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Number 7

Ophthalmology Manpower: Characteristics of Clinical Practice

United States-1968

Statistics are presented on selected characteristics of the clinical practice of ophthalmology in the United States in 1968. Described and evaluated are the volume and nature of the clinical activity: hours worked per week by the clinical ophthalmologist; number of patients seen per week; number of patient visits per week; number of office locations used in clinical practice; reliance on supplementary personnel in the provision of clinical care; clinical services rendered to patients; and primary ophthalmological specialty engaged in by the active ophthalmologist.

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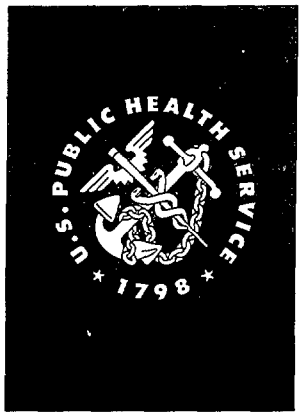

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OPHTHALMOLOGY MANPOWER

CHARACTERISTICS OF CLINICAL PRACTICE

Hugo K. Koch, M.H.A., *Division of Health Resources Statistics*

INTRODUCTION

Background

This is a report on selected characteristics of the clinical practice of ophthalmology in the United States in 1968. Statistics reported here are chiefly the product of one of three surveys on vision manpower conducted by the National Center for Health Statistics between May 1968 and June 1969. These surveys sought information on three groups: ophthalmologists, optometrists, and opticianry personnel. The long-range goal of the surveys was to provide statistical information that would aid the health professions in their planning for educational programs, manpower requirements, research projects, and delivery of eye-care services.

Scope

Reported here are statistics on the estimated 8,616 ophthalmologists who were active in their profession at the time of the 1968 survey. The chief subjects of the tabular data and textual commentary presented here are the 97 percent of the 8,616 active ophthalmologists who reported any degree of direct diagnosis and treatment of eye patients. An estimated 8,327 ophthalmologists made up this "clinical" universe. Figures used in this report reflect the application of a statistical adjustment designed to compensate for various types of nonresponse to the survey. Totals represent a good approximation of the actual manpower resource in ophthalmologists in 1968.

Included within the population of active ophthalmologists are 8,434 doctors of medicine (M.D. ophthalmologists) who had reported to the American Medical Association (AMA) that ophthalmology was their primary or secondary specialty and 181 doctors of osteopathy (D.O. ophthalmologists) who had reported to the American Osteopathic Association that they devoted time to ophthalmological activities.

Excluded from the scope of this report are 233 ophthalmologists who were active in the U.S. Army, Navy, Air Force, and the Commissioned Corps of the U.S. Public Health Service (PHS) at the time of the survey and 879 students of ophthalmology who were enrolled in civilian and military residency programs. The chief interest of this report then is in the formally qualified, civilian ophthalmologist who was active in clinical practice in the United States in 1968.

In scope and content, this report differs substantially from other sources of information on ophthalmological manpower. The reader should generally avoid a direct comparison of these data with data from other sources, especially with data from AMA directories for the period or with publications based on AMA data.[1-5] Caution in comparison is indicated for several reasons. First, it must be remembered that the universe reported on here includes D.O. ophthalmologists as well as M.D. ophthalmologists, and

those practitioners who worked part time as well as those who worked full time in ophthalmological activities. Furthermore, the population reported on in this report includes Federal employees and is non-Federal only to the extent that it excludes military and PHS ophthalmologists. Therefore, unless suitable adjustments are made for these exclusions and the student exclusions, only rough comparisons to the sources based on AMA data can generally be made.

Content

This report on characteristics of the clinical practice of ophthalmology is the second of three reports based on the findings of the 1968 survey of ophthalmologists. The first report, "Ophthalmology Manpower—A General Profile: United States, 1968" (*Vital and Health Statistics,* Series 14-No. 5), includes a general demographic and professional profile of ophthalmologists active in their profession in the United States at the time of the survey. Selected findings from the first report are reviewed in the following section, in advance of the focused discussion of clinical practice, the subject of this report. A third report will offer statistical information on the ophthalmologist's utilization of supplementary personnel.

This report is composed of the following parts, in the sequence in which they are discussed.

1. A statistical overview of selected demographic and professional characteristics of the total active universe of ophthalmologists and of the clinical universe in 1968 (tables 1 and 2).
2. A statistical description and evaluation of the volume of clinical activity, as expressed in:
   a. The hours worked per week by the clinical practitioner (tables 3 and 4).
   b. The number of patients seen in a typical week (tables 5 and 6) and the number of patient visits in a typical week (tables 7 and 8).
   c. The number of office locations used in the clinical practice of ophthalmology.
   d. The reliance on supplementary personnel in the provision of clinical care.
   e. The number of different services rendered to eye patients (tables 9 and 10).
3. A statistical description and evaluation of the nature of the clinical activity engaged in, as revealed by:
   a. The type of services ophthalmologists rendered to their patients (tables 11-15).
   b. The primary ophthalmological subspecialty engaged in by the clinical practitioner.

The above descriptors are cross-contrasted with each other and also weighed in relation to such other characteristics of the clinical practitioner as age, sex, geographic distribution, professional identity (M.D. or D.O.), areal scope of licensure, and principal form of practice.

The thematic sequence followed in the text is also preserved in the detailed tables.

The various compensatory adjustments used in establishing the report data, along with other methodological considerations, are discussed in appendix I. Definitions of demographic and professional terms used in the report appear in appendix II, and facsimiles of the survey questionnaires used to elicit information from M.D. and D.O. respondents appear as appendix III.

ACTIVE OPHTHALMOLOGIST IN PROFILE

Selected Demographic and Professional Characteristics

Selected findings from the first report reveal the following demographic and professional characteristics of active ophthalmologists in the United States in 1968.

1. There were an estimated 8,616 active ophthalmologists. Of these, 8,327 (or about 97 percent) qualified as "clinical ophthalmologists"; that is, they spent some portion of their working week in

the direct diagnosis and treatment of eye patients.

2. These figures reflect a slow but progressive increase over former years in the ratio of ophthalmologists to general population.
3. Regionally, the South and North Central Regions had fewer ophthalmologists per 100,000 population than did the Northeast and West Regions. D.O. ophthalmologists favored the North Central Region, especially Michigan, Missouri, and Ohio.
4. About 97 percent of all active ophthalmologists were male. About 98 percent were doctors of medicine. The typical ophthalmologist—with a mean age of 51.3 years—tended to be at least 2 years older than the typical member of the overall M.D. population.[2]
5. Substantially over one-half of the active ophthalmologists were licensed in only one State. The younger ophthalmologists were more likely to be licensed in more than one State.
6. Solo practice was the principal form of employment. About 68 percent of all active ophthalmologists engaged in this form of practice.
7. About 26 percent of all active ophthalmologists engaged in some form of multiple-physician practice; i.e., partnership practice, group practice, or nongroup arrangement with other physicians. The younger practitioner showed a relatively greater tendency to participate in multiple-physician practice than did his older colleague.
8. Only 5.3 percent of all ophthalmologists were salaried, the largest number of these (222) by medical schools. Only about 2 percent of all ophthalmologists reported that they were salaried by hospitals as their principal form of employment.
9. About 33 percent of active ophthalmologists reported spending some part of their working week in teaching and about 11 percent in medical research.
10. As a possible legacy from earlier days when eye-ear-nose-and-throat was a unified specialty, 1,583 of the older ophthalmologists still tended to devote a substantial portion of their working week to the practice of clinical otolaryngology.

CHARACTERISTICS OF CLINICAL PRACTICE

Volume of Activity

Hours worked per week.—The 8,327 respondents active in the direct care of eye patients reported that they devoted a median volume of 48.4 hours per week to all their professional activities.

When clinical ophthalmologists aged 65 years and over are eliminated from this determination of work volume, the result is an increase in median work experience from 48.4 to about 50 hours per week, a figure which is comparable to the median value of 51 hours per week obtained for ophthalmologists in a privately conducted 1968 study of 20 medical and surgical specialties.[4] Data abstracted from that private study and shown in table A reveal a median work volume of 60 hours per week for all the specialties reported. Ophthalmologists are seen to rank third from the bottom in number of hours devoted to all professional activities per week. According to that study, only dermatologists and allergists reported a smaller work volume in terms of hours worked per week.

In geographic areas where the ratio of clinical ophthalmologists to general population was smaller than the national ratio of 4.2 per 100,000 (table IV, appendix I), respondents to the Vision and Eye Care Survey generally reported a longer workweek. The data in figure 1 express this tendency by geographic division. Of the five divisions showing a ratio smaller than the national ratio, the reader may note that four of the five also reported a median work volume greater than the national median of 48.4 hours per week. It is notable that three of these four divisions comprise the South Region.

An inverse relationship is evident between the age of the clinical practitioner and the median number of hours worked per week (figure 2). As might be expected, the older the practitioner, the fewer the hours worked per week.

However, when other measures of clinical volume are contrasted with hours worked per week,

Table A. Median hours worked per week in 20 medical and surgical specialties: United States, 1968

Specialty	Median hours per week[1]
Allergy	50
Anesthesiology	55
Cardiovascular disease	65
Dermatology	46
General practice	60
General surgery	63
Internal medicine	60
Neurology	60
Neurological surgery	63
Obstetrics and gynecology	60
Ophthalmology	51
Orthopedic surgery	65
Otolaryngology	55
Pathology	56
Pediatrics	60
Plastic surgery	60
Psychiatry	58
Radiology	54
Thoracic surgery	65
Urology	60

[1] Includes clinical and nonclinical activities.

SOURCE: From a study of 7,864 self-employed M.D.'s under 65 years of age, conducted in spring 1968, and reported in Lewis, R. Cragin: Doctors' earnings dissected: The time factor. *Med.Econ.*, Dec. 23, 1968. pp. 64-67.

a directly proportional relationship is seen. Thus practioners with only one office used in clinical practice reported a median workweek of about 48 hours, while practitioners with two offices or more reported a longer working week of about 52 hours. Further, the 7,882 clinical ophthalmologists who utilized the services of supplementary personnel in their practice reported a median workweek of about 48 hours, in contrast with the 38-hour week reported by the 445 who did not use supplementary personnel.

One final, directly proportional relationship deserves attention—that between length of workweek and the number of physician associates who shared the services of supplementary personnel with the clinical respondent. In a direct though somewhat fluctuating fashion, the length of the working week increased from a median of about 46 hours per week for respondents with only one physician associate to 51 hours or more for respondents with three physician associates or more.

It is instructive to examine the total professional activity for an approximation of those hours which were applied only to the direct diagnosis and treatment of eye patients, excluding time devoted to clinical otolaryngology and miscellaneous clinical activity, as well as those hours spent in teaching, research, and administration.

As noted previously, respondents reported a national median of 48.4 hours per week spent in all their professional activities. They further reported that they devoted a median of 84.0 percent of this total to the direct care of eye patients. Thus the typical clinical ophthalmologist probably spent substantially fewer than 48.4 hours in the diagnosis and treatment of eye patients—more likely in the neighborhood of 40 to 42 hours.

This kind of rough but realistic reduction is helpful in evaluating the hours worked per week according to the various forms of practice or employment. From the data in table B, it seems evident that salaried ophthalmologists, although they reported an overall median workweek which equaled or exceeded the national median for all clinical ophthalmologists, probably devoted a much smaller proportion of this total activity to the direct care of eye patients than did their self-employed counterparts.

Patients seen per week and patient visits per week.—The 8,327 respondents active in the direct care of patients reported that they experienced a median volume of 101.6 patient visits per week. They further reported a median volume of 87.6 patients seen per week. Together, these values represent a national patient/visit ratio of about 1.2 visits per patient.

When the figure for patient visits per week is adjusted to exclude clinical ophthalmologists of 65 years and over, as well as all salaried ophthalmologists and doctors of osteopathy, the result is an increase in weekly visits by patients from 101.6 to about 116, a figure that is closely comparable to the median value of 116 visits per week obtained for ophthalmologists in a privately conducted 1968 study of 18 medical and surgical specialties.[5] Data abstracted from this

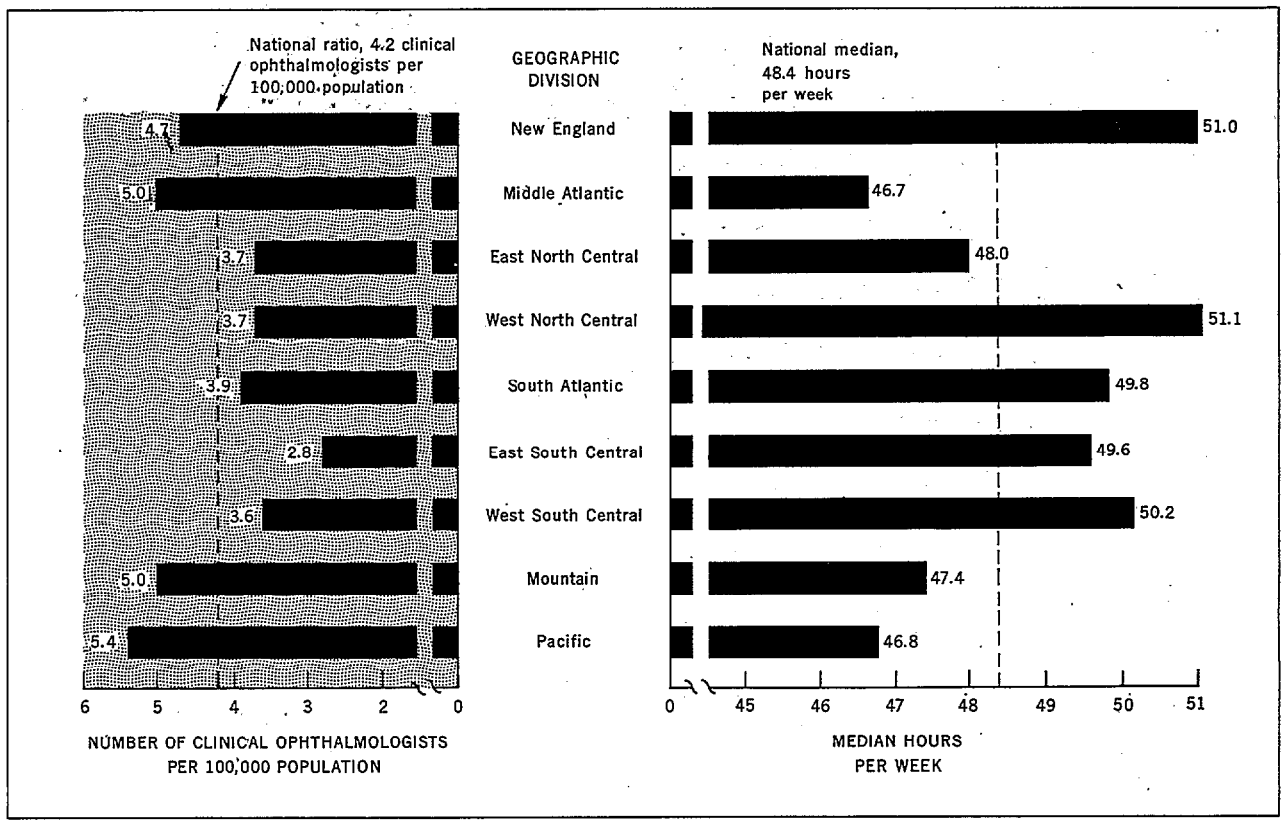

Figure 1. Number of clinical ophthalmologists per 100,000 population compared with median number of hours worked per week, by geographic division: United States, 1968.

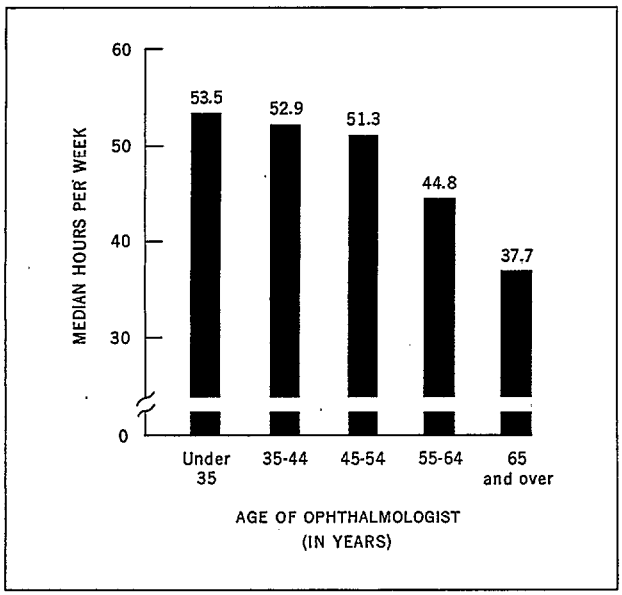

Figure 2. Median number of hours per week of ophthalmological activities, by age of ophthalmologist: United States, 1968.

private study and shown in table C reveal that ophthalmologists stood midway among the specialties in terms of patient visits per week.

As noted previously, respondents to the survey that provided the data for this study reported that they devoted a median of about 40 hours per week to the direct care of patients—excluding all other clinical and nonclinical activity. Thus, given a national median experience of about 102 visits per week, it follows that a typical visit by an eye patient lasted about 24 minutes.

In geographic areas where the ratio of clinical ophthalmologists to general population was smaller than the national ratio of 4.2 per 100,000, respondents reported a larger volume of clinical activity in terms of patient visits and patients seen per week. The data in figure 3 express this finding by geographic divisions. All five of the divisions that reported an ophthalmologist/population ratio smaller than the national ratio also showed a compensatory tend-

Table B. Number of clinical ophthalmologists, median hours worked per week, and percent of time devoted to care of patients, by principal form of practice or employment of clinical ophthalmologists: United States, 1968

Principal form of practice or employment	Number of clinical ophthal-mologists	Hours worked per week	Percent of time devoted to patients
		Median	
Self-employed:			
Solo practice	5,695	47.3	85.0
Partnership	1,385	50.0	85.0
Group practice	483	51.5	84.0
Nongroup arrangement with other physician(s)	352	50.0	84.0
Salaried:			
Hospital[1]	152	48.1	68.0
Nonhospital[2]	259	54.1	46.7

[1] Includes nongovernment hospitals and city, county, State, and Federal hospitals.

[2] Includes medical schools; city, county, State, and Federal agencies; and other (all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, and so forth).

Table C. Median patient visits per week in 18 medical and surgical specialties: United States, 1968

Specialty	Median patient vists per week[1]
Allergy	125
Anesthesiology	30
Cardiovascular disease	103
Dermatology	156
General practice	167
General surgery	106
Internal medicine	116
Neurology	59
Neurological surgery	85
Obstetrics and gynecology	130
Ophthalmology	116
Orthopedic surgery	129
Otolaryngology	125
Pediatrics	140
Plastic surgery	81
Psychiatry	38
Thoracic surgery	88
Urology	119

[1] Includes office, home, and hospital visits.

SOURCE: From a study of 7,864 self-employed M.D.'s under 65 years of age conducted in spring 1968 and reported in *Med.Econ.*, Dec. 9, 1968. pp. 75-79.

ency toward increased clinical activity; that is, they exceeded the national medians for both patient visits and patients seen per week. The divisions of the South were particularly strong in the inverse relationship between these measures of clinical volume and the availability of ophthalmologists to satisfy the clinical needs of the population. The interesting exception apparent in findings for the Mountain Division is discussed in "Number of patient services rendered."

Data in figure 4 show the result of determining clinical load according to the relative age of the practitioner. Median number of patient visits per week is seen to peak at about 120 visits per week in the age interval 45-54 years and to show a substantial decrease as age of the ophthalmologist increases—especially in the category over 65 years.

Volume in patient visits was observed to vary in direct proportion to several other indicators of clinical volume. For example:

Practitioners licensed in a single State reported a median volume of about 100 visits per week; those licensed in more than one State reported a median volume of about 104 visits.

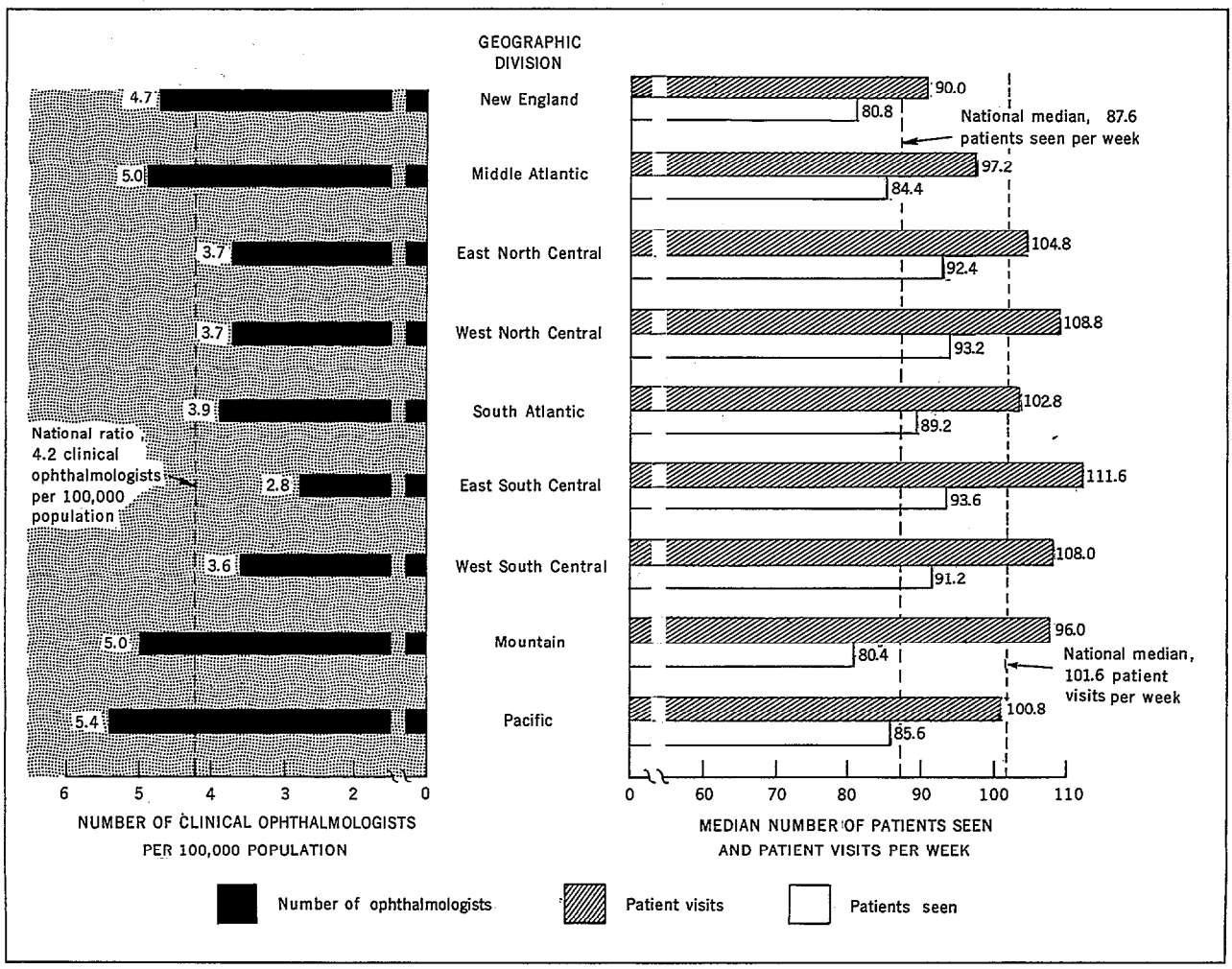

Figure 3. Number of clinical ophthalmologists per 100,000 population compared with median number of patient visits per week, by geographic division: United States, 1968.

Number of patient visits per week showed a steady, positive acceleration in harmony with the increase in hours worked per week, rising from a median of about 56 visits for clinicians who worked less than 35 hours per week to a median of 125 visits for those who reported working more than 60 hours per week.

A median of about 104 visits per week was reported by clinical practitioners who made use of supplementary personnel to assist them in their clinical practice, as opposed to a median of about 46 visits per week among the 445 practitioners who did not use such supplementary personnel.

One final measure of patient volume deserves attention. This is a classification of patient visits per week according to the principal form of practice or employment in which the patient visits were experienced. Data in table D show this classification. It is notable that the most intensive activity in patient visits and patients seen occurred with self-employed ophthalmologists who were practicing in multiple-physician arrangements—with the partnership showing a substantial lead over all other categories of self-employed and salaried practitioners.

Number of patient services rendered.—In order to probe the *nature* of their clinical activity, survey participants were asked to respond to the

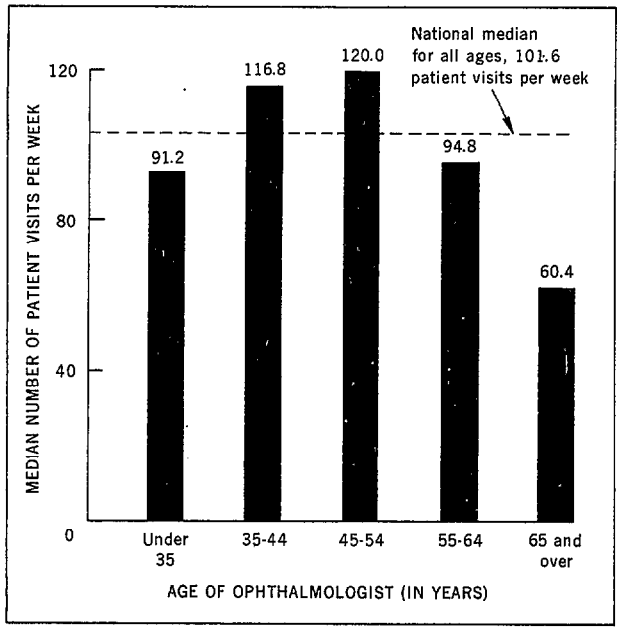

Figure 4. Median number of patient visits per week, by age intervals of 8,327 clinical ophthalmologists: United States, 1968.

following question: "In your clinical ophthalmology practice, which of the services below are rendered to your patients by you or under your direction?"

1. Diagnostic examination (includes refractive procedures and tonometry)
2. Medical treatment
3. Eye surgery
4. Visual field examination and medical interpretation
5. Fitting contact lenses
6. Orthoptic training (any procedure to improve acuity or binocularity)
7. Prescribing low-vision aids (includes optical aids greater than +4.00 addition)
8. Aniseikonic testing
9. Tonography
10. Other (specify)

A tabulation of practitioners by the *number* of these different services rendered by them—disregarding the nature of the service—permits

Table D. Number of clinical ophthalmologists, median number of patient visits per week, and median number of patients seen per week, by principal form of practice or employment of clinical ophthalmologists: United States, 1968

Principal form of practice or employment	Number of clinical ophthalmologists	Patient visits per week	Patients seen per week
		Median	
Self-employed:			
Solo practice	5,695	97.2	84.0
Partnership	1,385	124.0	106.4
Group practice	483	114.0	98.8
Nongroup arrangement with other physicians	352	105.6	91.2
Salaried:			
Hospital[1]	152	64.4	56.0
Nonhospital[2]	259	46.0	38.8

[1] Includes nongovernment hospitals and city, county, State, and Federal hospitals.

[2] Includes medical schools; city, county, State, and Federal agencies; and other (all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, and so forth).

another assessment of the volume of their clinical activity. Admittedly, this method of evaluating volume of activity is at best a rough one. It tells nothing about the duration, complexity, or degree of sophistication of the service rendered but, when combined with other measures of volume, it furnishes a helpful guide to evaluating the total volume of clinical activity reported by the survey respondents.

The typical, clinical respondent reported rendering five to six of the 10 patient services listed.

A useful approach to evaluating this measure of clinical activity is to tabulate for various demographic and professional categories that percentage of clinical ophthalmologists rendering five or more of the 10 patient services.

The results of determining this percentage according to the geographic divisions of practice are graphically shown in figure 5. The reader may note a tendency already observed with other measures of the volume of clinical activity, namely that volume is greater in those areas where the ratio of ophthalmologists to general population is smaller. Thus, the divisions of the South Region showed a higher percentage of practitioners who reported rendering five patient services or more than did the divisions of the Northeast and North Central Regions. The high percentage reported for the Mountain Division presents an interesting anomaly. Here, ratio of practitioners to population (5.0/100,000) was well above the national figure of 4.2/100,000. Yet practitioners in that division also reported the highest percentage of ophthalmologists who rendered five or more of the 10 patient services. This suggests that the range and number of patient services performed by the practitioners may, to some degree, be influenced by the relatively high dispersion of the population throughout an area such as the Mountain States.

The findings illustrated in figure 6 show that this measure of clinical volume was age-sensitive, the number of services rendered varying in-

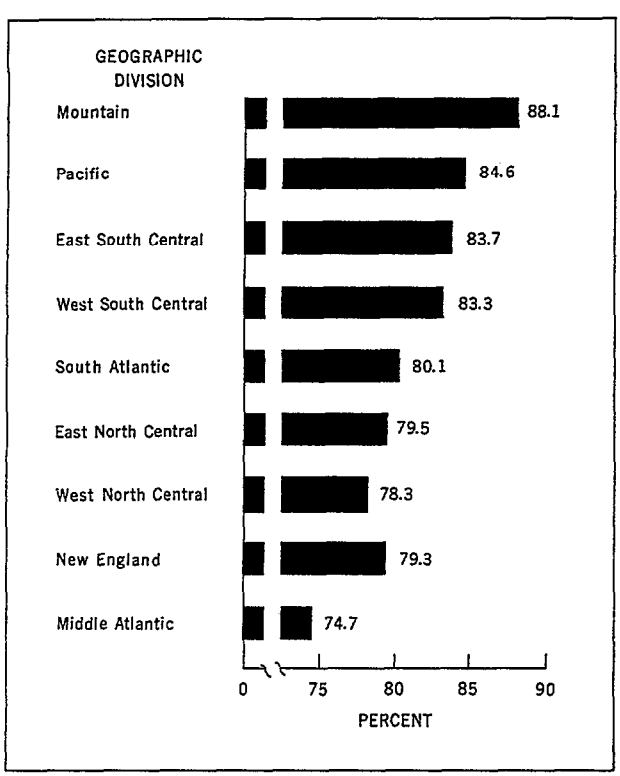

Figure 5. Percent of clinical ophthalmologists rendering five patient services or more, by geographic division: United States, 1968.

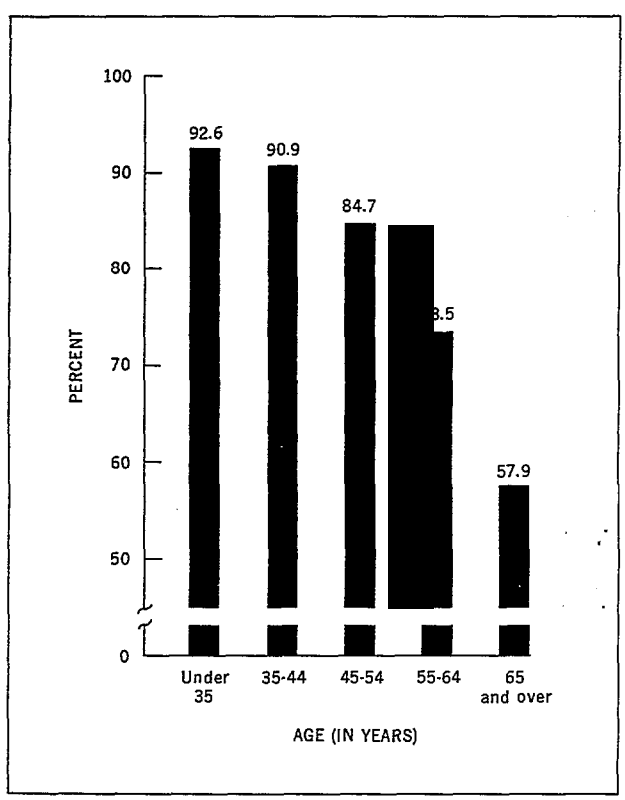

Figure 6. Percent of clinical ophthalmologists rendering five patient services or more, by age of ophthalmologist: United States, 1968.

versely with increasing age of the ophthalmologist.

Of two subgroups, female ophthalmologists and osteopathic physicians, female respondents reported a smaller percentage (74 percent) rendering five services or more than did their male counterparts (80percent); doctors of osteopathy, with only 62 percent of their members rendering five services or more, reported a markedly smaller volume of patient-service activity than did doctors of medicine, who reported 81 percent of their members rendering five services or more.

Comparing number of services rendered to another significant indicator of clinical volume, patient visits, a directly proportional relationship is apparent from figure 7. The percentage of practitioners offering five services or more is proportionately greater, the greater the number of patient visits reported.

The relationship of form of practice or employment to number of services rendered is revealed in figure 8. It is readily evident that a substantially higher percentage of self-employed practitioners rendered five patient services or more than did salaried ophthalmologists. Of the self-employed, ophthalmologists in the various forms of multiple-physician practice reported rendering substantially more patient services than did their colleagues in solo practice.

Nature of Clinical Activity

Type of patient services rendered.—The services rendered by the clinical respondent or performed under his direction have already been listed in the preceding section. In the discussion that follows on the *nature* of clinical services,

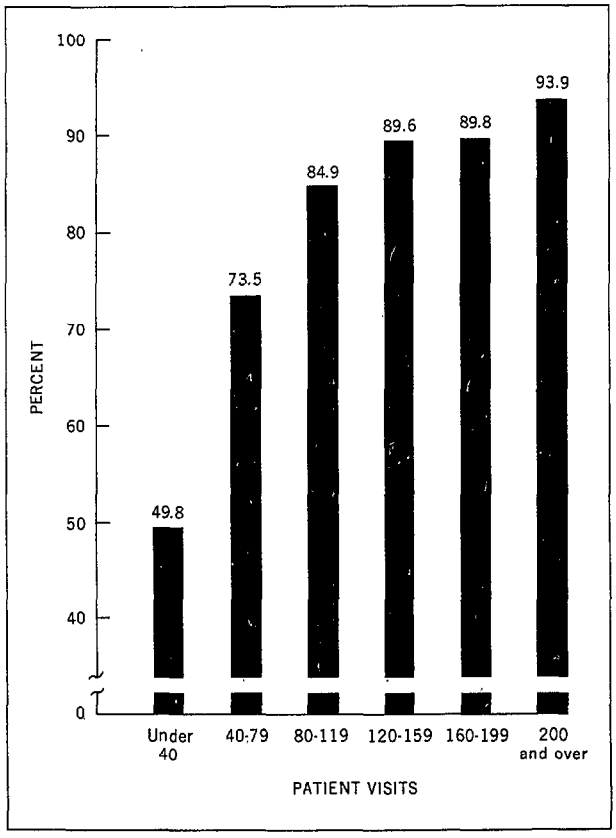

Figure 7. Percent of clinical ophthalmologists rendering five patient services or more, by number of patient visits per week: United States, 1968.

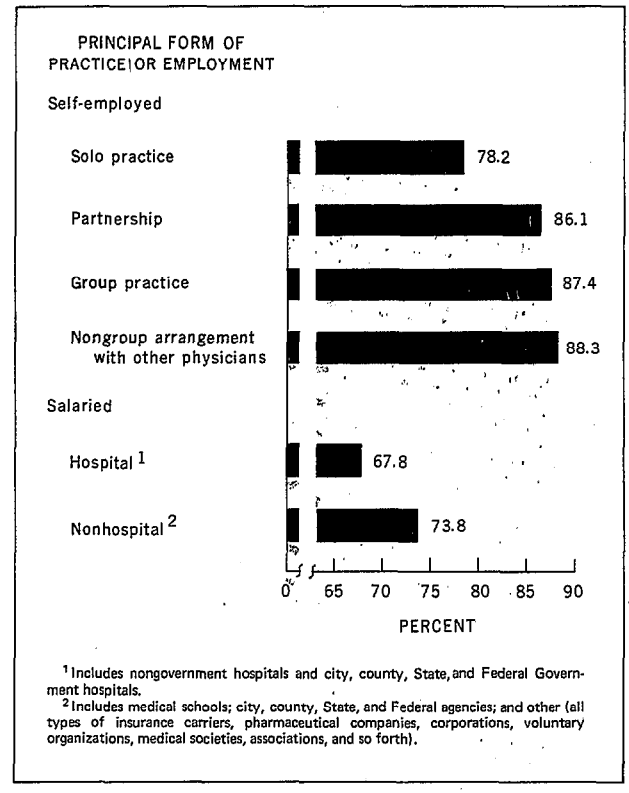

Figure 8. Percent of clinical ophthalmologists rendering five patient services or more, by principal form of practice or employment: United States, 1968.

the category "other" will not receive comment, since specific entries in this category did not occur with sufficient frequency to warrant separate tabulation.

The remaining nine services are ranked below by national percentages of practitioners who reported rendering each service:

Order	Type of service	Percent of total practitioners rendering the service
	Expected	
1	Diagnostic examination (including tonometry)	99.5
2	Medical treatment	97.9
3	Visual field examination and medical interpretation	93.7
4	Eye surgery	88.9
	Additional	
5	Fitting contact lenses	58.0
6	Prescribing low-vision aids	54.9
7	Tonography	49.8
8	Orthoptic training	32.5
9	Aniseikonic testing	9.4

The first four of these services were, by a substantial margin, the most frequently performed. They are the professional services traditionally associated with the clinical role of the ophthalmologist, services that in most cases can only be legally performed by the medical practitioner. For purposes of reporting, these will be called "expected" services. The other five services can be performed by other vision-care professionals. For purposes of reporting, they will be called "additional" services.

It was noted in the preceding section that the typical clinical respondent rendered five to six of these patient services. Relying solely on the rank-order of patient services according to the numbers of practitioners who rendered each service (see the preceding table), one might expect that the typical respondent who rendered five services performed the four "expected" services and then, from the remaining five services, added the "additional" service "fitting contact lenses." As the clinical respondent added services beyond the five-service level, the frequencies of rendition reported above indicate that he added them roughly in this order of preference: "prescribing low-vision aids"; "tonography"; "orthoptic training"; and "aniseikonic testing."

Geographic regions exhibited the same general order of preference shown nationally. It deserves mention, though, that practitioners in the South and West Regions were more prone to render one or more of the "additional" services than were their colleagues in the Northeast and the North Central Regions.

In analyzing the nature of the clinical activity performed by the ophthalmologist, it was useful to obtain a mean percentage figure for those respondents who rendered one or more of the four expected services and a mean percentage figure for those who rendered one or more of the five additional services, as these mean indicators were revealed by respondents in selected demographic and professional categories. Thus, the national means were 95.0 percent rendering one or more of the expected services and 40.9 percent rendering one or more of the additional services.

Applying this procedure with the variable of age produced the result pictured in figure 9. It may be noted that degree of rendition of both expected and additional services tends to decline as age categories of practitioners advance. With the expected services, however, only a 13-percent drop occurred between the youngest and the oldest category while with the additional services a 21-percent drop was the case, indicating that the rendition of additional services is substantially more sensitive to age influences than is rendition of expected services.

Figure 10 graphically presents the relationship between hours worked per week and this indicator of the nature of clinical activity. It is evident that the mean percent of respondents who rendered both the expected and the additional services showed a general proneness to increase as the workweek became longer. However, whereas the increase stabilized for the expected services at about the point of the median workweek (48.4 hours), the percent indicator for the additional services continued to rise in a steadily direct proportion to hours worked in excess of the median workweek.

As with the effects of age on services rendered—though this time in a direct rather than

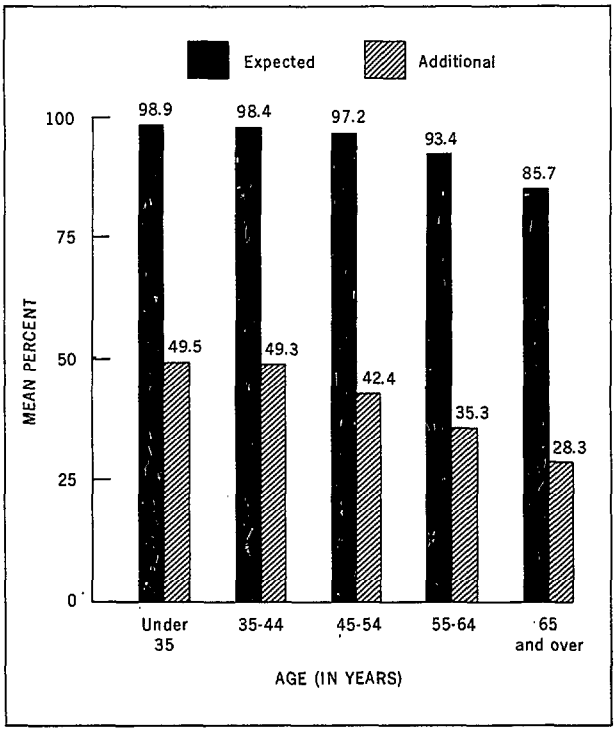

Figure 9. Mean percent of clinical ophthalmologists rendering one expected service or more and one additional service or more, by age of ophthalmologist: United States, 1968.

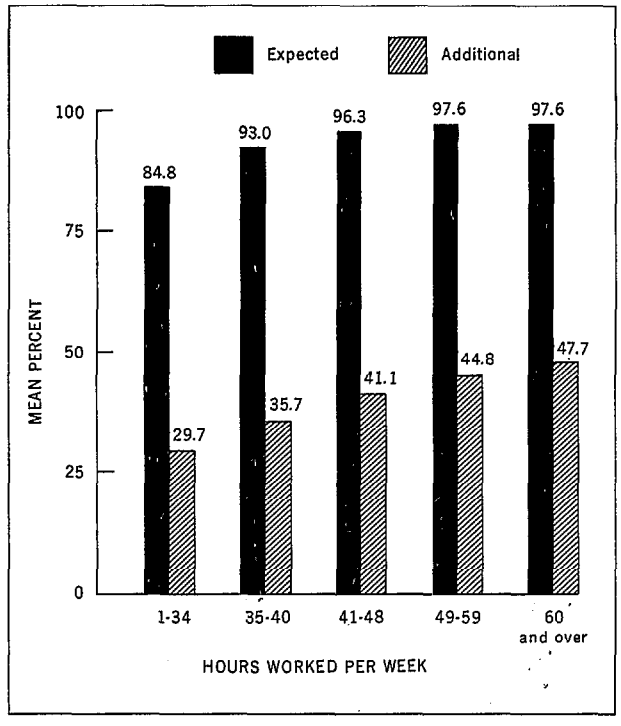

Figure 10. Mean percent of clinical ophthalmologists rendering one expected service or more and one additional service or more, by hours usually worked per week: United States, 1968.

an inverse proportion—the rendition of additional services proved to be substantially more sensitive to length of working week than did rendition of expected services.

Much the same relationship is evident from the comparison of this clinical indicator to number of patient visits per week, as depicted in figure 11. Again noticeable is the tendency for the percent indicator to increase as the number of patient visits increases. Again, the indicator for the expected services stabilizes at about the median number of patient visits per week (102 visits), while the indicator for the additional services continues to rise, stabilizes for the interval from 120 to 199 visits per week, and then rises again for the few respondents who reported 200 visits or more per week. Further, it may be noted that rendition of additional services more than doubled between the minimum- and maximum-visit categories, while rendition of expected services showed a corresponding increase of 17 percent. Increased activity in visits per week, then, was accompanied by relatively more activity in the additional services than in the expected services.

Comparing this indicator with other indicators of the volume of clinical activity yielded the following findings. With expected services, number of States the ophthalmologist was licensed in revealed no significant change in the proportions of respondents rendering the expected services, while, with the additional services, licensure in more than one State was accompanied by a corresponding increase of about 4 percent in the proportion rendering the additional services.

For number of office locations, the number of clinical ophthalmologists rendering both expected and additional services increased in a direct though nondramatic proportion to the number of offices used in clinical practice. Finally, the percent of participants was substantially higher when supplementary personnel were used to assist in clinical practice (96 percent for expected services and 42 percent for additional services, as opposed to the 83 percent

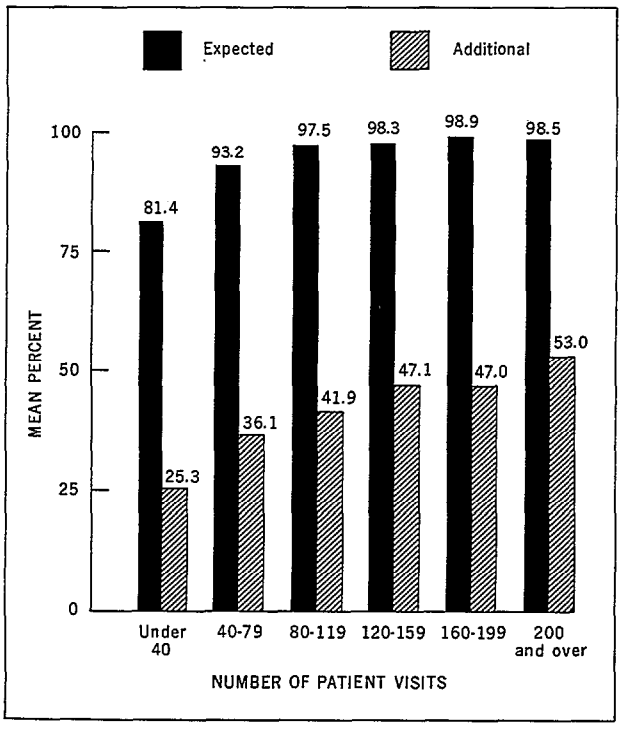

Figure 11. Mean percent of clinical ophthalmologists rendering one expected service or more and one additional service or more, by number of patient visits per week: United States, 1968.

for expected services and 24 percent for additional services calculated for respondents who reported that they did not use such supplementary personnel).

A comprehensive assessment of the nature of clinical services rendered by the ophthalmologist requires a statistical comment on the vocational context in which he rendered these services. Figure 12 offers such a description, graphically classifying the mean percent of respondents rendering expected and additional services by the particular form of practice or employment engaged in by the respondent. It is readily apparent that a greater proportion of self-employed ophthalmologists engaged in both expected and additional services than did their salaried colleagues. Of the self-employed respondents, those who were active in multiple-physician forms of practice were well in advance of solo practitioners in that proportion of their members who rendered the additional services; the partnership and group-practice arrangements seemed especially to favor the rendition of additional services.

It is worthy of comment, however, that two of the additional services—aniseikonic testing and tonography—were specifically favored in their rendition by ophthalmologists in the salaried, hospital environment.

Since ophthalmology is formally classified by AMA as a surgical specialty, it was interesting to analyze the survey findings for an evaluation of the surgical load carried by the typical clinical ophthalmologist and to compare this surgical load with that reported for two other surgical specialists, the thoracic surgeon and the specialist in obstetrics-gynecology. Of the clinical respondents to the Vision and Eye Care Survey (8,327), 7,400 practitioners reported that they engaged in eye surgery as one of their expected clinical services. In 1968, an estimated 527,000 eye operations were performed in short-stay hospitals, according to unpublished survey data from the National Center for Health Statistics.[6] Assuming 240 work days per year, 2,196 eye operations were performed per day on patients in short-stay hospitals. This amounted to one procedure per day for every three clinical ophthalmologists engaged in eye surgery.

Adjusting this figure to include only M.D., non-Federal respondents rendered it comparable to data obtained from the AMA[1] and the above-cited hospital survey[6] for the specialties of thoracic surgery and obstetrics-gynecology. The adjustment produced an estimate of one procedure per day for every two to three clinical ophthalmologists. This contrasted with two surgical procedures per day per thoracic surgeon and one procedure per day per specialist in obstetrics-gynecology. These data suggest a rather low surgical workload for the typical clinical ophthalmologist.

Primary clinical activity or ophthalmological subspecialty.—In order to determine how and to what degree the practitioner tended to specialize within the broad area of clinical ophthalmology, respondents were asked: "In your clinical ophthalmology practice, which of the following categories best describes how you spend the greatest amount of your time?"

By far the largest proportion of respondents (about 96 percent) stated that they spent most

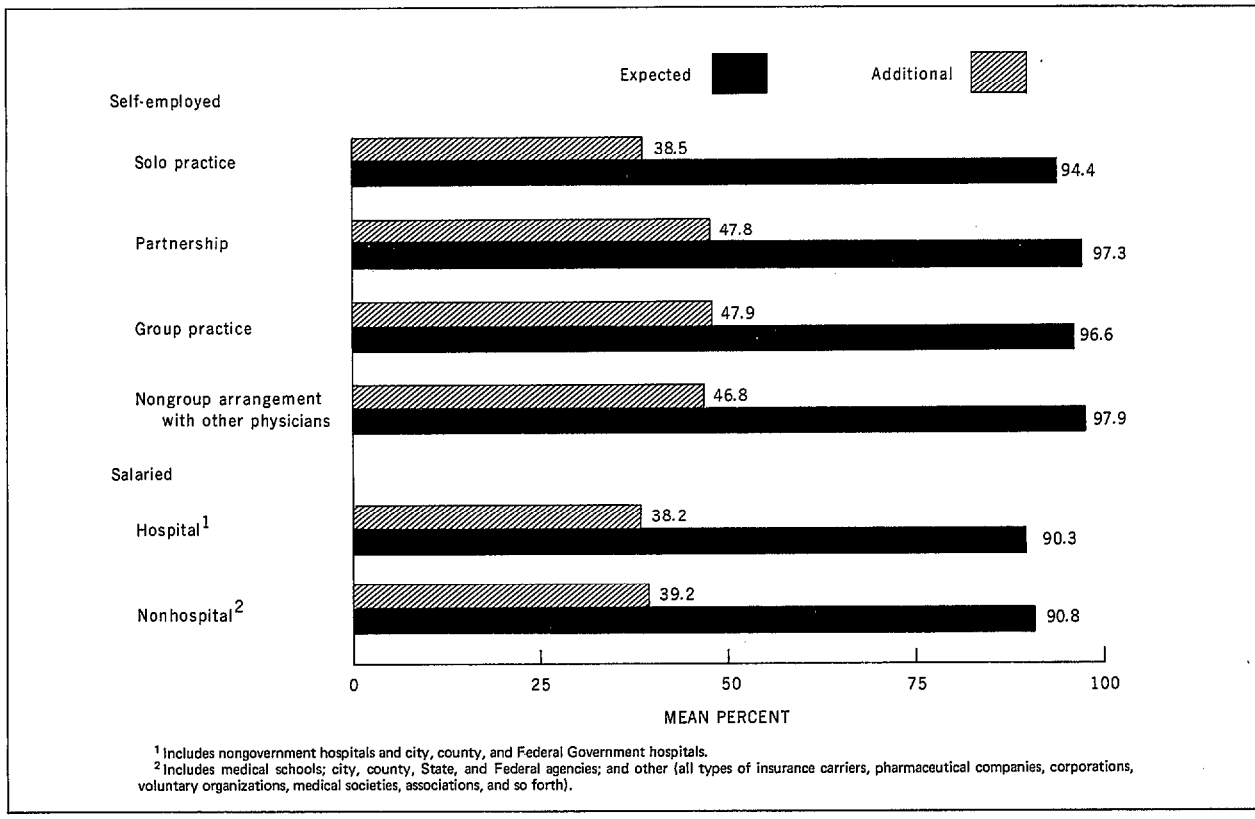

Figure 12. Mean percent of clinical ophthalmologists rendering one expected service or more and one additional service or more, by principal form of practice or employment: United States, 1968.

of their time in the practice of general ophthalmology (medical and surgical), indicating no specific subspecialty. About 4 percent (371 respondents) stated that they devoted the greatest part of their time to one of the following subspecialties: corneal surgery, retinal surgery, pediatric ophthalmology, ophthalmic ophthalmology, neuro-ophthalmology, or "other." Specific entries within the "other" category did not occur with sufficient frequency to warrant individual discussion here.

It is clear, then, that the typical practitioner tended to behave as a generalist in his rendition of expected and additional eye-care services.

Of the "specialists," 9 percent of the 371 specialized in corneal surgery; 26 percent in retinal surgery; 19 percent in pediatric ophthalmology; 4 percent in ophthalmic pathology; and 6 percent in neuro-ophthalmology.

General ophthalmologists (medical and surgical) followed the patterns of selected characteristics noted in preceding sections for the total clinical population. Ophthalmological specialists showed the following tendencies, several of which varied from the general pattern:

- The median age for specialists was lower (43.7 years) than was the overall median age.
- Geographically, specialists showed a statistical preference for the middle-Atlantic area (including the area around Washington, D.C.).
- Specialists—with a median of 52.8 hours per week—tended to have a longer workweek than did their generalist colleagues.
- Whereas only about 2 percent of the generalists tended to locate in salaried, nonhospital employment, a more substantial proportion of specialists (25 percent) were found there, chiefly, of course, in medical schools.
- Specialists reported a median experience of 63 patient visits per week, as opposed to

the median of 102 visits common to the generalist. Along with the finding of longer workweeks, this indicated that the specialist spent more time per patient visit.

In number of office locations, number of States licensed in, number of patient services rendered, and number of supplementary personnel used to assist in clinical practice, the specialist did not differ substantially from the generalist.

The 371 specialists—taken as a group—rendered substantially smaller proportions of all the expected and additional services than did their generalist colleagues. Exceptions, of course, occurred for the individual specialties where the area of specialty required the performance of a given service—expected or additional. Thus, for example, 79 percent of the specialists in pediatric ophthalmology reported giving orthoptic training, as opposed to only 33 percent among the general clinical practitioners. And, with about 53 percent of their members reporting tonography as one of their services, specialists in ophthalmic pathology showed the highest rendition of this procedure among all their generalist or specialist colleagues.

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[4]Lewis, R. Cragin: Doctors' earnings dissected: The time factor. *Med. Econ.* Dec. 23, 1968. pp. 64-67.

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[6]National Center for Health Statistics: Surgical Operations in Short-Stay Hospitals, United States, 1968. *Vital and Health Statistics.* Series 13-No. 11. DHEW Pub. No. (HSM) 73-1762. Washington. U.S. Government Printing Office. In press.

LIST OF DETAILED TABLES

LIST OF DETAILED TABLES—Con.

Table 1. Number of active ophthalmologists and of active ophthalmologists per 100,000 civilian population, and number and percent distribution of clinical ophthalmologists by professional identity (M.D. or D.O.), according to area of practice: United States and each State, 1968

[Data on professional identity reproduced in this table is treated as nonconfidential. It derives from data obtained directly from the American Medical Association and the American Osteopathic Association.]

Area	Total active ophthalmologists	Number of active ophthalmologists per 100,000 civilian population[1]	All clinical ophthalmologists	Professional identity		All clinical ophthalmologists	Professional identity	
				Doctor of Medicine	Doctor of Osteopathy		Doctor of Medicine	Doctor of Osteopathy
			Number			Percent distribution		
United States	8,616	4.4	8,327	8,167	161	100.0	98.1	1.9
Alabama	87	2.5	84	84	-	100.0	100.0	-
Alaska	5	2.1	5	5	-	100.0	100.0	-
Arizona	80	4.9	78	74	4	100.0	94.6	5.4
Arkansas	41	2.1	41	41	-	100.0	100.0	-
California	1,079	5.7	1,043	1,042	1	100.0	99.9	0.1
Colorado	123	6.1	118	112	5	100.0	95.5	4.5
Connecticut	152	5.2	150	149	1	100.0	99.2	0.8
Delaware	21	4.0	17	17	-	100.0	100.0	-
District of Columbia	81	10.3	75	75	-	100.0	100.0	-
Florida	302	4.9	292	281	10	100.0	96.5	3.5
Georgia	142	3.2	138	138	-	100.0	100.0	-
Hawaii	30	4.2	30	30	-	100.0	100.0	-
Idaho	34	4.8	34	34	-	100.0	100.0	-
Illinois	429	3.9	415	414	1	100.0	99.7	0.3
Indiana	175	3.5	170	169	1	100.0	99.3	0.7
Iowa	102	3.7	99	92	7	100.0	92.8	7.2
Kansas	76	3.4	72	69	3	100.0	95.5	4.5
Kentucky	96	3.0	90	89	1	100.0	98.8	1.2
Louisiana	153	4.2	149	149	-	100.0	100.0	-
Maine	39	4.0	39	38	1	100.0	97.3	2.7
Maryland	165	4.5	155	155	-	100.0	100.0	-
Massachusetts	280	5.2	269	268	1	100.0	99.6	0.4
Michigan	339	3.9	333	308	25	100.0	92.6	7.4
Minnesota	148	4.0	147	147	-	100.0	100.0	-
Mississippi	62	2.7	59	59	-	100.0	100.0	-
Missouri	190	4.2	176	151	25	100.0	85.5	14.5
Montana	39	5.7	39	39	-	100.0	100.0	-
Nebraska	55	3.8	54	54	-	100.0	100.0	-
Nevada	16	3.6	16	16	-	100.0	100.0	-
New Hampshire	27	3.9	27	27	-	100.0	100.0	-
New Jersey	307	4.4	299	294	4	100.0	98.5	1.5
New Mexico	45	4.6	44	42	2	100.0	94.9	5.1
New York	1,017	5.6	980	979	1	100.0	99.9	0.1
North Carolina	174	3.5	167	167	-	100.0	100.0	-
North Dakota	20	3.3	20	20	-	100.0	100.0	-
Ohio	392	3.7	382	361	21	100.0	94.6	5.4
Oklahoma	97	3.9	95	89	6	100.0	94.2	5.8
Oregon	109	5.5	108	107	1	100.0	99.0	1.0
Pennsylvania	585	5.0	548	535	13	100.0	97.6	2.4
Rhode Island	32	3.6	32	31	1	100.0	96.7	3.3
South Carolina	72	2.8	70	70	-	100.0	100.0	-
South Dakota	22	3.3	22	19	3	100.0	85.7	14.3
Tennessee	131	3.3	127	125	1	100.0	99.1	0.9
Texas	405	3.7	396	383	13	100.0	96.6	3.4
Utah	47	4.6	47	47	-	100.0	100.0	-
Vermont	19	4.4	18	18	-	100.0	100.0	-
Virginia	166	3.7	160	160	-	100.0	100.0	-
Washington	160	5.0	155	154	1	100.0	99.3	0.7
West Virginia	64	3.5	61	59	2	100.0	96.4	3.6
Wisconsin	168	4.0	168	167	1	100.0	99.4	0.6
Wyoming	16	5.0	16	15	1	100.0	93.3	6.7

[1] Based on census estimates for July 1, 1968.

SOURCE: U.S. Bureau of the Census. Population estimates. *Current Population Reports.* Series P-25, No. 436, Jan. 7, 1970.

Table 2. Number and percent distribution of clinical ophthalmologists by age, according to area of practice: United States and each State, 1968

Area	Total clinical ophthal-mologists	Age					Total clinical ophthal-mologists	Age				
		Under 35 years	35-44 years	45-54 years	55-64 years	65 years and over		Under 35 years	35-44 years	45-54 years	55-64 years	65 years and over
	Number						Percent distribution					
United States	8,327	781	2,222	1,927	2,153	1,244	100.0	9.4	26.7	23.1	25.9	14.9
Alabama	84	10	18	22	22	12	100.0	11.8	21.1	26.3	26.3	14.5
Alaska	5	#	#	#	#	-	100.0	#	#	#	#	-
Arizona	78	4	29	15	17	14	100.0	5.4	36.5	18.9	21.6	17.6
Arkansas	41	#	9	17	9	#	100.0	#	21.1	42.1	21.1	#
California	1,043	105	317	274	232	114	100.0	10.1	30.4	26.3	22.2	11.0
Colorado	118	6	42	25	30	14	100.0	5.4	35.7	21.4	25.9	11.6
Connecticut	150	10	44	40	34	22	100.0	6.8	29.5	26.5	22.7	14.4
Delaware	17	#	3	5	7	#	100.0	#	20.0	26.7	40.0	#
District of Columbia	75	10	23	13	16	14	100.0	13.3	30.0	16.7	21.7	18.3
Florida	292	42	107	60	59	24	100.0	14.3	36.8	20.5	20.2	8.1
Georgia	138	11	39	37	36	16	100.0	8.1	28.2	26.6	25.8	11.3
Hawaii	30	#	4	9	12	#	100.0	#	14.8	29.6	40.7	#
Idaho	34	3	9	8	10	4	100.0	9.7	25.8	22.6	29.0	12.9
Illinois	415	26	98	95	112	84	100.0	6.4	23.5	23.0	26.9	20.2
Indiana	170	8	38	45	51	29	100.0	4.7	22.3	26.4	29.7	16.9
Iowa	99	6	24	17	32	20	100.0	60	24.1	16.9	32.5	20.5
Kansas	72	3	17	19	18	14	100.0	4.5	23.9	26.9	25.4	19.4
Kentucky	90	12	20	20	22	16	100.0	12.9	22.4	22.4	24.7	17.6
Louisiana	149	19	37	40	34	19	100.0	12.6	25.2	26.8	22.8	12.6
Maine	39	3	6	7	15	7	100.0	8.1	16.2	18.9	37.8	18.9
Maryland	155	23	46	27	39	21	100.0	14.8	29.7	17.2	25.0	13.3
Massachusetts	269	23	59	73	72	42	100.0	8.5	22.0	27.1	26.7	15.7
Michigan	333	46	94	66	75	52	100.0	13.8	28.3	19.9	22.6	15.5
Minnesota	147	14	38	40	38	17	100.0	9.6	25.7	27.2	25.7	11.8
Mississippi	59	4	12	11	22	10	100.0	7.3	20.0	18.2	38.2	16.4
Missouri	176	29	40	38	41	28	100.0	16.3	22.9	21.7	23.5	15.7
Montana	39	5	8	6	15	4	100.0	13.5	21.6	16.2	37.8	10.8
Nebraska	54	#	12	16	#	17	100.0	#	22.2	28.9	#	31.1
Nevada	16	#	6	3	3	#	100.0	#	40.0	20.0	20.0	#
New Hampshire	27	#	6	9	7	#	100.0	#	23.1	34.6	26.9	#
New Jersey	299	39	73	61	91	34	100.0	13.0	24.5	20.4	30.5	11.5
New Mexico	44	6	12	8	15	3	100.0	12.8	28.2	17.9	33.3	7.7
New York	980	88	245	195	273	178	100.0	9.0	25.0	19.9	27.9	18.2
North Carolina	167	18	53	32	37	28	100.0	10.5	31.6	19.1	22.4	16.4
North Dakota	20	#	5	6	#	4	100.0	#	26.3	31.6	#	21.1
Ohio	382	26	100	85	106	64	100.0	6.9	26.3	22.3	27.7	16.9
Oklahoma	95	9	25	18	33	10	100.0	9.3	26.7	18.6	34.9	10.5
Oregon	108	6	32	32	19	17	100.0	6.0	30.0	30.0	18.0	16.0
Pennsylvania	548	38	111	123	184	92	100.0	6.9	20.2	22.5	33.6	16.8
Rhode Island	32	#	7	#	10	8	100.0	#	23.3	#	30.0	26.7
South Carolina	70	10	19	8	19	14	100.0	14.5	27.4	11.3	27.4	19.4
South Dakota	22	#	4	6	7	#	100.0	#	19.0	28.6	33.3	#
Tennessee	127	14	43	29	26	14	100.0	11.3	33.9	22.6	20.9	11.3
Texas	396	34	116	106	77	63	100.0	8.5	29.4	26.8	19.5	15.8
Utah	47	#	16	11	10	#	100.0	#	33.3	24.4	22.2	#
Vermont	18	#	#	#	10	4	100.0	#	#	#	55.6	22.2
Virginia	160	12	54	29	44	22	100.0	7.2	33.8	18.0	27.3	13.7
Washington	155	21	40	47	32	15	100.0	13.4	26.1	30.3	20.4	9.9
West Virginia	61	4	6	20	20	11	100.0	7.3	9.1	32.7	32.7	18.2
Wisconsin	168	15	45	41	42	27	100.0	8.6	26.5	24.1	24.7	16.0
Wyoming	16	-	#	6	5	#	100.0	-	#	40.0	33.3	#

Data suppressed to comply with confidentiality requirements.

Table 3. Number and percent distribution of clinical ophthalmologists by hours usually worked per week, according to area of practice: United States and each State, 1968

Area	Total clinical ophthalmologists	Hours worked per week[1]					Total clinical ophthalmologists	Hours worked per week[1]				
		1-34 hours	35-40 hours	41-48 hours	49-59 hours	60 hours or more		1-34 hours	35-40 hours	41-48 hours	49-59 hours	60 hours or more
	Number						Percent distribution					
United States	8,327	958	1,648	1,670	2,294	1,757	100.0	11.5	19.8	20.0	27.5	21.1
Alabama	84	6	19	27	17	17	100.0	6.6	22.4	31.6	19.7	19.7
Alaska	5	-	-	-	#	#	100.0	-	-	-	#	#
Arizona	78	12	17	17	21	12	100.0	14.9	21.6	21.6	27.0	14.9
Arkansas	41	#	12	11	9	#	100.0	#	28.9	26.3	21.1	#
California	1,043	137	254	203	264	185	100.0	13.1	24.4	19.5	25.3	17.8
Colorado	118	9	19	32	34	24	100.0	8.0	16.1	26.8	28.6	20.5
Connecticut	150	21	27	26	40	36	100.0	13.6	18.2	17.4	26.5	24.2
Delaware	17	#	8	3	#	#	100.0	#	46.7	20.0	#	#
District of Columbia	75	8	10	14	24	20	100.0	10.0	13.3	18.3	31.7	26.7
Florida	292	34	54	51	81	71	100.0	11.6	18.6	17.4	27.9	24.4
Georgia	138	11	26	30	43	28	100.0	8.1	18.5	21.8	31.5	20.2
Hawaii	30	8	4	4	9	4	100.0	26.0	14.8	14.8	29.6	14.8
Idaho	34	#	12	8	10	#	100.0	#	35.5	22.6	29.0	#
Illinois	415	51	105	85	98	77	100.0	12.2	25.2	20.5	23.5	18.6
Indiana	170	26	26	40	41	36	100.0	15.5	15.5	23.6	24.3	20.9
Iowa	99	10	21	23	23	23	100.0	9.6	21.7	22.9	22.9	22.9
Kansas	72	5	9	15	29	14	100.0	7.5	11.9	20.9	40.3	19.4
Kentucky	90	5	15	15	28	28	100.0	5.9	16.5	16.5	30.6	30.6
Louisiana	149	6	29	34	36	43	100.0	3.9	19.7	22.8	24.4	29.1
Maine	39	6	11	6	8	7	100.0	16.2	27.0	16.2	21.6	18.9
Maryland	155	12	29	31	53	29	100.0	7.8	18.8	20.3	34.4	18.8
Massachusetts	269	26	44	25	97	76	100.0	9.7	16.5	9.3	36.0	28.4
Michigan	333	37	63	72	86	75	100.0	11.1	18.9	21.5	25.9	22.6
Minnesota	147	9	15	31	57	35	100.0	5.9	10.3	21.3	39.0	23.5
Mississippi	59	5	10	16	15	13	100.0	9.1	16.4	27.3	25.5	21.8
Missouri	176	18	24	35	41	57	100.0	10.2	13.9	19.9	23.5	32.5
Montana	39	7	5	9	7	9	100.0	18.9	13.5	24.3	18.9	24.3
Nebraska	54	6	13	10	13	12	100.0	11.1	24.4	17.8	24.4	22.2
Nevada	16	-	9	#	#	4	100.0	-	53.3	#	#	26.7
New Hampshire	27	#	6	7	7	#	100.0	#	23.1	26.9	26.9	#
New Jersey	299	46	64	68	72	49	100.0	15.2	21.6	22.7	24.2	16.4
New Mexico	44	8	7	7	16	7	100.0	17.9	15.4	15.4	35.9	15.4
New York	980	169	208	166	236	200	100.0	17.3	21.3	16.9	24.1	20.5
North Carolina	167	20	21	32	47	47	100.0	11.8	12.5	19.1	28.3	28.3
North Dakota	20	#	#	4	8	5	100.0	#	#	21.0	42.1	26.3
Ohio	382	40	73	76	104	88	100.0	10.6	19.1	20.0	27.1	23.1
Oklahoma	95	#	23	23	26	#	100.0	#	24.4	24.4	27.9	#
Oregon	108	12	22	25	36	14	100.0	11.0	20.0	23.0	33.0	13.0
Pennsylvania	548	70	103	122	157	97	100.0	12.8	18.8	22.3	28.5	17.6
Rhode Island	32	7	7	4	4	8	100.0	23.3	23.3	13.3	13.3	26.7
South Carolina	70	9	8	18	25	10	100.0	12.9	11.3	25.8	35.5	14.5
South Dakota	22	#	#	3	9	3	100.0	#	#	14.3	42.9	14.3
Tennessee	127	9	18	31	44	25	100.0	7.0	13.9	24.3	34.8	20.0
Texas	396	26	75	76	119	101	100.0	6.5	18.9	19.2	29.9	25.4
Utah	47	3	9	9	14	11	100.0	6.7	20.0	20.0	28.9	24.4
Vermont	18	#	4	3	8	#	100.0	#	22.2	16.7	44.4	#
Virginia	160	16	32	32	49	30	100.0	10.1	20.1	20.1	30.9	18.7
Washington	155	15	28	31	45	36	100.0	9.9	18.3	19.7	28.9	23.2
West Virginia	61	9	10	12	18	12	100.0	14.5	16.4	20.0	29.1	20.0
Wisconsin	168	8	29	43	55	33	100.0	4.9	17.3	25.3	32.7	19.8
Wyoming	16	3	4	#	5	#	100.0	20.0	26.7	#	33.3	#

[1] Includes hours devoted to teaching, research, and administration.

Data suppressed to comply with confidentiality requirements.

Table 4. Number and percent distribution of clinical ophthalmologists by hours usually worked per week, according to selected characteristics: United States, 1968

Characteristic	Total clinical ophthalmologists	Hours worked per week[1]					Total clinical ophthalmologists	Hours worked per week[1]				
		1-34 hours	35-40 hours	41-48 hours	49-59 hours	60 hours or more		1-34 hours	35-40 hours	41-48 hours	49-59 hours	60 hours or more
	Number						Percent distribution					
United States	8,327	958	1,648	1,670	2,294	1,757	100.0	11.5	19.8	20.0	27.5	21.1
Age:												
Under 35 years	781	24	112	148	260	237	100.0	3.0	14.4	18.9	33.3	30.4
35-44 years	2,222	71	297	464	793	597	100.0	3.2	13.4	20.9	35.7	26.9
45-54 years	1,927	107	322	401	633	464	100.0	5.5	16.7	20.8	32.8	24.1
55-64 years	2,153	292	572	444	481	365	100.0	13.5	26.6	20.6	22.4	16.9
65 years and over	1,244	466	344	213	127	95	100.0	37.4	27.7	17.1	10.2	7.6
Sex:												
Male	8,106	882	1,597	1,635	2,263	1,729	100.0	10.9	19.7	20.2	27.9	21.3
Female	221	76	51	35	30	28	100.0	34.6	23.2	15.9	13.7	12.7
Percent of hours worked per week in direct diagnosis and treatment of patients:												
1-19 percent	141	26	32	19	28	37	100.0	18.1	22.8	13.3	20.0	25.9
20-49 percent	642	73	119	113	164	173	100.0	11.3	18.6	17.6	25.5	27.0
50-99 percent	4,935	391	786	1,024	1,527	1,208	100.0	7.9	15.9	20.7	30.9	24.5
100 percent	2,608	469	710	514	575	340	100.0	18.0	27.2	19.7	22.0	13.0
Principal form of practice:												
Self-employed:												
Solo practice	5,695	776	1,198	1,103	1,488	1,130	100.0	13.6	21.0	19.4	26.1	19.8
Partnership	1,385	86	243	324	421	311	100.0	6.2	17.6	23.4	30.4	22.4
Group practice	483	27	73	104	161	119	100.0	5.5	15.0	21.5	33.2	24.7
Nongroup arrangement with other physician(s)	352	29	56	81	115	71	100.0	8.3	15.8	23.0	32.8	20.2
Salaried:												
Hospital[2]	153	11	39	29	40	33	100.0	7.4	25.6	19.0	26.5	21.6
Nonhospital[3]	260	29	40	29	68	93	100.0	11.2	15.3	11.2	26.4	35.9
Number of patient visits per week:												
Under 40 visits	978	332	219	141	140	146	100.0	33.9	22.4	14.4	14.3	14.9
40-79 visits	1,983	362	582	378	400	262	100.0	18.3	29.3	19.0	20.1	13.2
80-119 visits	2,211	179	444	505	684	400	100.0	8.1	20.1	22.8	30.9	18.1
120-159 visits	2,041	61	295	446	705	534	100.0	3.0	14.4	21.9	34.5	26.1
160-199 visits	512	10	58	96	173	174	100.0	2.0	11.4	18.8	33.9	34.1
200 visits and over	603	15	50	103	192	242	100.0	2.4	8.3	17.1	31.9	40.2
Number of office locations:												
0-1 office[4]	7,232	878	1,484	1,474	1,951	1,447	100.0	12.1	20.5	20.4	27.0	20.0
2 offices	891	64	133	167	281	247	100.0	7.1	14.9	18.7	31.5	27.7
3 offices	132	10	23	16	39	44	100.0	7.7	17.8	12.0	29.5	33.1
4 offices or more	72	7	9	13	24	20	100.0	9.3	12.3	18.5	32.5	27.4
Number of services rendered:												
1-2 services	213	87	55	25	25	22	100.0	40.8	25.7	11.6	11.5	10.4
3-4 services	1,439	338	372	266	258	204	100.0	23.5	25.9	18.5	17.9	14.2
5-6 services	3,550	358	738	761	1,013	681	100.0	10.1	20.8	21.4	28.5	19.2
7-8 services	2,643	154	421	517	864	687	100.0	5.8	15.9	19.5	32.7	26.0
9-10 services	483	21	62	102	134	163	100.0	4.4	12.9	21.1	27.9	33.8
Are supplementary personnel used to assist in clinical practice?												
Yes	7,882	808	1,529	1,605	2,229	1,711	100.0	10.2	19.4	20.4	28.3	21.7
No	445	151	119	65	65	46	100.0	33.8	26.8	14.5	14.5	10.3
Primary clinical activity:												
General ophthalmology (medical and surgical)	7,956	915	1,599	1,623	2,187	1,632	100.0	11.5	20.1	20.4	27.5	20.5
Corneal surgery	32	3	2	5	10	11	100.0	10.5	7.2	14.3	32.5	35.6
Retinal surgery	95	-	5	7	36	48	100.0	-	4.8	7.1	37.5	50.5
Pediatric ophthalmology	70	7	7	9	25	22	100.0	9.7	9.6	12.8	35.6	32.3
Ophthalmic pathology	14	2	2	3	3	3	100.0	15.4	15.3	23.3	23.4	22.6
Neuro-ophthalmology	22	1	1	3	9	8	100.0	4.9	5.0	14.9	39.7	35.4
Other	138	30	32	20	24	33	100.0	21.7	23.4	14.4	17.0	23.5

[1] Includes hours devoted to teaching, research, and administration.

[2] Includes nongovernment hospitals and city, county, State, and Federal government hospitals.

[3] Includes medical schools; city, county, State, and Federal agencies; and other (all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, and so forth).

[4] Only 13 of these respondents reported no office location.

Table 5. Number and percent distribution of clinical ophthalmologists by number of patients seen per week, according to area of practice: United States and each State, 1968

Area	Total clinical ophthalmologists	Number of patients seen per week					
		Under 40 patients	40-79 patients	80-119 patients	120-159 patients	160-199 patients	200 patients and over
	Number of clinical ophthalmologists						
United States	8,327	1,303	2,356	2,528	1,454	386	300
Alabama	84	17	14	31	19	3	-
Alaska	5	#	#	#	#	-	-
Arizona	78	16	25	23	8	-	5
Arkansas	41	-	12	17	75	#	#
California	1,043	138	333	365	141	36	31
Colorado	118	17	41	38	17	#	#
Connecticut	150	21	40	57	26	3	3
Delaware	17	#	6	#	6	#	-
District of Columbia	75	11	26	16	15	3	4
Florida	292	45	77	95	44	17	14
Georgia	138	20	39	32	29	10	8
Hawaii	30	4	8	10	4	3	-
Idaho	34	9	7	12	#	#	11
Illinois	415	75	106	118	68	32	16
Indiana	170	29	38	58	29	6	12
Iowa	99	23	27	25	14	4	6
Kansas	72	11	19	23	15	4	-
Kentucky	90	12	22	33	19	#	#
Louisiana	149	16	36	51	33	7	5
Maine	39	9	11	14	4	#	#
Maryland	155	29	46	47	27	#	#
Massachusetts	269	57	86	74	43	6	3
Michigan	333	64	69	102	67	12	18
Minnesota	147	15	36	45	38	10	3
Mississippi	59	9	19	19	10	#	#
Missouri	176	30	42	58	25	12	8
Montana	39	9	9	13	6	#	#
Nebraska	54	#	17	8	17	10	#
Nevada	16	#	7	4	3	#	-
New Hampshire	27	4	10	9	#	-	#
New Jersey	299	58	80	79	58	10	14
New Mexico	44	8	17	9	7	#	#
New York	980	156	327	295	152	27	24
North Carolina	167	24	51	48	30	10	4
North Dakota	20	#	5	3	5	#	3
Ohio	382	59	87	97	84	29	25
Oklahoma	95	18	34	24	11	#	#
Oregon	108	22	32	29	17	#	#
Pennsylvania	548	89	144	149	101	39	27
Rhode Island	32	8	6	10	4	-	3
South Carolina	70	9	18	24	16	-	3
South Dakota	22	7	#	6	4	-	#
Tennessee	127	15	28	46	23	11	3
Texas	396	55	112	109	78	24	19
Utah	47	#	11	12	10	6	#
Vermont	18	3	8	#	5	-	#
Virginia	160	20	36	61	36	#	#
Washington	155	19	49	43	29	11	4
West Virginia	61	9	18	19	12	#	#
Wisconsin	168	21	50	61	26	5	5
Wyoming	16	4	7	#	3	-	#

Data suppressed to comply with confidentiality requirements.

Table 5. Number and percent distribution of clinical ophthalmologists by number of patients seen per week, according to area of practice: United States and each State, 1968—Con.

Area	Total clinical ophthalmologists	Number of patients seen per week					
		Under 40 patients	40-79 patients	80-119 patients	120-159 patients	160-199 patients	200 patients and over
	Percent distribution						
United States	100.0	15.6	28.3	30.4	17.5	4.6	3.6
Alabama	100.0	19.7	17.1	36.8	22.4	3.9	-
Alaska	100.0	#	#	#	#	-	-
Arizona	100.0	20.3	32.4	29.7	10.8	-	6.8
Arkansas	100.0	-	28.9	42.1	18.4	#	#
California	100.0	13.2	31.9	35.0	13.5	3.4	3.0
Colorado	100.0	14.3	34.8	32.1	14.3	#	#
Connecticut	100.0	13.6	26.5	37.9	17.4	2.3	2.3
Delaware	100.0	#	33.3	#	33.3	#	-
District of Columbia	100.0	15.0	35.0	21.7	20.0	3.3	5.0
Florida	100.0	15.5	26.4	32.6	15.1	5.8	4.7
Georgia	100.0	14.5	28.2	23.4	21.0	7.3	5.6
Hawaii	100.0	14.8	25.9	33.3	14.8	11.1	-
Idaho	100.0	25.8	19.4	35.5	#	#	3.2
Illinois	100.0	18.0	25.5	28.5	16.3	7.8	3.9
Indiana	100.0	16.9	22.3	33.8	16.9	3.4	6.8
Iowa	100.0	22.9	27.7	25.3	14.5	3.6	6.0
Kansas	100.0	14.9	26.9	31.3	20.9	6.0	-
Kentucky	100.0	12.9	24.7	36.5	21.2	#	#
Louisiana	100.0	11.0	24.4	34.6	22.0	4.7	3.2
Maine	100.0	24.3	27.0	35.1	10.8	#	#
Maryland	100.0	18.8	29.7	30.5	17.2	#	#
Massachusetts	100.0	21.2	31.8	27.5	16.1	2.1	1.3
Michigan	100.0	19.2	20.9	30.6	20.2	3.7	5.4
Minnesota	100.0	10.3	24.3	30.9	25.7	6.6	2.2
Mississippi	100.0	14.5	32.7	32.7	16.4	#	#
Missouri	100.0	16.9	24.1	33.1	14.5	6.6	4.8
Montana	100.0	24.3	24.3	32.4	16.2	#	#
Nebraska	100.0	#	31.1	15.6	31.1	17.8	#
Nevada	100.0	#	46.7	26.7	20.0	#	-
New Hampshire	100.0	15.4	38.5	34.6	#	-	#
New Jersey	100.0	19.3	26.8	26.4	19.3	3.3	4.8
New Mexico	100.0	17.9	38.5	20.5	15.4	#	#
New York	100.0	15.9	33.4	30.1	15.6	2.7	2.4
North Carolina	100.0	14.5	30.3	28.9	17.8	5.9	2.6
North Dakota	100.0	#	26.3	15.8	26.3	#	15.8
Ohio	100.0	15.4	22.9	25.4	22.0	7.7	6.6
Oklahoma	100.0	18.6	36.0	25.6	11.6	#	#
Oregon	100.0	20.0	30.0	27.0	16.0	#	#
Pennsylvania	100.0	16.2	26.3	27.1	18.4	7.1	4.9
Rhode Island	100.0	26.7	20.0	30.0	13.3	-	10.0
South Carolina	100.0	12.9	25.8	33.9	22.6	-	4.8
South Dakota	100.0	33.3	#	28.6	19.0	-	#
Tennessee	100.0	12.2	21.7	36.5	18.3	8.7	2.6
Texas	100.0	13.8	28.2	27.4	19.8	5.9	4.8
Utah	100.0	#	24.4	26.7	22.2	13.3	#
Vermont	100.0	16.7	44.4	#	27.8	-	#
Virginia	100.0	12.2	22.3	38.1	22.3	#	#
Washington	100.0	12.0	31.7	27.5	19.0	7.0	2.8
West Virginia	100.0	14.5	29.1	30.9	20.0	#	#
Wisconsin	100.0	12.3	29.6	36.4	15.4	3.1	3.1
Wyoming	100.0	26.7	46.7	#	20.0	-	#

Data suppressed to comply with confidentiality requirements.

Table 6. Number and percent distribution of clinical ophthalmologists by number of patients seen per week, according to selected characteristics: United States, 1968

Characteristic	Total clinical ophthalmologists	Number of patients seen per week					
		Under 40 patients	40-79 patients	80-119 patients	120-159 patients	160-199 patients	200 patients and over
	Number of clinical ophthalmologists						
United States	8,327	1,303	2,356	2,528	1,454	386	300
Age:							
Under 35 years	781	104	279	273	86	20	18
35-44 years	2,222	159	488	839	485	157	94
45-54 years	1,927	183	431	612	481	116	104
55-64 years	2,153	376	708	600	315	81	74
65 years and over	1,244	481	449	204	88	11	11
Sex:							
Male	8,106	1,255	2,278	2,472	1,428	381	293
Female	221	47	77	56	27	6	8
Professional identity:							
Doctor of Medicine	8,167	1,220	2,308	2,505	1,450	384	299
Doctor of Osteopathy	161	82	47	23	5	2	1
Number of States licensed in:							
1 State	4,701	777	1,330	1,432	808	205	149
2 States or more	3,626	525	1,026	1,097	646	181	151
Principal form of practice:							
Self-employed:							
Solo practice	5,695	968	1,713	1,646	964	233	171
Partnership	1,385	87	269	509	321	112	87
Group practice	483	27	130	179	96	26	27
Nongroup arrangements with other physician(s)	352	37	101	130	56	13	13
Salaried:							
Hospital[1]	153	51	64	29	6	1	2
Nonhospital[2]	260	133	79	35	12	1	-
Number of patient visits per week:							
Under 40 visits	978	978	-	-	-	-	-
40-79 visits	1,983	296	1,687	-	-	-	-
80-119 visits	2,211	15	578	1,618	-	-	-
120-159 visits	2,041	9	78	839	1,115	-	-
160-199 visits	512	3	3	50	244	211	-
200 visits and over	603	1	10	21	95	176	300
Number of office locations:							
0-1 office[3]	7,232	1,163	2,027	2,181	1,272	334	255
2 offices	891	114	258	286	151	42	39
3 offices	132	14	56	37	17	7	2
4 offices or more	72	12	14	24	15	3	4
Number of services rendered:							
1-2 services	213	145	46	11	10	-	1
3-4 services	1,439	454	488	310	135	34	18
5-6 services	3,550	465	1,068	1,146	606	148	118
7-8 services	2,643	197	624	923	599	179	121
9-10 services	483	42	130	138	104	25	43
Are supplementary personnel used to assist in clinical practice?							
Yes	7,882	1,063	2,230	2,485	1,425	383	296
No	445	239	126	43	29	3	4
Primary clinical activity:							
General ophthalmology (medical and surgical)	7,956	1,166	2,233	2,459	1,423	381	294
Corneal surgery	32	8	11	3	8	1	-
Retinal surgery	95	24	43	22	7	-	-
Pediatric ophthalmology	69	12	20	22	9	1	5
Ophthalmic pathology	14	10	2	-	1	-	1
Neuro-ophthalmology	22	13	2	2	3	-	1
Other	138	69	44	19	3	3	-

[1] Includes nongovernment hospitals and city, county, State, and Federal government hospitals.

[2] Includes medical schools; city, county, State and Federal agencies; and other (all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, and so forth).

[3] Only 13 of these respondents reported no office location.

Table 6. Number and percent distribution of clinical ophthalmologists by number of patients seen per week, according to selected characteristics: United States, 1968—Con.

Characteristic	Total clinical ophthalmologists	Number of patients seen per week					
		Under 40 patients	40-79 patients	80-119 patients	120-159 patients	160-199 patients	200 patients and over
	Percent distribution						
United States	100.0	15.6	28.3	30.4	17.5	4.6	3.6
Age:							
Under 35 years	100.0	13.4	35.7	35.0	11.0	2.6	2.3
35-44 years	100.0	7.2	22.0	37.7	21.8	7.1	4.2
45-54 years	100.0	9.5	22.4	31.8	25.0	6.0	5.4
55-64 years	100.0	17.5	32.9	27.9	14.6	3.8	3.4
65 years and over	100.0	38.6	36.1	16.4	7.0	0.9	0.9
Sex:							
Male	100.0	15.5	28.1	30.5	17.6	4.7	3.6
Female	100.0	21.4	35.0	25.4	12.1	2.5	3.5
Professional identity:							
Doctor of Medicine	100.0	14.9	28.3	30.7	17.8	4.7	3.7
Doctor of Osteopathy	100.0	51.3	29.5	14.3	2.8	1.4	0.7
Number of States licensed in:							
1 State	100.0	16.5	28.3	30.5	17.2	4.4	3.2
2 States or more	100.0	14.5	28.3	30.2	17.8	5.0	4.2
Principal form of practice:							
Self-employed:							
Solo practice	100.0	17.0	30.1	28.9	16.9	4.1	3.0
Partnership	100.0	6.3	19.4	36.7	23.2	8.1	6.3
Group practice	100.0	5.5	26.9	37.0	19.8	5.3	5.5
Nongroup arrangement with other physician(s)	100.0	10.6	28.7	37.1	16.0	3.8	3.8
Salaried:							
Hospital[1]	100.0	33.1	41.9	19.1	3.7	0.7	1.5
Nonhospital[2]	100.0	51.2	30.4	13.3	4.7	0.4	-
Number of patient visits per week:							
Under 40 visits	100.0	100.0	-	-	-	-	-
40-79 visits	100.0	14.9	85.1	-	-	-	-
80-119 visits	100.0	0.7	26.1	73.2	-	-	-
120-159 visits	100.0	0.4	3.8	41.1	54.7	-	-
160-199 visits	100.0	0.7	0.6	9.8	47.8	41.2	-
200 visits and over	100.0	0.2	1.6	3.5	15.7	29.1	49.8
Number of office locations:							
0-1 office[3]	100.0	16.1	28.0	30.2	17.6	4.6	3.5
2 offices	100.0	12.8	29.0	32.1	16.9	4.8	4.3
3 offices	100.0	10.3	42.4	27.9	12.7	5.0	1.7
4 offices or more	100.0	16.7	19.8	32.5	20.4	4.7	5.9
Number of services rendered:							
1-2 services	100.0	68.0	21.5	5.3	4.7	-	0.5
3-4 services	100.0	31.6	33.9	21.6	9.4	2.3	1.2
5-6 services	100.0	13.1	30.1	32.3	17.1	4.2	3.3
7-8 services	100.0	7.4	23.6	34.9	22.7	6.8	4.6
9-10 services	100.0	8.7	27.0	28.6	21.6	5.3	8.9
Are supplementary personnel used to assist in clinical practice?							
Yes	100.0	13.5	28.3	31.5	18.1	4.9	3.8
No	100.0	53.8	28.2	9.7	6.5	0.8	1.0
Primary clinical activity:							
General ophthalmology (medical and surgical)	100.0	14.7	28.1	30.9	17.9	4.8	3.7
Corneal surgery	100.0	25.0	35.9	10.5	25.1	3.5	-
Retinal surgery	100.0	24.8	45.0	23.2	6.9	-	-
Pediatric ophthalmology	100.0	17.9	28.9	32.2	12.8	1.6	6.6
Ophthalmic pathology	100.0	69.8	15.4	-	7.2	-	7.5
Neuro-ophthalmology	100.0	60.4	10.3	9.8	14.7	-	4.9
Other	100.0	49.9	31.5	13.8	2.4	2.4	-

[1] Includes nongovernment hospitals and city, county, State, and Federal government hospitals.

[2] Includes medical schools; city, county, State, and Federal agencies; and other (all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, and so forth).

[3] Only 13 of these respondents reported no office location.

Table 7. Number and percent distribution of clinical ophthalmologists by number of patient visits per week, according to area of practice: United States and each State, 1968

Area	Total clinical ophthalmologists	Number of patient visits per week					
		Under 40 visits	40-79 visits	80-119 visits	120-159 visits	160-199 visits	200 visits and over
	Number of clinical ophthalmologists						
United States	8,327	978	1,983	2,211	2,041	512	603
Alabama	84	8	18	17	28	9	6
Alaska	5	#	#	#	#	-	-
Arizona	78	13	24	17	18	#	#
Arkansas	41	-	9	13	12	4	3
California	1,043	93	264	326	245	48	67
Colorado	118	14	28	39	28	3	5
Connecticut	150	17	31	54	38	8	3
Delaware	17	#	6	-	7	#	#
District of Columbia	75	10	21	18	18	4	5
Florida	292	37	59	73	80	19	23
Georgia	138	14	32	26	38	14	13
Hawaii	30	3	6	7	7	3	4
Idaho	34	7	9	8	8	#	#
Illinois	415	54	94	110	83	38	36
Indiana	170	17	40	54	32	5	22
Iowa	99	19	23	18	25	7	7
Kansas	72	8	14	22	16	10	3
Kentucky	90	7	21	24	29	#	#
Louisiana	149	12	28	41	46	11	12
Maine	39	7	13	12	5	#	#
Maryland	155	23	41	45	33	7	6
Massachusetts	269	43	83	68	57	7	10
Michigan	333	47	67	81	93	11	34
Minnesota	147	14	26	38	41	15	13
Mississippi	59	4	15	18	14	7	-
Missouri	176	17	45	43	38	11	22
Montana	39	6	9	9	12	#	#
Nebraska	54	#	16	#	18	10	5
Nevada	16	-	#	7	3	#	-
New Hampshire	27	4	7	11	#	-	#
New Jersey	299	42	74	67	71	18	27
New Mexico	44	6	12	11	8	#	#
New York	980	119	278	273	228	31	50
North Carolina	167	19	47	44	39	10	9
North Dakota	20	#	4	3	3	#	6
Ohio	382	46	80	75	99	39	43
Oklahoma	95	11	30	24	20	7	3
Oregon	108	19	25	24	29	3	8
Pennsylvania	548	77	120	133	125	40	53
Rhode Island	32	5	10	5	7	#	#
South Carolina	70	8	15	20	19	#	#
South Dakota	22	6	3	5	5	#	#
Tennessee	127	13	19	34	42	9	10
Texas	396	44	85	95	104	31	37
Utah	47	3	8	10	14	7	4
Vermont	18	3	4	5	4	#	#
Virginia	160	9	31	53	51	12	5
Washington	155	15	28	49	39	11	12
West Virginia	61	7	18	11	16	7	3
Wisconsin	168	17	32	60	40	10	9
Wyoming	16	3	6	3	3	-	-

Data suppressed to comply with confidentiality requirements.

Table 7. Number and percent distribution of clinical ophthalmologists by number of patient visits per week, according to area of practice: United States and each State, 1968—Con.

Area	Total clinical ophthalmologists	Number of patient visits per week					
		Under 40 visits	40-79 visits	80-119 visits	120-159 visits	160-199 visits	200 visits and over
	Percent distribution						
United States	100.0	11.7	23.8	26.6	24.5	6.1	7.2
Alabama	100.0	9.2	21.1	19.7	32.9	10.5	6.6
Alaska	100.0	#	#	#	#	-	-
Arizona	100.0	16.2	31.1	21.6	23.0	#	#
Arkansas	100.0	-	21.1	31.6	28.9	10.5	7.9
California	100.0	8.9	25.3	31.3	23.5	4.6	6.4
Colorado	100.0	11.6	24.1	33.0	24.1	2.7	4.5
Connecticut	100.0	11.4	20.5	35.6	25.0	5.3	2.3
Delaware	100.0	#	33.3	-	40.0	#	#
District of Columbia	100.0	13.3	28.3	23.3	23.3	5.0	6.7
Florida	100.0	12.8	20.2	25.2	27.5	6.6	7.8
Georgia	100.0	10.5	23.4	18.5	27.4	10.5	9.7
Hawaii	100.0	11.1	18.5	22.2	22.2	11.1	14.8
Idaho	100.0	19.4	25.8	22.6	22.6	#	#
Illinois	100.0	13.0	22.7	26.6	19.9	9.1	8.6
Indiana	100.0	10.1	23.6	31.8	18.9	2.7	12.8
Iowa	100.0	19.3	22.9	18.1	25.3	7.2	7.2
Kansas	100.0	10.4	19.4	29.9	22.4	13.4	4.5
Kentucky	100.0	8.2	23.5	27.1	31.8	#	#
Louisiana	100.0	7.9	18.9	27.6	30.7	7.1	7.9
Maine	100.0	18.9	32.4	29.7	13.5	#	#
Maryland	100.0	14.8	26.6	28.9	21.1	4.7	3.9
Massachusetts	100.0	16.1	30.9	25.4	21.2	2.5	3.8
Michigan	100.0	14.1	20.2	24.2	27.9	3.4	10.1
Minnesota	100.0	9.6	17.6	25.7	27.9	10.3	8.8
Mississippi	100.0	7.3	25.5	30.9	23.6	12.7	-
Missouri	100.0	9.6	25.3	24.7	21.7	6.0	12.7
Montana	100.0	16.2	24.3	24.3	29.7	#	#
Nebraska	100.0	#	28.9	#	33.3	17.8	8.9
Nevada	100.0	-	#	46.7	20.0	#	-
New Hampshire	100.0	15.4	26.9	42.3	#	-	#
New Jersey	100.0	14.1	24.9	22.3	23.8	5.9	8.9
New Mexico	100.0	12.8	28.2	25.6	17.9	#	#
New York	100.0	12.1	28.3	27.9	23.3	3.2	5.1
North Carolina	100.0	11.2	28.3	26.3	23.0	5.9	5.3
North Dakota	100.0	#	21.1	15.8	15.8	#	31.6
Ohio	100.0	12.0	20.9	19.7	26.0	10.3	11.1
Oklahoma	100.0	11.6	31.4	25.6	20.9	7.0	3.5
Oregon	100.0	18.0	23.0	22.0	27.0	3.0	7.0
Pennsylvania	100.0	14.0	21.9	24.3	22.9	7.3	9.7
Rhode Island	100.0	16.7	30.0	16.7	23.3	#	#
South Carolina	100.0	11.3	21.0	29.0	27.4	#	#
South Dakota	100.0	28.6	14.3	23.8	23.8	#	#
Tennessee	100.0	10.4	14.8	27.0	33.0	7.0	7.8
Texas	100.0	11.0	21.5	24.0	26.3	7.9	9.3
Utah	100.0	6.7	17.8	22.2	28.9	15.6	8.9
Vermont	100.0	16.7	22.2	27.8	22.2	#	#
Virginia	100.0	5.8	19.4	33.1	31.7	7.2	2.9
Washington	100.0	9.9	18.3	31.7	25.4	7.0	7.7
West Virginia	100.0	10.9	29.1	18.2	25.5	10.9	5.5
Wisconsin	100.0	9.9	19.1	35.8	23.5	6.2	5.6
Wyoming	100.0	20.0	40.0	20.0	20.0	-	-

Data suppressed to comply with confidentiality requirements.

Table 8. Number and percent distribution of clinical ophthalmologists by number of patient visits per week, according to selected characteristics: United States, 1968

Characteristic	Total clinical ophthalmologists	Number of patient visits per week					
		Under 40 visits	40-79 visits	80-119 visits	120-159 visits	160-199 visits	200 visits and over
	Number of clinical ophthalmologists						
United States	8,327	978	1,983	2,211	2,041	512	603
Age:							
Under 35 years	781	83	238	246	160	22	31
35-44 years	2,222	124	345	692	685	183	192
45-54 years	1,927	129	315	516	607	167	193
55-64 years	2,153	266	604	548	459	121	156
65 years and over	1,244	376	481	210	130	18	30
Sex:							
Male	8,106	943	1,902	2,159	2,004	504	594
Female	221	35	81	52	37	8	9
Number of States licensed in:							
1 State	4,701	576	1,148	1,238	1,139	294	305
2 States or more	3,626	402	835	973	902	217	298
Principal form of practice:							
Self-employed:							
Solo practice	5,695	708	1,496	1,487	1,313	336	357
Partnership	1,385	63	184	397	455	117	168
Group practice	483	18	87	160	142	33	43
Nongroup arrangement with other physician(s)	352	32	76	107	91	19	28
Salaried:							
Hospital[1]	152	40	58	28	17	6	3
Nonhospital[2]	259	117	81	32	23	2	3
Number of patients seen weekly:							
Under 40 patients	1,303	978	296	15	9	3	1
40-79 patients	2,356	-	1,687	578	78	3	10
80-119 patients	2,528	-	-	1,618	839	50	21
120-159 patients	1,454	-	-	-	1,115	244	95
160-199 patients	386	-	-	-	-	211	176
200 patients and over	300	-	-	-	-	-	300
Number of office locations:							
0-1 office[3]	7,232	880	1,715	1,905	1,765	453	514
2 offices	891	83	206	251	230	45	77
3 offices	132	6	51	34	29	7	6
4 offices or more	72	9	12	21	17	7	7
Number of services rendered:							
1-2 services	213	127	55	18	12	-	1
3-4 services	1,439	364	470	317	200	52	36
5-6 services	3,550	327	867	1,018	884	216	239
7-8 services	2,643	131	496	736	813	206	261
9-10 services	483	29	96	122	132	38	66
Are supplementary personnel used to assist in clinical practice?							
Yes	7,882	774	1,845	2,156	2,010	504	594
No	445	204	139	55	31	8	9
Primary clinical activity:							
General ophthalmology (medical and surgical)	7,956	855	1,877	2,136	1,994	504	590
Corneal surgery	32	6	11	3	7	3	1
Retinal surgery	95	21	35	27	12	-	-
Pediatric ophthalmology	69	11	16	22	12	2	6
Ophthalmic pathology	14	10	2	-	1	-	1
Neuro-ophthalmology	22	13	2	2	3	-	1
Other	138	61	40	20	11	2	3

[1] Includes nongovernment hospitals and city, county, State, and Federal government hospitals.

[2] Includes medical schools; city, county, State, and Federal agencies; and other (all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, and so forth).

[3] Only 13 of these respondents reported no office location.

Table 8. Number and percent distribution of clinical ophthalmologists by number of patient visits per week, according to selected characteristics: United States, 1968—Con.

Characteristic	Total clinical ophthalmologists	Number of patient visits per week					
		Under 40 visits	40-79 visits	80-119 visits	120-159 visits	160-199 visits	200 visits and over
	Percent distribution						
United States	100.0	11.7	23.8	26.6	24.5	6.1	7.2
Age:							
Under 35 years	100.0	10.6	30.4	31.5	20.6	2.9	4.0
35-44 years	100.0	5.6	15.5	31.2	30.8	8.2	8.7
45-54 years	100.0	6.7	16.4	26.8	31.5	8.7	10.0
55-64 years	100.0	12.3	28.0	25.4	21.3	5.6	7.2
65 years and over	100.0	30.2	38.7	16.8	10.4	1.4	2.4
Sex:							
Male	100.0	11.6	23.5	26.6	24.7	6.2	7.3
Female	100.0	15.8	36.6	23.4	16.7	3.6	4.0
Number of States licensed in:							
1 State	100.0	12.3	24.4	26.3	24.2	6.3	6.5
2 States or more	100.0	11.1	23.0	26.8	24.9	6.0	8.2
Principal form of practice:							
Self-employed:							
Solo practice	100.0	12.4	26.3	26.1	23.0	5.9	6.3
Partnership	100.0	4.6	13.3	28.7	32.9	8.5	12.1
Group practice	100.0	3.7	18.0	33.1	29.3	6.9	9.0
Nongroup arrangement with other physician(s)	100.0	9.0	21.5	30.3	26.0	5.3	7.9
Salaried:							
Hospital[1]	100.0	26.5	38.1	18.4	11.1	3.7	2.2
Nonhospital[2]	100.0	45.0	31.4	12.4	9.0	0.8	1.3
Number of patients seen weekly:							
Under 40 patients	100.0	75.0	22.7	1.2	0.7	0.3	0.1
40-79 patients	100.0	-	71.6	24.5	3.3	0.1	0.4
80-119 patients	100.0	-	-	64.0	33.2	2.0	0.8
120-159 patients	100.0	-	-	-	76.7	16.8	6.5
160-199 patients	100.0	-	-	-	-	54.5	45.5
200 patients and over	100.0	-	-	-	-	-	100.0
Number of office locations:							
0-1 office[3]	100.0	12.2	23.7	26.3	24.4	6.3	7.1
2 offices	100.0	9.3	23.1	28.2	25.8	5.1	8.6
3 offices	100.0	4.2	38.4	26.1	22.0	5.0	4.2
4 offices or more	100.0	12.1	16.9	29.3	23.4	9.4	9.0
Number of services rendered:							
1-2 services	100.0	59.6	25.7	8.4	5.7	-	0.5
3-4 services	100.0	25.3	32.7	22.0	13.9	3.6	2.5
5-6 services	100.0	9.2	24.4	28.7	24.9	6.1	6.7
7-8 services	100.0	5.0	18.8	27.9	30.8	7.8	9.9
9-10 services	100.0	6.0	19.8	25.3	27.4	7.8	13.7
Are supplementary personnel used to assist in clinical practice?							
Yes	100.0	9.8	23.4	27.4	25.5	6.4	7.5
No	100.0	45.8	31.2	12.3	7.0	1.7	2.0
Primary clinical activity:							
General ophthalmology (medical and surgical)	100.0	10.7	23.6	26.8	25.1	6.3	7.4
Corneal surgery	100.0	17.9	35.9	10.7	21.5	10.5	3.5
Retinal surgery	100.0	22.5	36.8	28.1	12.7	-	-
Pediatric ophthalmology	100.0	16.2	22.6	32.2	17.6	3.2	8.3
Ophthalmic pathology	100.0	69.8	15.4	-	7.2	-	7.5
Neuro-ophthalmology	100.0	60.4	10.3	9.8	14.7	-	4.9
Other	100.0	44.2	29.0	14.6	8.1	1.6	2.4

[1] Includes nongovernment hospitals and city, county, State, and Federal government hospitals.

[2] Includes medical schools; city, county, State, and Federal agencies; and other (all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, and so forth).

[3] Only 13 of these respondents reported no office location.

Table 9. Number and percent distribution of clinical ophthalmologists by number of services rendered, according to area of practice: United States and each State, 1968

Area	Total clinical ophthal-mologists	Number of services rendered					Total clinical ophthal-mologists	Number of services rendered				
		1-2 services	3-4 services	5-6 services	7-8 services	9-10 services		1-2 services	3-4 services	5-6 services	7-8 services	9-10 services
	Number						Percent distribution					
United States	8,327	213	1,439	3,550	2,643	483	100.0	2.6	17.3	42.6	31.7	5.8
Alabama	84	#	13	33	32	#	100.0	#	15.8	39.5	38.2	#
Alaska	5	-	#	3	#	-	100.0	-	#	60.0	#	-
Arizona	78	-	11	33	23	12	100.0	-	13.5	41.9	29.7	14.9
Arkansas	41	#	3	17	16	#	100.0	#	7.9	42.1	39.5	#
California	1,043	19	147	463	346	69	100.0	1.8	14.0	44.4	33.2	6.6
Colorado	118	4	12	48	44	9	100.0	3.6	9.8	41.1	37.5	8.0
Connecticut	150	5	23	55	59	9	100.0	3.0	15.2	36.4	39.4	6.1
Delaware	17	#	5	5	7	#	100.0	#	26.7	26.7	40.0	#
District of Columbia	75	#	11	40	20	#	100.0	#	15.0	53.3	26.7	#
Florida	292	6	45	122	97	21	100.0	1.9	15.5	41.9	33.3	7.4
Georgia	138	4	23	52	50	8	100.0	3.2	16.9	37.9	36.3	5.6
Hawaii	30	-	7	14	6	3	100.0	-	22.2	48.1	18.5	11.1
Idaho	34	#	#	16	10	5	100.0	#	#	48.4	29.0	16.1
Illinois	415	16	90	187	104	18	100.0	3.9	21.6	45.2	24.9	4.4
Indiana	170	#	30	74	59	#	100.0	#	17.6	43.2	34.5	#
Iowa	99	#	27	39	26	#	100.0	#	27.7	39.8	26.5	#
Kansas	72	#	17	33	19	#	100.0	#	23.9	46.3	26.9	#
Kentucky	90	#	14	47	21	#	100.0	#	15.3	51.8	23.5	#
Louisiana	149	-	18	54	62	15	100.0	-	11.8	36.2	41.7	10.2
Maine	39	#	6	13	16	#	100.0	#	16.2	32.4	40.5	#
Maryland	155	6	31	69	45	4	100.0	3.9	20.3	44.5	28.9	2.3
Massachusetts	269	8	52	127	74	8	100.0	3.0	19.5	47.0	27.5	3.0
Michigan	333	17	44	120	125	27	100.0	5.1	13.1	36.0	37.7	8.1
Minnesota	147	3	19	67	49	9	100.0	2.2	13.2	45.6	33.1	5.9
Mississippi	59	-	9	27	20	3	100.0	-	14.5	45.5	34.5	5.5
Missouri	176	4	38	72	47	15	100.0	2.4	21.7	41.0	26.5	8.4
Montana	39	#	3	18	17	#	100.0	#	8.1	45.9	43.2	#
Nebraska	54	#	7	22	20	#	100.0	#	13.3	40.0	37.8	#
Nevada	16	#	-	9	6	#	100.0	#	-	53.3	40.0	#
New Hampshire	27	#	6	13	6	#	100.0	#	23.1	50.0	23.1	#
New Jersey	299	12	50	128	99	10	100.0	4.1	16.7	42.8	33.1	3.3
New Mexico	44	-	6	21	14	3	100.0	-	12.8	48.7	30.8	7.7
New York	980	31	220	446	237	46	100.0	3.2	22.4	45.5	24.2	4.7
North Carolina	167	6	24	59	61	18	100.0	3.3	14.5	35.5	36.2	10.5
North Dakota	20	-	-	16	#	#	100.0	-	-	78.9	#	#
Ohio	382	13	58	144	140	27	100.0	3.4	15.1	37.7	36.6	7.1
Oklahoma	95	3	15	42	31	3	100.0	3.5	16.3	44.2	32.6	3.4
Oregon	108	#	12	55	37	#	100.0	#	11.0	51.0	34.0	#
Pennsylvania	548	17	132	245	138	17	100.0	3.0	24.1	44.7	25.1	3.0
Rhode Island	32	#	3	15	11	#	100.0	#	10.0	46.7	33.3	#
South Carolina	70	#	18	28	21	#	100.0	#	25.8	40.3	30.6	#
South Dakota	22	#	4	12	5	#	100.0	#	19.0	52.4	23.8	#
Tennessee	127	#	19	47	46	#	100.0	#	14.8	37.4	36.5	#
Texas	396	10	63	146	151	27	100.0	2.5	15.8	36.7	38.1	6.8
Utah	47	#	6	20	16	#	100.0	#	13.3	42.2	33.3	#
Vermont	18	#	#	7	7	-	100.0	#	#	38.9	38.9	-
Virginia	160	#	31	64	54	#	100.0	#	19.4	40.3	33.8	#
Washington	155	#	19	58	62	#	100.0	#	12.0	37.3	40.1	#
West Virginia	61	#	11	20	26	#	100.0	#	18.2	32.7	41.8	#
Wisconsin	168	#	30	81	51	#	100.0	#	17.9	48.1	30.2	#
Wyoming	16	-	#	5	6	#	100.0	-	#	33.3	40.0	#

Data suppressed to comply with confidentiality requirements.

Table 10. Number and percent distribution of clinical ophthalmologists by number of services rendered, according to selected characteristics: United States, 1968

Characteristic	Total clinical ophthal-mologists	Number of services rendered					Total clinical ophthal-mologists	Number of services rendered				
		1-2 services	3-4 services	5-6 services	7-8 services	9-10 services		1-2 services	3-4 services	5-6 services	7-8 services	9-10 services
	Number						Percent distribution					
United States	8,327	213	1,439	3,550	2,643	483	100.0	2.6	17.3	42.6	31.7	5.8
Age:												
Under 35 years	781	6	53	311	364	48	100.0	0.7	6.7	39.8	46.6	6.1
35-44 years	2,222	21	182	891	938	189	100.0	1.0	8.2	40.1	42.2	8.5
45-54 years	1,927	27	267	888	617	126	100.0	1.4	14.0	46.1	32.0	6.6
55-64 years	2,153	58	514	965	522	95	100.0	2.7	23.8	44.8	24.3	4.4
65 years and over	1,244	102	422	495	201	24	100.0	8.2	33.9	39.8	16.2	2.0
Sex:												
Male	8,106	202	1,393	3,459	2,580	473	100.0	2.5	17.2	42.7	31.8	5.8
Female	221	11	46	91	63	10	100.0	5.1	20.8	41.2	28.4	4.5
Professional identity:												
Doctor of Medicine	8,167	204	1,386	3,485	2,617	474	100.0	2.5	17.0	42.7	32.1	5.8
Doctor of Osteopathy	161	9	53	65	25	9	100.0	5.5	33.0	40.4	15.6	5.5
Principal form of practice:												
Self-employed:												
Solo practice	5,695	158	1,082	2,559	1,634	262	100.0	2.8	19.0	44.9	28.7	4.6
Partnership	1,385	17	176	515	560	116	100.0	1.2	12.7	37.2	40.5	8.4
Group practice	483	11	50	183	206	33	100.0	2.3	10.4	37.8	42.7	6.9
Nongroup arrangement with other physician(s)	352	6	36	145	141	25	100.0	1.6	10.2	41.2	40.0	7.0
Salaried:												
Hospital[1]	152	4	45	54	30	19	100.0	2.9	29.3	35.3	19.9	12.6
Nonhospital[2]	259	18	50	94	70	27	100.0	6.8	19.3	36.2	27.2	10.4
Number of patient visits per week:												
Under 40 visits	978	127	364	327	131	29	100.0	13.0	37.3	33.4	13.4	2.9
40-79 visits	1,983	55	470	867	496	96	100.0	2.8	23.7	43.7	25.0	4.8
80-119 visits	2,211	18	317	1,018	736	122	100.0	0.8	14.3	46.0	33.3	5.5
120-159 visits	2,041	12	200	884	813	132	100.0	0.6	9.8	43.3	39.8	6.5
160-199 visits	512	-	52	216	206	38	100.0	-	10.2	42.2	40.2	7.3
200 visits and over	603	1	36	239	261	66	100.0	0.2	5.9	39.6	43.3	11.0
Number of office locations:												
0-1 office[3]	7,232	194	1,279	3,103	2,282	375	100.0	2.7	17.7	42.9	31.6	5.2
2 offices	891	12	133	362	300	83	100.0	1.4	15.0	40.7	33.7	9.3
3 offices	132	2	19	59	38	13	100.0	1.7	14.4	44.9	28.9	10.1
4 offices or more	72	5	8	26	22	12	100.0	6.2	10.7	35.4	31.1	16.6
Are supplementary personnel used to assist in clinical practice?												
Yes	7,882	161	1,273	3,385	2,586	477	100.0	2.0	16.2	43.0	32.8	6.1
No	445	52	166	165	56	6	100.0	11.8	37.2	37.0	12.7	1.3
Primary clinical activity:												
General ophthalmology (medical and surgical)	7,956	177	1,342	3,403	2,567	467	100.0	2.2	16.9	42.8	32.3	5.9
Corneal surgery	32	5	9	12	4	1	100.0	14.8	28.3	39.3	14.1	3.6
Retinal surgery	95	9	20	43	20	3	100.0	9.5	21.0	44.9	21.1	3.5
Pediatric ophthalmology	69	2	4	31	27	4	100.0	3.2	6.4	45.3	38.7	6.4
Ophthalmic pathology	14	3	2	4	3	1	100.0	23.3	15.1	31.0	23.0	7.5
Neuro-ophthalmology	22	1	8	9	2	2	100.0	4.9	35.6	39.4	9.6	10.5
Other	138	15	53	47	19	3	100.0	11.2	38.5	34.2	13.8	2.4

[1] Includes nongovernment hospitals and city, county, State, and Federal government hospitals.

[2] Includes medical schools; city, county, State, and Federal agencies; and other (all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, and so forth).

[3] Only 13 of these respondents reported no office location.

Table 11. Number and percent of clinical ophthalmologists, by services rendered and area of practice: United States and each State, 1968

Area	Total clinical ophthal-mologists	Service rendered								
		Diagnostic examination (including tonometry)	Medical treatment	Eye surgery	Visual field examination and medical interpretation	Orthoptic training	Prescribing low-vision aids	Aniseikonic testing	Fitting contact lenses	Tonography
		Number of clinical ophthalmologists								
United States	8,327	8,282	8,154	7,400	7,802	2,710	4,571	786	4,834	4,148
Alabama	84	84	83	75	80	31	54	9	54	41
Alaska	5	5	5	5	4	-	4	-	#	#
Arizona	78	78	78	72	75	31	53	20	47	43
Arkansas	41	41	41	39	39	14	27	#	33	20
California	1,043	1,040	1,032	962	999	313	578	97	623	582
Colorado	118	117	116	109	107	42	66	12	102	46
Connecticut	150	149	149	135	140	70	90	16	90	75
Delaware	17	17	17	16	16	6	12	#	9	5
District of Columbia	75	74	74	69	71	24	39	4	38	44
Florida	292	290	287	259	277	98	166	27	195	149
Georgia	138	138	134	128	130	50	78	14	74	74
Hawaii	30	30	29	29	30	9	11	#	19	16
Idaho	34	34	34	31	33	17	24	9	27	13
Illinois	415	413	403	366	380	106	200	30	204	187
Indiana	170	170	169	145	159	54	94	13	101	87
Iowa	99	99	98	86	92	32	45	7	48	37
Kansas	72	72	72	56	68	9	38	4	39	28
Kentucky	90	87	88	88	88	28	54	7	37	49
Louisiana	149	149	149	138	143	60	96	16	111	85
Maine	39	39	38	33	38	20	23	3	23	17
Maryland	155	154	148	138	146	48	76	8	73	69
Massachusetts	269	269	263	243	252	64	135	18	131	120
Michigan	333	329	321	281	307	151	185	47	208	180
Minnesota	147	147	147	129	134	48	86	12	90	87
Mississippi	59	59	58	56	57	22	40	4	37	25
Missouri	176	176	171	148	163	56	101	18	96	89
Montana	39	39	39	30	39	13	26	3	30	20
Nebraska	54	54	52	48	49	18	34	7	37	25
Nevada	16	16	16	16	16	6	11	-	14	10
New Hampshire	27	27	27	24	25	7	13	#	11	#
New Jersey	299	294	291	268	275	93	153	27	184	125
New Mexico	44	44	43	41	42	16	24	6	29	28
New York	980	974	949	881	902	269	502	65	459	408
North Carolina	167	165	163	144	152	59	98	23	112	105
North Dakota	20	20	20	18	20	6	9	#	13	9
Ohio	382	378	376	330	359	138	226	53	198	234
Oklahoma	95	95	92	84	87	29	52	9	61	45
Oregon	108	108	106	96	105	28	63	11	82	55
Pennsylvania	548	544	536	446	498	154	253	42	271	238
Rhode Island	32	32	31	27	31	13	21	4	16	17
South Carolina	70	70	69	61	67	26	34	#	45	29
South Dakota	22	22	22	19	21	6	12	#	15	8
Tennessee	127	127	124	116	123	48	79	21	89	68
Texas	396	393	380	361	368	149	239	41	263	221
Utah	47	46	47	44	46	18	22	#	31	26
Vermont	18	18	16	13	16	4	11	#	#	9
Virginia	160	160	156	143	148	58	92	16	91	82
Washington	155	153	154	140	150	64	98	23	114	78
West Virginia	61	61	61	51	57	26	39	9	34	38
Wisconsin	168	167	166	154	165	53	77	14	98	84
Wyoming	16	16	16	14	15	6	11	#	14	7

Data suppressed to comply with confidentiality requirements.

Table 11. Number and percent of clinical ophthalmologists, by services rendered and area of practice: United States and each State, 1968—Con.

Area	Service rendered								
	Diagnostic examination (including tonometry)	Medical treatment	Eye surgery	Visual field examination and medical interpretation	Orthoptic training	Prescribing low-vision aids	Aniseikonic testing	Fitting contact lenses	Tonography
	Percent								
United States	99.5	97.9	88.9	93.7	32.5	54.9	9.4	58.0	49.8
Alabama	100.0	98.7	89.5	94.7	36.8	64.5	10.5	64.5	48.7
Alaska	100.0	100.0	100.0	80.0	-	80.0	-	#	#
Arizona	100.0	100.0	91.9	95.9	39.2	67.6	25.7	59.5	55.4
Arkansas	100.0	100.0	94.7	94.7	34.2	65.8	#	81.6	50.0
California	99.7	98.9	92.2	95.7	30.0	55.4	9.3	59.7	55.7
Colorado	99.1	98.2	92.9	91.1	35.7	56.3	9.8	86.6	39.3
Connecticut	99.2	99.2	89.4	93.2	46.2	59.8	10.6	59.8	50.0
Delaware	100.0	100.0	93.3	93.3	33.3	66.7	#	53.3	26.7
District of Columbia	98.3	98.3	91.7	95.0	31.7	51.7	5.0	50.0	58.3
Florida	99.6	98.5	88.8	95.0	33.7	57.0	9.3	67.1	51.2
Georgia	100.0	97.6	92.7	94.4	36.3	56.5	10.5	54.0	54.0
Hawaii	100.0	96.3	96.3	100.0	29.6	37.0	#	63.0	51.9
Idaho	100.0	100.0	90.3	96.8	51.6	71.0	25.8	80.6	38.7
Illinois	99.4	97.0	88.1	91.4	25.5	48.2	7.2	49.0	45.2
Indiana	100.0	99.3	85.1	93.2	31.8	55.4	7.4	59.5	51.4
Iowa	100.0	98.8	86.7	92.8	32.5	45.8	7.2	48.2	37.3
Kansas	100.0	100.0	77.6	94.0	11.9	52.2	6.0	53.7	38.8
Kentucky	96.5	97.6	97.6	97.6	30.6	60.0	8.2	41.2	54.1
Louisiana	100.0	100.0	92.9	96.1	40.2	64.6	11.0	74.8	57.5
Maine	100.0	97.3	83.8	97.3	51.4	59.5	8.1	59.5	43.2
Maryland	99.2	95.3	89.1	94.5	31.3	49.2	5.5	46.9	44.5
Massachusetts	100.0	97.9	90.3	93.6	23.7	50.0	6.8	48.7	44.5
Michigan	99.0	96.6	84.5	92.3	45.5	55.6	14.1	62.6	54.2
Minnesota	100.0	100.0	87.5	91.2	32.4	58.8	8.1	61.0	59.6
Mississippi	100.0	98.2	94.5	96.4	38.2	67.3	7.3	63.6	41.8
Missouri	100.0	97.0	84.3	92.8	31.9	57.2	10.2	54.8	50.6
Montana	100.0	100.0	78.4	100.0	32.4	67.6	8.1	78.4	51.4
Nebraska	100.0	95.6	88.9	91.1	33.3	62.2	13.3	68.9	46.7
Nevada	100.0	100.0	100.0	100.0	40.0	66.7	-	86.7	60.0
New Hampshire	100.0	100.0	88.5	92.3	26.9	50.0	#	42.3	#
New Jersey	98.5	97.4	89.6	92.2	31.2	51.3	8.9	61.7	42.0
New Mexico	100.0	97.4	92.3	94.9	35.9	53.8	12.8	66.7	64.1
New York	99.4	96.8	89.9	92.0	27.4	51.2	6.6	46.9	41.6
North Carolina	98.7	97.4	86.2	90.8	35.5	58.6	13.8	67.1	62.5
North Dakota	100.0	100.0	89.5	100.0	31.6	47.4	#	63.2	47.4
Ohio	99.1	98.6	86.6	94.0	36.3	59.1	14.0	52.0	61.4
Oklahoma	100.0	97.7	88.4	91.9	30.2	54.7	9.3	64.0	47.7
Oregon	100.0	98.0	89.0	97.0	26.0	58.0	10.0	76.0	51.0
Pennsylvania	99.2	97.8	81.4	90.9	28.1	46.2	7.7	49.4	43.3
Rhode Island	100.0	96.7	83.3	96.7	40.0	66.7	13.3	50.0	53.3
South Carolina	100.0	98.4	87.1	95.2	37.1	48.4	#	64.5	41.9
South Dakota	100.0	100.0	85.7	95.2	28.6	52.4	#	66.7	38.1
Tennessee	100.0	98.3	91.3	97.4	38.3	62.6	16.5	70.4	53.9
Texas	99.2	95.8	91.0	92.9	37.6	60.2	10.5	66.4	55.7
Utah	97.8	100.0	93.3	97.8	37.8	46.7	#	66.7	55.6
Vermont	100.0	88.9	72.2	88.9	22.2	61.1	#	#	50.0
Virginia	100.0	97.8	89.2	92.8	36.0	57.6	10.1	56.8	51.1
Washington	98.6	99.3	90.1	97.2	41.5	63.4	14.8	73.9	50.7
West Virginia	100.0	100.0	83.6	92.7	41.8	63.6	14.5	56.4	61.8
Wisconsin	99.4	98.8	91.4	98.1	31.5	45.7	8.0	58.0	50.0
Wyoming	100.0	100.0	86.7	93.3	40.0	66.7	#	86.7	46.7

Data suppressed to comply with confidentiality requirements.

Table 12. Number of clinical ophthalmologists, by services rendered and selected characteristics: United States, 1968

Characteristic	Total clinical ophthalmologists	Service rendered								
		Diagnostic examination (including tonometry)	Medical treatment	Eye surgery	Visual field examination and medical interpretation	Orthoptic training	Prescribing low-vision aids	Aniseikonic testing	Fitting contact lenses	Tonography
	Number of clinical ophthalmologists									
United States	8,327	8,282	8,154	7,400	7,802	2,710	4,571	786	4,834	4,148
Age:										
Under 35 years	781	779	774	773	763	334	542	80	634	343
35-44 years	2,222	2,214	2,193	2,176	2,166	931	1,457	261	1,694	1,129
45-54 years	1,927	1,920	1,904	1,829	1,835	644	1,091	181	1,176	995
55-64 years	2,153	2,140	2,104	1,839	1,965	546	1,015	169	1,003	1,066
65 years and over	1,244	1,229	1,178	782	1,073	255	466	96	326	616
Sex:										
Male	8,106	8,063	7,941	7,227	7,597	2,621	4,461	765	4,738	4,046
Female	221	219	213	173	205	89	111	21	96	102
Professional identity:										
Doctor of Medicine	8,167	8,123	7,998	7,276	7,671	2,673	4,521	771	4,766	4,075
Doctor of Osteopathy	161	158	156	123	131	37	50	15	68	72
Number of States licensed in:										
1 State	4,701	4,673	4,607	4,077	4,371	1,443	2,466	450	2,542	2,304
2 States or more	3,626	3,609	3,547	3,323	3,431	1,267	2,106	336	2,291	1,844
Hours worked per week:[1]										
1-34 hours	958	944	916	591	801	187	327	65	297	461
35-40 hours	1,648	1,636	1,597	1,389	1,512	417	785	152	833	758
41-48 hours	1,670	1,670	1,643	1,524	1,598	548	917	157	990	820
49-59 hours	2,294	2,282	2,264	2,204	2,204	844	1,430	192	1,542	1,130
60 hours or more	1,757	1,750	1,735	1,692	1,686	713	1,112	220	1,172	979
Principal form of practice:										
Self-employed:										
Solo practice	5,695	5,664	5,577	4,958	5,311	1,671	2,990	510	3,165	2,626
Partnership	1,385	1,380	1,364	1,313	1,330	560	862	150	934	801
Group practice	483	481	475	459	454	216	298	50	312	283
Nongroup arrangement with other physician(s)	352	350	350	336	342	138	221	36	243	185
Salaried:										
Hospital[2]	152	150	143	120	137	42	72	19	64	94
Nonhospital[3]	259	256	246	212	228	84	128	21	116	159
Number of patient visits per week:										
Under 40 visits	978	954	923	555	751	156	307	68	263	441
40-79 visits	1,983	1,973	1,932	1,655	1,837	540	935	178	970	957
80-119 visits	2,211	2,204	2,181	2,092	2,146	758	1,283	191	1,385	1,010
120-159 visits	2,041	2,035	2,017	2,002	1,982	788	1,299	204	1,430	1,082
160-199 visits	512	512	507	508	496	204	332	51	345	272
200 visits and over	603	603	595	588	590	263	415	93	441	385

[1] Includes hours devoted to teaching, research, and administration.

[2] Includes nongovernment hospitals and city, county, State, and Federal government hospitals.

[3] Includes medical schools; city, county, State, and Federal agencies; and other (all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, and so forth).

Table 13. Number and percent of clinical ophthalmologists, by services rendered and selected characteristics: United States, 1968

Characteristic	Total clinical ophthal-mologists	Service rendered								
		Diagnostic examination (including tonometry)	Medical treatment	Eye surgery	Visual field examination and medical interpretation	Orthoptic training	Prescribing low-vision aids	Aniseikonic testing	Fitting contact lenses	Tonography
		Percent								
United States	8,327	99.5	97.9	88.9	93.7	32.5	54.9	9.4	58.0	49.8
Age:										
Under 35 years	781	99.7	99.1	99.0	97.7	42.8	69.4	10.3	81.2	43.9
35-44 years	2,222	99.6	98.7	97.9	97.5	41.9	65.6	11.7	76.3	50.8
45-54 years	1,927	99.7	98.8	94.9	95.2	33.4	56.6	9.4	61.0	51.6
55-64 years	2,153	99.4	97.7	85.4	91.3	25.4	47.1	7.8	46.6	49.5
65 years and over	1,244	98.8	94.7	62.9	86.3	20.5	37.5	7.7	26.2	49.5
Sex:										
Male	8,106	99.5	98.0	89.1	93.7	32.3	55.0	9.4	58.4	49.9
Female	221	99.0	96.5	78.3	92.8	40.1	50.1	9.6	43.4	46.3
Professional identity:										
Doctor of Medicine	8,167	99.5	97.9	89.1	93.9	32.7	55.4	9.4	58.4	49.9
Doctor of Osteopathy	161	98.7	97.2	76.8	81.5	23.2	31.3	9.5	42.3	45.2
Number of States licensed in:										
1 State	4,701	99.4	98.0	86.7	93.0	30.7	52.5	9.6	54.1	49.0
2 States or more	3,626	99.5	97.8	91.6	94.6	34.9	58.1	9.3	63.2	50.8
Hours worked per week:[1]										
1-34 hours	958	98.5	95.6	61.7	83.6	19.5	34.1	6.8	31.0	48.1
35-40 hours	1,648	99.3	96.9	84.3	91.7	25.3	47.6	9.2	50.5	46.0
41-48 hours	1,670	100.0	98.4	91.3	95.7	32.8	54.9	9.4	59.3	49.1
49-59 hours	2,294	99.5	98.7	96.1	96.1	36.8	62.4	8.4	67.2	49.3
60 hours or more	1,757	99.6	98.7	96.3	95.9	40.6	63.3	12.5	66.7	55.7
Principal form of practice:										
Self-employed:										
Solo practice	5,695	99.5	97.9	87.1	93.3	29.3	52.5	9.0	55.6	46.1
Partnership	1,385	99.7	98.5	94.9	96.1	40.4	62.3	10.8	67.5	57.8
Group practice	483	99.6	98.2	95.0	93.8	44.6	61.6	10.4	64.5	58.5
Nongroup arrangement with other physician(s)	352	99.4	99.4	95.6	97.2	39.1	62.8	10.2	69.2	52.7
Salaried:										
Hospital[2]	152	98.5	94.1	78.9	89.8	27.4	47.3	12.4	42.1	61.8
Nonhospital[3]	259	98.8	94.8	81.8	88.0	32.5	49.5	8.2	44.6	61.1
Number of patient visits per week:										
Under 40 visits	978	97.6	94.4	56.8	76.8	16.0	31.4	6.9	26.9	45.1
40-79 visits	1,983	99.5	97.4	83.5	92.6	27.2	47.2	9.0	48.9	48.3
80-119 visits	2,211	99.7	98.6	94.6	97.1	34.3	58.0	8.7	62.6	45.7
120-159 visits	2,041	99.7	98.8	98.1	97.1	38.6	63.6	10.0	70.1	53.0
160-199 visits	512	100.0	99.1	99.3	96.9	39.8	64.8	9.9	67.3	53.2
200 visits and over	603	100.0	98.7	97.5	97.9	43.7	68.9	15.5	73.2	63.8

[1] Includes hours devoted to teaching, research, and administration.

[2] Includes nongovernment hospitals and city, county, State, and Federal government hospitals.

[3] Includes medical schools; city, county, State, and Federal agencies; and other (all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, and so forth).

Table 14. Number of clinical ophthalmologists, by services rendered and selected characteristics: United States, 1968

Characteristic	Total clinical ophthal-mologists	Service rendered: Diagnostic examination (including tonometry)	Medical treatment	Eye surgery	Visual field examination and medical interpretation	Orthoptic training	Prescribing low-vision aids	Aniseikonic testing	Fitting contact lenses	Tonography
Number of patients seen weekly:										
Under 40 patients	1,303	1,275	1,238	795	1,039	235	446	95	386	614
40-79 patients	2,356	2,347	2,300	2,070	2,215	684	1,176	222	1,267	1,092
80-119 patients	2,528	2,524	2,500	2,433	2,462	920	1,544	210	1,663	1,238
120-159 patients	1,454	1,450	1,436	1,427	1,413	580	933	156	1,035	769
160-199 patients	386	386	385	383	377	161	264	40	280	223
200 patients and over	300	300	296	292	296	130	208	62	204	211
Number of office locations:										
0-1 office[1]	7,232	7,190	7,082	6,359	6,766	2,301	3,946	647	4,133	3,581
2 offices	891	888	873	850	841	331	509	108	573	467
3 offices	132	132	130	124	128	49	75	16	83	56
4 offices or more	72	71	70	66	67	29	42	15	46	44
Number of services rendered:										
1-2 services	213	177	129	25	19	-	-	-	1	7
3-4 services	1,439	1,432	1,379	952	1,177	19	81	1	95	235
5-6 services	3,550	3,547	3,530	3,325	3,486	479	1,596	71	1,906	1,521
7-8 services	2,643	2,643	2,633	2,615	2,637	1,740	2,413	345	2,355	1,910
9-10 services	483	483	483	483	483	473	481	368	477	475
Are supplementary personnel used to assist in clinical practice?										
Yes	7,882	7,847	7,729	7,130	7,451	2,643	4,438	757	4,733	3,950
No	445	435	425	269	351	67	134	29	100	198
Primary clinical activity:										
General ophthalmology (medical and surgical)	7,956	7,931	7,820	7,114	7,512	2,608	4,426	766	4,693	3,980
Corneal surgery	32	26	27	31	17	5	13	2	15	10
Retinal surgery	95	91	85	95	81	15	35	6	31	48
Pediatric ophthalmology	69	69	65	65	61	55	41	3	43	28
Ophthalmic pathology	14	12	12	9	11	4	7	1	3	8
Neuro-ophthalmology	22	22	20	16	21	3	7	2	8	9
Other	138	131	125	70	100	20	42	6	41	65

[1]Only 13 of these respondents reported no office location.

Table 15. Number and percent of clinical ophthalmologists, by services rendered and selected characteristics: United States, 1968

Characteristic	Total clinical ophthal-mologists	Service rendered: Diagnostic examination (including tonometry)	Medical treatment	Eye surgery	Visual field examination and medical interpretation	Orthoptic training	Prescribing low-vision aids	Aniseikonic testing	Fitting contact lenses	Tonography
		Percent								
Number of patients seen weekly:										
Under 40 patients	1,303	97.9	95.0	61.0	79.8	18.0	34.2	7.3	29.6	47.2
40-79 patients	2,356	99.6	97.6	87.9	94.0	29.0	49.9	9.4	53.8	46.4
80-119 patients	2,528	99.8	98.9	96.2	97.4	36.4	61.1	8.3	65.8	49.0
120-159 patients	1,454	99.7	98.7	98.1	97.2	39.9	64.2	10.7	71.1	52.9
160-199 patients	386	100.0	99.7	99.2	97.7	41.7	68.3	10.4	72.5	57.8
200 patients and over	300	100.0	98.5	97.1	98.5	43.2	69.3	20.6	67.8	70.3
Number of office locations:										
0-1 office[1]	7,232	99.4	97.9	87.9	93.6	31.8	54.6	8.9	57.1	49.5
2 offices	891	99.8	98.0	95.5	94.5	37.1	57.1	12.2	64.3	52.4
3 offices	132	100.0	98.3	94.1	96.6	37.2	56.7	11.8	62.5	42.5
4 offices or more	72	98.6	96.9	90.7	92.3	39.9	58.2	21.2	63.1	60.2
Number of services rendered:										
1-2 services	213	83.3	60.7	11.6	8.9	-	-	-	0.6	3.2
3-4 services	1,439	99.5	95.9	66.2	81.8	1.3	5.6	0.1	6.6	16.4
5-6 services	3,550	99.9	99.4	93.7	98.2	13.5	44.9	2.0	53.7	42.8
7-8 services	2,643	100.0	99.6	99.0	99.8	65.8	91.3	13.1	89.1	72.3
9-10 services	483	100.0	100.0	100.0	100.0	97.9	99.8	76.3	98.8	98.4
Are supplementary personnel used to assist in clinical practice?										
Yes	7,882	99.5	98.1	90.5	94.5	33.5	56.3	9.6	60.1	50.1
No	445	97.8	95.5	60.5	78.9	15.0	30.0	6.5	22.5	44.5
Primary clinical activity:										
General ophthalmology (medical and surgical)	7,956	99.7	98.3	89.4	94.4	32.8	55.6	9.6	59.0	50.0
Corneal surgery	32	81.7	85.5	96.5	53.0	14.3	42.5	7.2	46.2	32.3
Retinal surgery	95	95.2	89.4	100.0	84.7	15.3	38.5	5.9	32.6	50.7
Pediatric ophthalmology	69	100.0	93.6	93.6	87.1	79.3	59.4	4.7	61.5	39.8
Ophthalmic pathology	14	84.6	84.3	62.1	77.3	30.5	46.0	7.5	22.5	53.2
Neuro-ophthalmology	22	100.0	89.7	69.8	95.0	15.4	30.1	10.5	34.9	39.5
Other	138	94.5	90.4	50.9	72.1	14.5	30.5	4.0	29.9	47.0

[1]Only 13 of these respondents reported no office location.

APPENDIX I
TECHNICAL NOTES AND QUALIFYING COMMENTS

Data Collection

Most of the statistical information used in this report is the product of a survey of ophthalmologists conducted by the National Center for Health Statistics between May and December 1968. This was a part of a general survey of eye-care manpower that sought information about three groups: ophthalmologists (both doctors of medicine and doctors of osteopathy); optometrists; and dispensing opticians.

In advance of the actual survey of the ophthalmologists, prominent ophthalmological associations received copies of the proposed questionnaires and survey plan. A number of government agencies—Federal, State, and local—were also contacted. Recommendations received from these advisory sources were used to modify the survey plan and questionnaires.

An announcement of the survey was published by the *Eye, Ear, Nose and Throat Monthly, The Ophthalmologist,* and the newsletter of the American Osteopathic Association. The American Association of Ophthalmology cooperated by sending a letter to each of its members, urging their participation.

A total of 10,302 ophthalmologists comprised the survey "universe," a figure which included both doctors of medicine (M.D.) and doctors of osteopathy (D.O.). M.D. ophthalmologists surveyed included all those who had reported to the American Medical Association that ophthalmology was their primary or secondary specialty. Of the 10,102 M.D. ophthalmologists surveyed, 9,020, or 89.3 percent, had listed ophthalmology as their primary specialty, while 1,082, or 10.7 percent, had designated it as their secondary specialty.

D.O. ophthalmologists included in the survey were all doctors of osteopathy who had reported to the American Osteopathic Association that they devoted any time whatever to ophthalmology. Of the 200 D.O. ophthalmologists surveyed, 17, or 8.5 percent, had reported that they devoted 75 percent or more of their workweek to ophthalmology. An additional 21, or 10.5 percent, reported between 50 and 75 percent, while 145, or 72.5 percent, apparently devoted less than 25 percent of their workweek to ophthalmological activities.

A pretest was conducted by the National Center for Health Statistics from May 31 to July 3, 1968. Questionnaires were mailed to two M.D. ophthalmologists in each State and the District of Columbia. Twenty-five D.O. ophthalmologists were selected at random and mailed questionnaires. A 90.5-percent response to the pretest was achieved and, based on an analysis of this pretest response, certain minor alterations were made in the M.D. questionnaire and the D.O. questionnaire.

The revised questionnaires, as they were used, are reproduced in appendix III.

In the remaining months of 1968, the main body of ophthalmologists was surveyed. The collection of data for the survey was accomplished under contract with the Bureau of the Census. This agency was responsible for mailing the questionnaires, receiving the responses, and for followup whenever incomplete or inadequate questionnaires were returned or whenever a questionnaire was not returned. Four mailings were used in an attempt to elicit a response, the first three by first-class mail, the last by certified mail. All four mailings were made in every case where a return was not received.

In addition to the mailings, telephone contacts and personal interviews were also used. They were employed in cases of nonresponse or

refusal, as well as in cases of questionnaires that had been only partially completed.

After all contact efforts, a response rate of 92.7 percent was achieved.

In addition to the information obtained directly from the survey respondents, the report also uses supplementary information supplied by the American Medical Association and the American Osteopathic Association for such characteristics as sex, age at the time of the survey, age at graduation, and certification by specialty boards.

Processing of Data

A preliminary edit was undertaken at the time of the return of the survey questionnaires. This was done to insure completeness of the responses. The information from the questionnaires was then coded, punched, and placed on computer tape.

During the cleanup and editing phases of the processing, an elaborate series of checks and cross-checks were made, chiefly to confirm accuracy of response and to correct coding and punching errors that occurred, but also to insure consistency between related items.

Table I shows the overall response to the survey. Of the total 10,302 M.D. and D.O. ophthalmologists included in the scope of the original survey, 1,245, or 12.1 percent, were eliminated in processing as out of scope for the purposes of reporting. Those out of scope included 133 respondents who were either practicing ophthalmology in foreign countries or not engaged at all in ophthalmological activities; 233 uniformed ophthalmologists (in the Army, Navy, Air Force, and U.S. Public Health Service); and 879 students in ophthalmology residency programs (both civilian and military). Data reported, then, are for civilian (nonuniformed) ophthalmologists who had completed their training requirements and were formally qualified to practice. In number, this group amounted to 9,057 ophthalmologists, or 87.9 percent of the preadjusted survey population.

A total of 8,136, or 89.8 percent of the 9,057, responded to the survey with usable questionnaires. The remainder was composed of 675 nonrespondents (i.e., no questionnaires returned, reason unspecified); 186 postmaster returns; and 60 nonrespondents, deceased; or 7.5 percent, 2.1 percent, and 0.7 percent, respectively.

Of these 8,136 usable questionnaires ("good" responses), 7,741, or 95.1 percent, specified an active status while 395 reported that they were either retired or not currently engaged in ophthalmological activities although nonretired.

Adjustments

Two types of adjustment were applied to the survey responses.

The first was an adjustment for partial nonresponse within the questionnaire; for example, leaving one item unanswered. In such cases, omitted items were randomly assigned the response obtained from respondents with similar characteristics, and the total response figure for the item was adjusted to include this "imputation." As may be seen in table II, the need for this type of adjustment was minimal; the partial nonresponse rate was less than 4 percent for all items considered in this report, except for the questions as to patient visits and patients seen per week. To the question, "In your clinical ophthalmology practice, approximately how many eye-patient visits do you have during a typical week? (Include office and hospital outpatient visits)," there was a nonresponse rate of 7.6 percent. Probably influential, here, was the need for the ophthalmologist to make a quantified estimate based on an arbitrary judgment of typicality. To the question, "Approximately how many eye patients does this represent? (Patients with multiple visits should be counted only once.)," there was a nonresponse rate of 7.8 percent. Here, not only did the above influence operate, but the respondent was asked as well to make a quantified estimate which is itself a second-order derivation from another quantified estimate. This rather difficult succession of requirements may have caused this item to exhibit a higher nonresponse rate than any other in the questionnaire.

In addition to the adjustment for item nonresponse, an adjustment was also made for total nonresponse, i.e., for nonavailability of the entire questionnaire. This "inflation" factor was established from the ratio of total ophthalmologists in a civilian, formally qualified status to the number of usable (good) responses obtained.

Table I. Number and percent distribution of survey population of ophthalmologists, by type of respondent or nonrespondent: United States, 1968

Type of respondent or nonrespondent	Number	Percent distribution
Total questionnaires mailed	10,302	100.0
Out-of-scopes:		
Not practicing in the United States or not engaged at all in ophthalmological activities	133	1.3
Uniformed ophthalmologists	233	2.3
Student residents	879	8.5
Civilian, formally qualified ophthalmologists	9,057	87.9
Civilian, formally qualified ophthalmologists	9,057	100.0
Nonavailable questionnaires:		
Nonrespondents (reason unspecified)	675	7.5
Postmaster returns	186	2.1
Nonrespondents (deceased)	60	0.7
Good responses	8,136	89.8
Good responses	8,136	100.0
Professionally active ophthalmologists	7,741	95.1
Inactive ophthalmologists	395	4.9

Table II. Percent of professionally active ophthalmologists responding to selected items on survey questionnaires: United States, 1968

Questionnaire item	Percent responding
Activity status	100.0
Number of States licensed in	97.4
Principal form of employment	98.1
Weeks per year usually worked	96.6
Hours per week usually worked	96.4
Clinical and nonclinical activities	97.1
Primary clinical activity (ophthalmological specialty)	96.9
Use of supplementary personnel	97.1
Patient services rendered	97.2
Number of office locations	96.8
Patients visits per week	92.4
Number of patients seen weekly	92.2
Associates sharing supplementary personnel	98.2
Physicians sharing supplementary personnel	98.2
Ophthalmologists sharing supplementary personnel	98.2

The national inflation factor was, therefore, 9,057:8,136, or 1 + 0.113. Applied to the 7,741 professionally active, good respondents cited above, it produced a weighted, national estimate of 8,616 ophthalmologists who were professionally active, nonuniformed, and formally qualified in the United States in 1968. Table III shows the geographic distribution of this professionally active total by State, before and after applying the appropriate adjustment factor for each State.

The Clinical Subuniverse

In question 9 of the M.D. questionnaire and question 11 of the D.O. questionnaire (see appendix III), respondents were asked to indicate how they apportioned their working time per week, in terms of percent of total hours devoted to clinical and nonclinical activities. Those respondents who reported that they devoted a portion of their time—however small that portion—to clinical ophthalmological activities

Table III. Distribution of professionally active formally qualified civilian ophthalmologists, by State before and after application of adjustment ratios: United States, 1968

Area	Responding active ophthalmologists	Adjustment factor	Weighted ophthalmologists
United States	7,741	1.113	8,616
Alabama	78	1.11	87
Alaska	5	1.00	5
Arizona	75	1.06	80
Arkansas	38	1.07	41
California	972	1.11	1,079
Colorado	117	1.05	123
Connecticut	133	1.14	152
Delaware	18	1.15	21
District of Columbia	65	1.25	81
Florida	267	1.13	302
Georgia	128	1.11	142
Hawaii	27	1.11	30
Idaho	31	1.09	34
Illinois	373	1.15	429
Indiana	152	1.15	175
Iowa	86	1.19	102
Kansas	70	1.08	76
Kentucky	91	1.06	96
Louisiana	131	1.17	153
Maine	37	1.05	39
Maryland	136	1.21	165
Massachusetts	246	1.14	280
Michigan	303	1.12	339
Minnesota	137	1.08	148
Mississippi	58	1.07	62
Missouri	179	1.06	190
Montana	37	1.05	39
Nebraska	46	1.20	55
Nevada	15	1.07	16
New Hampshire	26	1.03	27
New Jersey	277	1.11	307
New Mexico	40	1.13	45
New York	908	1.12	1,017
North Carolina	158	1.10	174
North Dakota	19	1.05	20
Ohio	360	1.09	392
Oklahoma	88	1.10	97
Oregon	101	1.08	109
Pennsylvania	527	1.11	585
Rhode Island	30	1.06	32
South Carolina	64	1.13	72
South Dakota	21	1.05	22
Tennessee	119	1.10	131
Texas	362	1.12	405
Utah	45	1.04	47
Vermont	19	1.00	19
Virginia	144	1.15	166
Washington	147	1.09	160
West Virginia	58	1.11	64
Wisconsin	162	1.04	168
Wyoming	15	1.07	16

Table IV. Frequency and ratio to 100,000 general population of professionally active ophthalmologists and of clinical ophthalmologists, by geographic location: United States, each region, division, and State, 1968

Geographic location	1968 population (in thousands)[1]	Number of active ophthalmologists	Number of active ophthalmologists per 100,000 population	Number of clinical ophthalmologists	Number of clinical ophthalmologists per 100,000 population
United States	197,560	8,616	4.4	8,327	4.2
Geographic regions:					
Northeast	48,193	2,458	5.1	2,362	4.9
North Central	55,369	2,117	3.8	2,058	3.7
South	61,227	2,259	3.7	2,175	3.6
West	32,771	1,782	5.4	1,733	5.3
Geographic divisions:					
New England	11,322	548	4.8	535	4.7
Middle Atlantic	36,871	1,909	5.2	1,827	5.0
East North Central	39,403	1,504	3.8	1,468	3.7
West North Central	15,965	613	3.8	590	3.7
South Atlantic	29,381	1,186	4.0	1,134	3.9
East South Central	12,893	376	2.9	360	2.8
West South Central	18,953	696	3.7	680	3.6
Mountain	7,800	399	5.1	392	5.0
Pacific	24,972	1,383	5.5	1,341	5.4
State:					
Alabama	3,487	87	2.5	84	2.4
Alaska	242	5	2.1	5	2.1
Arizona	1,635	80	4.9	78	4.8
Arkansas	1,973	41	2.1	41	2.1
California	18,793	1,079	5.7	1,043	5.6
Colorado	2,009	123	6.1	118	5.9
Connecticut	2,947	152	5.2	150	5.1
Delaware	524	21	4.0	17	3.2
District of Columbia	786	81	10.3	75	9.5
Florida	6,114	302	4.9	292	4.8
Georgia	4,466	142	3.2	138	3.1
Hawaii	718	30	4.2	30	4.2
Idaho	705	34	4.8	34	4.8
Illinois	10,897	429	3.9	415	3.8
Indiana	5,057	175	3.5	170	3.4
Iowa	2,773	102	3.7	99	3.6
Kansas	2,258	76	3.4	72	3.2
Kentucky	3,166	96	3.0	90	2.8
Louisiana	3,664	153	4.2	149	4.1
Maine	965	39	4.0	39	4.0
Maryland	3,643	165	4.5	155	4.3
Massachusetts	5,399	280	5.2	269	5.0
Michigan	8,654	339	3.9	333	3.9
Minnesota	3,658	148	4.0	147	4.0
Mississippi	2,322	62	2.7	59	2.5
Missouri	4,567	190	4.2	176	3.9
Montana	689	39	5.7	39	5.7
Nebraska	1,438	55	3.8	54	3.8
Nevada	439	16	3.6	16	3.6
New Hampshire	700	27	3.9	27	3.9
New Jersey	6,996	307	4.4	299	4.3
New Mexico	979	45	4.6	44	4.5
New York	18,147	1,017	5.6	980	5.4
North Carolina	5,015	174	3.5	167	3.3
North Dakota	612	20	3.3	20	3.3
Ohio	10,587	392	3.7	382	3.6
Oklahoma	2,498	97	3.9	95	3.8
Oregon	2,000	109	5.5	108	5.4
Pennsylvania	11,728	585	5.0	548	4.7
Rhode Island	881	32	3.6	32	3.6
South Carolina	2,584	72	2.8	70	2.7
South Dakota	660	22	3.3	22	3.3
Tennessee	3,918	131	3.3	127	3.2
Texas	10,818	405	3.7	396	3.7
Utah	1,026	47	4.6	47	4.6
Vermont	429	19	4.4	18	4.2
Virginia	4,432	166	3.8	160	3.6
Washington	3,219	160	5.0	155	4.8
West Virginia	1,818	64	3.5	61	3.4
Wisconsin	4,208	168	4.0	168	4.0
Wyoming	319	16	5.0	16	5.0

[1] Based on census estimates for July 1, 1968.

SOURCE: U.S. Bureau of the Census. Population estimates. *Current Population Reports.* Series P-25, No. 436, Jan. 7, 1970.

are treated in this report as a "clinical subuniverse" (the clinical practitioners) of the professionally active total. In number, there are an estimated 8,327 members of this subuniverse; they comprise about 97 percent of the professionally active universe. It is these 8,327 clinical practitioners who supply the statistical base for most of the tables and textual commentary that appear in this report on characteristics of clinical practice. See table IV for the frequency and ratio to general population of these clinical ophthalmologists, according to geographic location.

APPENDIX II
DEFINITIONS OF CERTAIN TERMS USED IN THIS REPORT

Demographic Terms

Age.—Refers to the respondent's age in 1968. In all cases, it is calculated as the difference between 1968 and respondent's year of birth.

Geographic region and division.—The regions of the United States are divided as follows:

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

United States.—The 50 States and the District of Columbia.

Terms Relating to Ophthalmology

Administration.—As defined in the survey questionnaires, duties with professional associations, hospital medical staffs, and so forth. Administrative duties related to the medical care of the ophthalmologist's own patients are excluded from this kind of activity and included under specific clinical activity engaged in.

Aniseikonic testing.—Testing for aniseikonia, a condition in which the ocular image of an object as seen by one eye differs in size and shape from that seen by the other.

Associates.—As used in this report, signifies all medical professionals and other professionals in medically related fields, such as optometrists.

Clinical.—Signifies professional activity characterized by direct patient care.

Group practice.—The delivery of medical services by three or more physicians formally organized to provide medical care, consultation, diagnosis, and/or treatment through the joint use of equipment and personnel, and with the income from medical practice distributed in accordance with methods previously determined by members of the group.

Hospital employment.—Salaried employment in nongovernment hospitals and in city, county, State, and Federal hospitals.

Nonhospital employment.—Salaried employment by medical school (or parent university); city, county, State, and Federal governments (other than hospitals); and by "other" employers (all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, and so forth).

Ophthalmologist.—A physician (M.D. or D.O.) who specializes in ophthalmology, that branch of medical science dealing with the structure, functions, and diseases of the eye.

Optometrist.—A specialist in optometry, the profession of examining the eye for defects and faults of refraction and prescribing correctional lenses or exercises.

Otolaryngologist.—Used interchangeably with "otorhinolaryngologist"; signifies a medical specialist who diagnoses and treats diseases of the ear, nose, and throat.

Tonography.—The recording of changes in intraocular pressure produced by the constant application of a known weight on the globe of the eye, reflecting the facility of outflow of the aqueous humor from the anterior chamber.

Tonometry.—The measurement of tension or pressure, especially the indirect estimation of the intraocular pressure from determination of the resistance of the eyeball to indentation by an applied force.

APPENDIX III
SURVEY QUESTIONNAIRES

QUESTIONNAIRE FOR DOCTORS OF MEDICINE

PHS-T407-1
REV. 8-68

Form Approved
Budget Bureau No. 68-S68028

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
ACTING AS COLLECTING AGENT FOR THE
U.S. PUBLIC HEALTH SERVICE

CONFIDENTIAL: All information which permits the identification of the individual will be held strictly confidential, will be used solely by persons engaged in, and only for the purposes of the survey and will not be disclosed or released to other persons or for any other purpose.

SURVEY OF OPHTHALMOLOGISTS

1. Is your name correct, and is the address above your PRIMARY PLACE OF PRACTICE?

1 ☐ Yes 2 ☐ No

If no, please enter the correct information below:

Name: _____
First *Middle* *Last*

Primary place of practice: _____
Number *Street*

_____
City *State* *Zip Code*

2. Where were you born? _____
(State or foreign country)

3. In which States do you currently hold an ACTIVE LICENSE to practice medicine?

_____

_____

4. Are you CURRENTLY ACTIVE in medicine? *(Include patient care, teaching, research, and administration.)*

1 ☐ Yes, Full-time
2 ☐ Yes, Part-time

→ PROCEED TO QUESTION 5.

3 ☐ No, Not active in medicine
4 ☐ No, Retired

→ STOP! REMAINDER OF QUESTIONNAIRE DOES NOT APPLY. PLEASE RETURN QUESTIONNAIRE IN THE ENVELOPE PROVIDED.

5. Which of the following categories best describes your PRINCIPAL form of practice or employment? (Check one)

01 ☐ Solo practice
02 ☐ Partnership practice
03 ☐ Group practice
04 ☐ Arrangement with other physician(s): non-group
05 ☐ Medical school *(or parent university)*
06 ☐ Non-governmental hospital
07 ☐ City or county government hospital
08 ☐ City or county government other than hospital
09 ☐ State government hospital
10 ☐ State government other than hospital
11 ☐ Federal government hospital *(Specify agency: _____)*
12 ☐ Federal government other than hospital *(Specify agency: _____)*
13 ☐ Other – Not listed above *(all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, etc.).*

If you have checked 02, 03, or 04, what is the name of your GROUP, PARTNERSHIP or NON-GROUP ARRANGEMENT?

Name of group: _____

6. In your PRINCIPAL form of practice or employment indicated in Item 5, are you PRIMARILY: (Check one)

1 ☐ Self-employed
2 ☐ Salaried employee *(other than in training or in military service)*
3 ☐ In the military service *(other than intern or resident)*
4 ☐ Intern - Civilian
5 ☐ Intern - Military
6 ☐ Resident or fellow - Civilian
7 ☐ Resident or fellow - Military

7. How many WEEKS per year do you usually practice medicine? *(Include patient care, teaching, research, and administration. Do not count vacations as weeks worked).*

_____
(Weeks per year)

8. How many HOURS per week do you usually practice medicine? *(Include patient care, teaching, research, and administration.)*

_____
(Hours per week)

9. APPROXIMATELY what PERCENT of the total number of hours per week, indicated in Item 8, do you usually spend in each of the following activities?

a. _____ % Clinical ophthalmology
b. _____ % Clinical otorhinolaryngology
c. _____ % Other clinical medical activity
d. _____ % Teaching (Include hours spent in preparation)
e. _____ % Medical research
f. _____ % Administration, e.g., professional associations, hospital medical staffs, etc. *(Administrative duties related to the medical care of your OWN patients should be excluded in f and included in a, b, or c.)*
g. _____ % Other *(Specify: _____)*
100 % TOTAL

If 0% of your time is spent in CLINICAL OPHTHALMOLOGY (Item 9a above), STOP, and return questionnaire in the envelope provided; otherwise continue.

10. **A. In your CLINICAL OPHTHALMOLOGY practice, APPROXIMATELY how many EYE patient VISITS do you have during a typical week?** *(Include office and hospital outpatient visits)*

_____
(Approximate number of visits)

B. APPROXIMATELY how many EYE PATIENTS does this represent? *(Patients with multiple visits should be counted only once.)*

_____
(Approximate number of patients)

11. **In your CLINICAL OPHTHALMOLOGY practice, which of the services below are rendered to your patients by you or under your direction?**

(Check all that apply)

01 ☐ Diagnostic examination *(includes refractive procedures and tonometry)*
02 ☐ Medical treatment
03 ☐ Eye surgery
04 ☐ Visual field examination and medical interpretation
05 ☐ Fitting contact lenses
06 ☐ Orthoptic training *(any procedure to improve acuity or binocularity)*
07 ☐ Prescribing low vision aids *(includes optical aids greater than +4.00 addition)*
08 ☐ Aniseikonic testing
09 ☐ Tonography
10 ☐ Other *(Specify:* _____ *)*

12. **In your CLINICAL OPHTHALMOLOGY practice, which of the following categories best describes how you spend the GREATEST amount of your time?**

(Check one)

1 ☐ General ophthalmology, medical and surgical
2 ☐ Corneal surgery
3 ☐ Retinal surgery
4 ☐ Pediatric ophthalmology
5 ☐ Ophthalmic pathology
6 ☐ Neuro-ophthalmology
7 ☐ Other *(Specify:* _____ *)*

13. **What is the total number of office locations at which you currently practice CLINICAL OPHTHALMOLOGY?**

_____
(Number of locations)

14. In your PRINCIPAL FORM OF PRACTICE OR EMPLOYMENT, indicated in Item 5 above, do you have supplementary personnel to assist you?

1 ☐ Yes 2 ☐ No

Please indicate the NUMBER in each category below for ALL offices combined which are related to your principal form of practice or employment. Include hospital personnel ONLY if your principal form of practice or employment is hospital-based.

(Persons who spend less than 75% of their time in any one category below should be counted in category d, ophthalmic medical assistant-general.)

	NUMBER WHO WORK FULL-TIME (35 hours or more per week)		NUMBER WHO WORK PART-TIME (Less than 35 hours per week)	
	FOR YOU ALONE	FOR YOU AND ASSOCIATES	FOR YOU ALONE	FOR YOU AND ASSOCIATES
a. Secretaries, receptionists, and other administrative personnel				
b. Registered nurses				
c. Licensed practical nurses (or L.V.N.'s)				
d. Ophthalmic medical assistants-general				
e. Ophthalmic medical assistants-refractive				
f. Optical fitters (including opticians)				
g. Contact lens technicians				
h. Optical technicians (laboratory – ophthalmic or contact lenses)				
i. Orthoptists				
j. Other clinical assistants				
k. Optometrists (performing refractions and prescribing lenses on OWN authority)				

15A. If you have made entries under FOR YOU AND ASSOCIATES in the full-time or part-time columns in Item 14 above, how many associates, COUNTING YOURSELF, share these personnel?

_____
(Number of associates)

B. Of these associates, how many are PHYSICIANS, COUNTING YOURSELF?

_____
(Number of physicians)

C. Of these physicians, how many are OPHTHALMOLOGISTS, COUNTING YOURSELF?

_____
(Number of ophthalmologists)

COMMENTS – General comments are invited as well as comments on specific items:

PLEASE RETURN QUESTIONNAIRE IN THE STAMPED ENVELOPE PROVIDED.

QUESTIONNAIRE FOR DOCTORS OF OSTEOPATHY

PHS-T407-2
REV. 8-68

Form Approved
Budget Bureau No. 68-S68028

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
ACTING AS COLLECTING AGENT FOR THE
U.S. PUBLIC HEALTH SERVICE

CONFIDENTIAL: All information which permits the identification of the individual will be held strictly confidential, will be used solely by persons engaged in, and only for the purposes of the survey and will not be disclosed or released to other persons or for any other purpose.

SURVEY OF OPHTHALMOLOGISTS

1. **Is your name correct, and is the address above your PRIMARY PLACE OF PRACTICE?**

   1 ☐ Yes 2 ☐ No

   If no, please enter the correct information below:

   Name: _____ (First / Middle / Last)

   Primary place of practice: _____ (Number / Street)

   _____ (City / State / Zip Code)

2. **Where were you born?** _____ *(State or foreign country)*

3. **Are you a citizen of the United States?** *(Please check appropriate box)*

   1 ☐ Yes, Native Born 2 ☐ Yes, Naturalized 3 ☐ No

4. **What degrees have you earned OTHER THAN Doctor of Osteopathy or Doctor of Medicine?** *(Check all that apply)*

   1 ☐ Doctorate *(Specify Major Field:* _____ *)*
   2 ☐ Master's *(Specify Major Field:* _____ *)*
   3 ☐ Bachelor's *(Specify Major Field:* _____ *)*
   4 ☐ Other *(Specify:* _____ *)*
   5 ☐ None

5. **In which States do you currently hold an ACTIVE LICENSE to practice osteopathic medicine?**

   _____

6. **Are you CURRENTLY ACTIVE in osteopathic medicine?** *(Include patient care, teaching, research and administration).*

   1 ☐ Yes, Full-time
   2 ☐ Yes, Part-time

   → PROCEED To Question 7.

   3 ☐ No, Not active in osteopathic medicine
   4 ☐ No, Retired

   → STOP! Remainder of questionnaire does not apply. Please return questionnaire in the envelope provided.

7. Which of the following categories best describes your PRINCIPAL form of practice or employment?
(Check one)

01 ☐ Solo practice
02 ☐ Partnership practice
03 ☐ Group practice
04 ☐ Arrangement with other physician(s): non-group

If you have checked 02, 03, or 04, what is the name of your GROUP, PARTNERSHIP or NON-GROUP ARRANGEMENT?

Name of group: _____

05 ☐ Osteopathic medical school *(or parent university)*
06 ☐ Non-governmental hospital
07 ☐ City or county government hospital
08 ☐ City or county government other than hospital
09 ☐ State government hospital
10 ☐ State government other than hospital
11 ☐ Federal government hospital *(Specify agency:* _____ *)*
12 ☐ Federal government other than hospital *(Specify agency:* _____ *)*
13 ☐ Other—Not listed above *(all types of insurance carriers, pharmaceutical companies, corporations, voluntary organizations, medical societies, associations, etc.).*

8. In your PRINCIPAL form of practice or employment indicated in Item 7, are you PRIMARILY:
(Check one)

1 ☐ Self-employed
2 ☐ Salaried employee *(Other than in training or in military service)*
3 ☐ In the military service *(Other than intern or resident)*
4 ☐ Intern - Civilian
5 ☐ Intern - Military
6 ☐ Resident or fellow - Civilian
7 ☐ Resident or fellow - Military

9. How many WEEKS per year do you usually practice osteopathic medicine? *(Include patient care, teaching, research, or administration. Do not count vacations as weeks worked.)*

_____
(Weeks per year)

10. How many HOURS per week do you usually practice osteopathic medicine? *(Include patient care, teaching, research, or administration.)*

_____
(Hours per week)

11. APPROXIMATELY what PERCENT of the total number of hours per week, indicated in Item 10, do you usually spend in each of the following activities?

a. _____ % Clinical ophthalmology
b. _____ % Clinical otorhinolaryngology
c. _____ % Other clinical osteopathic medical activity
d. _____ % Teaching *(Include hours spent in preparation.)*
e. _____ % Osteopathic medical research
f. _____ % Administration, e.g., professional associations, hospital medical staffs, etc. *(Administrative duties related to the medical care of your OWN patients should be excluded in f and included in a, b, or c.)*
g. _____ % Other *(Specify* _____ *)*

100 % TOTAL

If 0% of your time is spent in CLINICAL OPHTHALMOLOGY *(Item 11a. above)* **STOP, and return questionnaire in the envelope provided; otherwise continue.**

12. **A. In your CLINICAL OPHTHALMOLOGY practice, APPROXIMATELY how many EYE patient VISITS do you have during a typical week?** *(Include office and hospital outpatient visits.)*

_____
(Approximate number of visits)

B. APPROXIMATELY how many EYE PATIENTS does this represent? *(Patients with multiple visits should be counted only once.)*

_____
(Approximate number of patients)

13. **In your CLINICAL OPHTHALMOLOGY practice, which of the services below are rendered to your patients by you or under your direction?**

(Check all that apply)

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02 ☐ Medical treatment
03 ☐ Eye surgery
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05 ☐ Fitting contact lenses
06 ☐ Orthoptic training *(Any procedure to improve acuity or binocularity)*
07 ☐ Prescribing low vision aids *(Includes optical aids greater than +4.00 addition)*
08 ☐ Aniseikonic testing
09 ☐ Tonography
10 ☐ Other *(Specify:* _____
_____ *)*

14. **In your CLINICAL OPHTHALMOLOGY practice, which of the following categories best describes how you spend the GREATEST amount of your time?**

(Check one)

1 ☐ General ophthalmology, medical and surgical
2 ☐ Corneal surgery
3 ☐ Retinal surgery
4 ☐ Pediatric ophthalmology
5 ☐ Ophthalmic pathology
6 ☐ Neuro-ophthalmology
7 ☐ Other *(Specify:* _____ *)*

15. **What is the total number of office locations at which you currently practice CLINICAL OPHTHALMOLOGY?**

_____
(Number of locations)

16. In your PRINCIPAL FORM OF PRACTICE OR EMPLOYMENT, indicated in Item 7 above, do you have supplementary personnel to assist you?

1 ☐ Yes 2 ☐ No

Please indicate the NUMBER in each category below for ALL offices combined which are related to your principal form of practice or employment. Include hospital personnel ONLY if your principal form of practice or employment is hospital-based.

(Persons who spend less than 75% of their time in any one category below should be counted in category d, ophthalmic medical assistant-general.)

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b. Registered nurses				
c. Licensed practical nurses (or L.V.N.'s)				
d. Ophthalmic medical assistants-general				
e. Ophthalmic medical assistants-refractive				
f. Optical fitters (including opticians)				
g. Contact lens technicians				
h. Optical technicians (laboratory - ophthalmic or contact lenses)				
i. Orthoptists				
j. Other clinical assistants				
k. Optometrists (performing refractions and prescribing lenses on OWN authority)				

17A. If you have made entries under FOR YOU AND ASSOCIATES in the full-time or part-time columns in Item 16 above, how many associates, COUNTING YOURSELF, share these personnel?

_____
(Number of associates)

B. Of these associates, how many are PHYSICIANS, COUNTING YOURSELF?

_____
(Number of physicians)

C. Of these physicians, how many are OPHTHALMOLOGISTS, COUNTING YOURSELF?

_____
(Number of ophthalmologists)

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