN THIS SPACE

4. DATE OF BIRTH

Month Day Year 174-179

DO NOT WRITE IN THIS SPACE

5. BIRTHPLACE: Name of State or foreign country

180-182

6. PRINCIPAL RESIDENCE: Name of State or foreign country.

183-185

7. PRINCIPAL PLACE OF WORK IN PHARMACY: Name of State or foreign country.

186-188

(If not working, please check this box )

8a. For PHARMACY—Are you licensed by one or both States you listed in Question 6 or 7?

YES ↓

NO ↓

b. Are you currently residing or working in the State for which you are completing this questionnaire?

YES ↓

NO ↓

(Please continue with item 9)

(Please continue with Question 9)

PLEASE STOP HERE AND RETURN THIS QUESTIONNAIRE WITH YOUR LICENSE APPLICATION AND FEE TO THE STATE FROM WHICH YOU RECEIVED IT.

9. Please indicate below where you were working in pharmacy one year ago.

If you were not working in pharmacy one year ago, please check this box.

191-193

194-196

State or foreign country

County

City

ZIP Code 201-205

10. SEX: (Circle applicable number)

- 1 Male 2 Female

11. COLOR OR RACE: (Circle applicable number)

- 1 Caucasian or White
2 Negro or Black
3 American Indian/Native American
4 Oriental or Asian
5 Other (Please specify):

12. SPANISH ORIGIN OR DESCENT: (Circle applicable number)

- 1 Mexican American or Chicano
2 Puerto Rican or Boricua
3 Cuban
4 Central or South American
5 Other Spanish
6 No Spanish origin or descent

PART II: The information in this section will be published or released without individual identifiers such as name or address to agencies within the Department of Health, Education, and Welfare.

13. In what year did you receive your first professional pharmacy degree and what was the exact name of the pharmacy school at the time of your graduation?

Year 19 209-210

Name of pharmacy school at time of graduation

14. Indicate your first college of pharmacy degree. (Circle only one number)

- 1 No college or pharmacy degree (Skip to item 17)
2 Ph.C., Ph.G., Pharm.D. (Prior to 1940)
3 B.S., or B.Pharm., four-year program
4 B.S., or B.Pharm., five-year program
5 Pharm.D., six-year program

211-217

DO NOT WRITE IN THIS SPACE

15. Indicate your formal advanced training in pharmacy beyond the first professional degree. (Circle (1) YES or (2) NO for items a thru h)

- a. 1 YES 2 NO Continuing education
- b. 1 YES 2 NO Advanced training (If NO, skip to Item 17)
- c. 1 YES 2 NO Residency in hospital pharmacy
- d. 1 YES 2 NO Residency in clinical pharmacy
- e. 1 YES 2 NO Post B.S. Pharm.D.
- f. 1 YES 2 NO Master of Science
- g. 1 YES 2 NO Ph.D. or D.Sc.
- h. 1 YES 2 NO Other (Please specify):

\_\_\_\_\_

\_\_\_\_\_

16a. Have you been awarded an advanced degree in pharmacy?

- 1 YES ↓ 2 NO

16b. Please indicate below your major area of concentration. (Circle only one number) (Please continue with item 17)

- 01 Pharmacy (Pharmaceutics)
  - 02 Hospital Pharmacy
  - 03 Clinical Pharmacy
  - 04 Pharmacognosy
  - 05 Pharmacology
  - 06 Pharmacy Administration
  - 07 Pharmaceutical (Medicinal) Chemistry
  - 08 Other (Please specify):
- \_\_\_\_\_

DO NOT WRITE IN THIS SPACE

17. How many years have you been active in pharmacy since initial licensure. (Exclude periods of inactivity of six months or more.)

Years

230-231

18. During the past 12 months, how many weeks did you work in pharmacy practice or pharmacy related activities? (Include paid vacation and sick leave.)

Weeks

232-233

19. Are you currently working in pharmacy practice or pharmacy related activities for one or more hours per week? (e.g., retailing pharmaceutical research, teaching, management in pharmacy related firm, etc.)

- 1 YES (Please continue with item 20) →
- 2 NO ↓

19b. If NO, which of the following best describes your present status? (Circle only one number)

- 1 Retired
  - 2 Unemployed and seeking work in pharmacy
  - 3 Unemployed and not seeking work in pharmacy
  - 4 Working in another field and seeking work in pharmacy
  - 5 Working in another field and not seeking work in pharmacy
  - 6 Home maker
  - 7 Other (Please specify: disabled, etc.)
- \_\_\_\_\_

19c. What was the last month and year that you worked in pharmacy practice or pharmacy related activities?

Month   Year

236-237 238-239

STOP! PLEASE RETURN THIS QUESTIONNAIRE WITH YOUR LICENSURE APPLICATION AND FEE TO THE STATE FROM WHICH YOU RECEIVED IT.

20. Principal place of work in pharmacy.

\_\_\_\_\_

(City)

\_\_\_\_\_

(County)

\_\_\_\_\_

(State)

ZIP Code

250-254

240-243

244-246

247-249

21. Which of the following best describes your principal form of employment in this profession? (Circle only one number)

- 1 Sole owner-manager
- 2 Partner
- 3 Manager (Chief, Director, etc.)—Employee
- 4 Assistant Manager (Ass't. Chief, Ass't. Director; etc.)—Employee
- 5 Staff pharmacist—Employee
- 6 Unpaid worker (volunteer)
- 7 Other, (Please specify): \_\_\_\_\_

22. Do you have a formal consultant arrangement with a health care facility? (Circle appropriate number)

- 1 YES 2 NO

DO NOT WRITE IN THIS SPACE

DO NOT WRITE IN THIS SPACE

23. In an average week, how many hours do you work in pharmacy practice or pharmacy related activities?

Hours    
257-258

23a. In an average week, how many hours are spent in each of the following types of activities?

- Providing information to prescribers and institutional clients (e.g., nursing homes, hospitals) on sick room supplies, surgical appliances, and other health related items   259-260
- Administrative, managerial   261-262
- Providing information to patients on prescriptions and nonprescription drugs, and other health related activities   263-264
- Dispensing of prescriptions   265-266
- Teaching and/or research (pharmacy related)   267-268
- Manufacturing and/or bulk compounding   269-270
- Retailing of nonhealth related merchandise   271-272
- Other (Please specify):   273-274

TOTAL

23b. In an average week, how many hours are spent in pharmacy practice or pharmacy related work in each of the following employment settings?

- Independent community pharmacy (one outlet)   275-276
- Small chain community pharmacy (2-11 outlets)   277-278
- Large chain community pharmacy (More than 11 outlets)   279-280
- Clinic or medical building pharmacy   281-282
- Nursing home   283-284
- Private hospital   285-286
- Government hospital (includes State, county, local government, and military)   287-288
- Other government (e.g., FDA, State boards of pharmacy)   289-290
- Pharmaceutical manufacturer   291-292
- Pharmaceutical wholesaler   293-294
- College of Pharmacy   295-296
- Other (Please specify):   297-298

TOTAL

COMMENTS:

# Appendix III

## Definitions of certain terms used in this report

All data items used in this report are defined in the same way as those in the questionnaire (appendix II).

*Practice or employment settings* are combined as follows:

- Chain pharmacy: small or large chain community pharmacy.
- Hospital: Government or other hospital.

*Active pharmacists* are placed in their work State. When work State was missing from a record, the following hierarchy was used for determining the State in which to place the pharmacist: (1) residence State when it equaled mail State, (2) licensure State when it equaled residence or mail State, (3) mail State, and (4) licensure State.

*Inactive pharmacists* are placed in their residence State. Mail State is used when data on residence State are missing. If both States are missing, licensure State is used.

*Geographic region and division* are defined as follows:

| <i>Geographic region and division</i> | <i>States included</i>  |
|---------------------------------------|---|
| Northeast                             |   |
| New England . . . . .                 | Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut |
| Mid-Atlantic . . . . .                | New York, New Jersey, and Pennsylvania                                      |
| North Central                         |   |
| East North Central . . . . .          | Ohio, Indiana, Illinois, Michigan, and Wisconsin                            |
| West North Central . . . . .          | Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas |
| South                                 |   |
| East South Central . . . . .          | Kentucky, Tennessee, Alabama, and Mississippi                               |
| West South Central . . . . .          | Arkansas, Louisiana, Oklahoma, and Texas                                    |
| West                                  |   |
| Mountain . . . . .                    | Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada    |
| Pacific . . . . .                     | Washington, Oregon, Alaska, California, and Hawaii                          |

# Vital and Health Statistics series descriptions

- SERIES 1. Programs and Collection Procedures**—Reports describing the general programs of the National Center for Health Statistics and its offices and divisions and the data collection methods used. They also include definitions and other material necessary for understanding the data.
- SERIES 2. Data Evaluation and Methods Research**—Studies of new statistical methodology including experimental tests of new survey methods, studies of vital statistics collection methods, new analytical techniques, objective evaluations of reliability of collected data, and contributions to statistical theory.
- SERIES 3. Analytical and Epidemiological Studies**—Reports presenting analytical or interpretive studies based on vital and health statistics, carrying the analysis further than the expository types of reports in the other series.
- SERIES 4. Documents and Committee Reports**—Final reports of major committees concerned with vital and health statistics and documents such as recommended model vital registration laws and revised birth and death certificates.
- SERIES 10. Data From the National Health Interview Survey**—Statistics on illness, accidental injuries, disability, use of hospital, medical, dental, and other services, and other health-related topics, all based on data collected in the continuing national household interview survey.
- SERIES 11. Data From the National Health Examination Survey and the National Health and Nutrition Examination Survey**—Data from direct examination, testing, and measurement of national samples of the civilian noninstitutionalized population provide the basis for (1) estimates of the medically defined prevalence of specific diseases in the United States and the distributions of the population with respect to physical, physiological, and psychological characteristics and (2) analysis of relationships among the various measurements without reference to an explicit finite universe of persons.
- SERIES 12. Data From the Institutionalized Population Surveys**—Discontinued in 1975. Reports from these surveys are included in Series 13.
- SERIES 13. Data on Health Resources Utilization**—Statistics on the utilization of health manpower and facilities providing long-term care, ambulatory care, hospital care, and family planning services.
- SERIES 14. Data on Health Resources: Manpower and Facilities**—Statistics on the numbers, geographic distribution, and characteristics of health resources including physicians, dentists, nurses, other health occupations, hospitals, nursing homes, and outpatient facilities.
- SERIES 15. Data From Special Surveys**—Statistics on health and health-related topics collected in special surveys that are not a part of the continuing data systems of the National Center for Health Statistics.
- SERIES 20. Data on Mortality**—Various statistics on mortality other than as included in regular annual or monthly reports. Special analyses by cause of death, age, and other demographic variables; geographic and time series analyses; and statistics on characteristics of deaths not available from the vital records based on sample surveys of those records.
- SERIES 21. Data on Natality, Marriage, and Divorce**—Various statistics on natality, marriage, and divorce other than as included in regular annual or monthly reports. Special analyses by demographic variables; geographic and time series analyses; studies of fertility; and statistics on characteristics of births not available from the vital records based on sample surveys of those records.
- SERIES 22. Data From the National Monthly and Natality Surveys**—Discontinued in 1975. Reports from these sample surveys based on vital records are included in Series 20 and 21, respectively.
- SERIES 23. Data From the National Survey of Family Growth**—Statistics on fertility, family formation and dissolution, family planning, and related maternal and infant health topics derived from a periodic survey of a nationwide probability sample of ever-married women 15-44 years of age.

For a list of titles of reports published in these series, write to:

Scientific and Technical Information Branch  
National Center for Health Statistics  
Public Health Service  
Hyattsville, Md. 20782  
301-436-NCHS



U.S. DEPARTMENT OF HEALTH AND  
HUMAN SERVICES  
Public Health Service  
National Center for Health Statistics  
3700 East-West Highway  
Hyattsville, Maryland 20782

---

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300

THIRD CLASS MAIL  
BULK RATE  
POSTAGE & FEES PAID  
PHS  
PERMIT No. G29