

Distribution
of
Physicians
in the
United States



REVISED

Bureau of Medical Economics, American Medical Association, Chicago

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American Medical Association

CHICAGO

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INTRODUCTION

There have been several studies of the distribution of medical facilities in the United States. Most of these have been based largely on various sized samples or on studies of selected cities, counties or states in which there has been an analysis of all the physicians in the territory studied. The present study is based on the American Medical Directory of 1931, which is issued by the American Medical Association and constitutes a "register of legally qualified physicians of the United States, Alaska, Canal Zone, Hawaii, Philippine Islands, Porto Rico, Guam, and Virgin Islands, Canada, Newfoundland and Yukon." All names contained in the Directory within the continental United States have been included in the present compilation. Each physician has been classified as "Engaged in Active Practice," "Retired" or "Otherwise Withdrawn from Active Practice."

Those physicians in "Active Practice" have been classified as to the nature of their practice whether as general practitioners, specialists, or giving special attention to a specialty.

Those classified as "Retired" are physicians who have withdrawn from active practice principally because of age or disability.

Those classified as "Not in Practice" include many in teaching or administrative positions, in research and laboratory work, employees of medical societies and other positions or work in which these physicians are not actually engaged in the direct care of patients. In the broader sense many of these may be considered as contributing to the total of medical service, in that their work is essential to medical progress and the maintenance of medical standards, but they are not giving care directly to patients.

This study represents a much wider selection than was made in the only other comparable study of the same nature, made by Lewis Mayers and Leonard V. Harrison on "The Distribution of Physicians in the United States" under the sponsorship of the General Education Board in 1924. Comparisons with this earlier study are made in the tables and text.

In this study, each physician in the 1931 American Medical Directory is also classified as to location according to geographic division, state and size of city.

For sixteen states and the District of Columbia a special classification is made of each physician as to age, according to type of practice, whether general practitioner, specialist or giving special attention to any subject, and according to the population group in which he was

located. These states were chosen with a view to giving a fair sample of the entire medical profession. It is believed that the inclusion of the remainder of the states would not cause a significant change in the conclusions that are drawn from this sample. This statement is based on the fact that, the selection being geographic and all inclusive within the limits chosen, it is not subject to the errors which seem to be inseparable from any sampling made through questionnaires.

Throughout this study, corrections have been made for some discrepancies in the 1931 Directory totals.

GROWTH OF THE PROFESSION

Changes in the rate of growth of members of a profession are not determined by the same forces that control entrance into business, industry and even most of the trades. There is far less flexibility in

TABLE 1.—*Number of Medical Schools and Graduates 1880-1935**

Year	Number of Medical Schools	Number of Graduates	Year	Number of Medical Schools	Number of Graduates
1880.....	100	3,241	1917.....	96	3,379
1890.....	123	4,454	1918.....	90	2,670
1900.....	160	5,214	1919.....	85	2,656
1901.....	160	5,444	1920.....	85	3,047
1902.....	160	5,009	1921.....	83	3,192
1903.....	160	5,698	1922.....	81	2,529
1904.....	160	5,747	1923.....	80	3,120
1905.....	158	5,600	1924.....	79	3,562
1906.....	162	5,364	1925.....	80	3,974
1907.....	159	4,980	1926.....	79	3,962
1908.....	151	4,741	1927.....	80	4,035
1909.....	140	4,515	1928.....	80	4,262
1910.....	131	4,440	1929.....	76	4,446
1911.....	122	4,273	1930.....	76	4,565
1912.....	118	4,483	1931.....	76	4,735
1913.....	107	3,981	1932.....	76	4,936
1914.....	102	3,594	1933.....	77	4,895
1915.....	96	3,536	1934.....	77	5,035
1916.....	95	3,518	1935.....	77	5,101

* Based on annual reports of the Council on Medical Education and Hospitals of the American Medical Association, 1922 and 1935.

the growth of the number of physicians than of those engaged in these other fields. The decision to start a store, factory or bank is determined largely by immediate conditions. The prospective entrepreneur considers his resources and abilities with regard to the conditions of trade at a definite time and generally in a specific locality.

The decision to enter the medical profession is usually made at least seven to ten years before actual practice can begin. Change of objective during this period means a heavy sacrifice. The motives that lead to choosing the career of a physician are seldom wholly or even predominantly economic. The prospective physician seldom knows a great deal about economic conditions in his chosen profession during his preparatory years and is still less competent to predict the probable conditions at the future date when he will be ready to practice.

Probably the most important effects on the supply of physicians have been produced by changes in the standards of medical education. The work of the American Medical Association in eliminating low

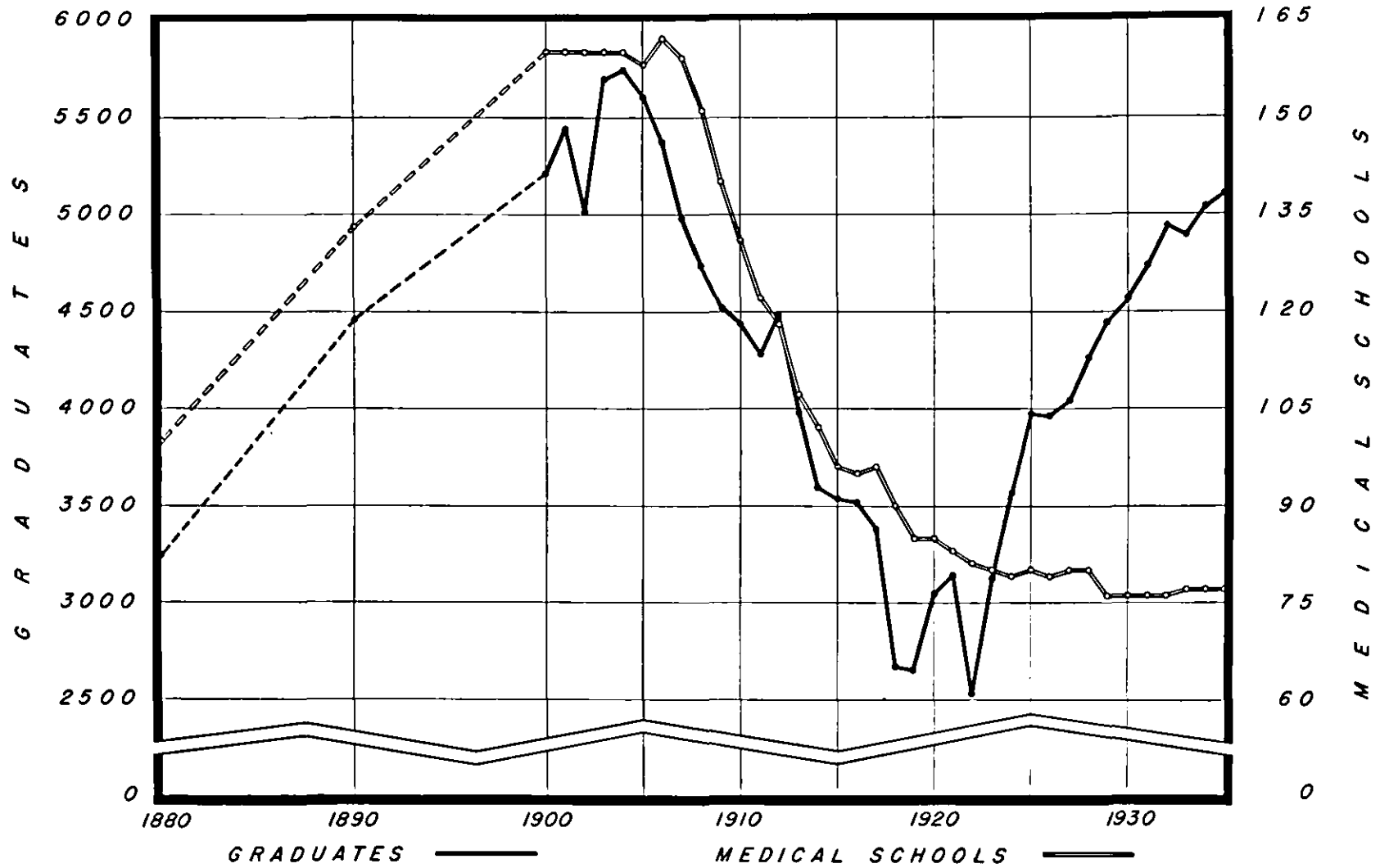


Chart 1. Number graduating in medicine each year and number of medical schools.

grade medical schools, lengthening the medical curriculum and introducing a period of intern training seems to have produced greater fluctuations in the number of graduates than any other discernible cause. Chart 1, based on table 1, shows the annual number of graduates in medicine compared with the number of medical schools. Since 1904 when inspection and classification of medical schools began, the number of medical schools has steadily decreased from 160 to 77 in 1935. At the same time the number of graduates in medicine has fallen from 5,747 to 2,529 in 1922 after which there has been a steady increase so that the number of graduates in 1935 was 5,101.

The Commission on Medical Education is the authority for the statement that, in addition to the number of graduates of approved schools, about 250 graduates of schools outside the United States and about 200 from nonapproved institutions enter the medical profession each year.

When the annual body of graduates is ready for licensure, the time for decision as to entrance into the profession has practically passed. Whatever may have been the economic conditions, some 5,000 new physicians have entered the profession in each recent year. The existence of a deficit or an excess in the demand for their services has little effect on the number of new physicians who enter the profession each year. The supply of those prepared to give medical services increases at a rate largely determined by conditions several years prior to the date when that service is ready to be delivered. So far as the "law of supply and demand," so much utilized in other fields of economics, operates in the medical field, it is with so great a "lag" between the two factors, and subject to so many "disturbing influences," as to offer but little guidance in arriving at conclusions or in effecting any immediate results.

Exit from the medical profession is also far less subject to purely economic conditions than is true of trade, commerce or industry. Old age and death are the two most important factors in eliminating physicians. The fact that the 1931 Directory listed but 2,212, or a little over 1 per cent, as "retired," and but 3,769, or about 2.4 per cent, as "not in practice" shows how reluctant the physician is to yield to old age and how few enter other lines of activity.

There appear to be no absolutely dependable data concerning the number of deaths in the medical profession annually. It seems safe to estimate, from obituaries published in the Journal of the American Medical Association each year, that the annual number of deaths among physicians is somewhat in excess of 3,000, possibly as high as 3,500. The distribution of a known number of deaths among physicians for the years 1931, 1932 and 1933 is shown in table 2. The number and percentage of deaths according to age groups are shown for each year. It must be understood that the totals do *not* represent complete mortality statistics for those years but only the known number of deaths at the time this study went to press. Chart 2 is based on table 2 and shows graphically that the highest average age attained by physicians is between 60 and 64 years.

The average age at death has ranged from 60.3 years in 1905 to 64.3 years in 1934, with a high of 64.9 years in 1929. The average time that

a physician practices medicine can be estimated at 37 years since the average age at graduation is just under 27 years, and the average age at death is about 64 years. To be more accurate it would be necessary to correct for the time not in practice because of graduate study, intern training, or retirement.

It was found from a sample of 6,328 physicians in active practice that the average length of time these physicians had been practicing medicine was approximately 20 years. The average age of physicians in active practice, as will be shown later, is 47 years, which gives approximately 17 additional years of practice before death. The "average" physician is

TABLE 2.—*Number and Percentage of Deaths Among Physicians by Age Groups for the Years 1931, 1932 and 1933*

	1931		1932		1933	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
20-24.....	3	0.1	2	0.06	..	....
25-29.....	20	0.68	27	0.86	31	0.97
30-34.....	51	1.73	44	1.4	38	1.18
35-39.....	66	2.24	55	1.75	68	2.12
40-44.....	86	2.91	114	3.63	96	2.99
45-49.....	169	5.72	178	5.51	179	5.58
50-54.....	285	9.65	248	7.89	271	8.44
55-59.....	360	12.2	420	13.37	379	11.81
60-64.....	426	14.43	478	15.21	510	15.89
65-69.....	428	14.5	454	14.45	445	13.87
70-74.....	420	14.23	410	13.33	446	13.9
75-79.....	296	10.03	343	10.92	345	10.75
80-84.....	202	6.84	206	6.56	220	7.14
85 and up.....	140	4.74	158	5.03	170	5.3
No age given.....	...	....	1	0.03	2	0.06
Total.....	2,952	100	3,142	100	3,209	100

47 years old, has practiced 20 years, and can expect to practice 17 years more for a total of 37 years of service.

It is significant that a physician selected at random will usually have 20 years of experience to offer as a guarantee of good service and sound therapeutic judgment. The medical profession, through constantly raised standards and close professional supervision, is rapidly attaining a high level of competence for each of its individual members.

During recent years there has been little criticism of the quality of medical service in the United States but there has been considerable discussion of the distribution of physicians and medical facilities. It is hoped that the data presented will assist in studies of this problem.

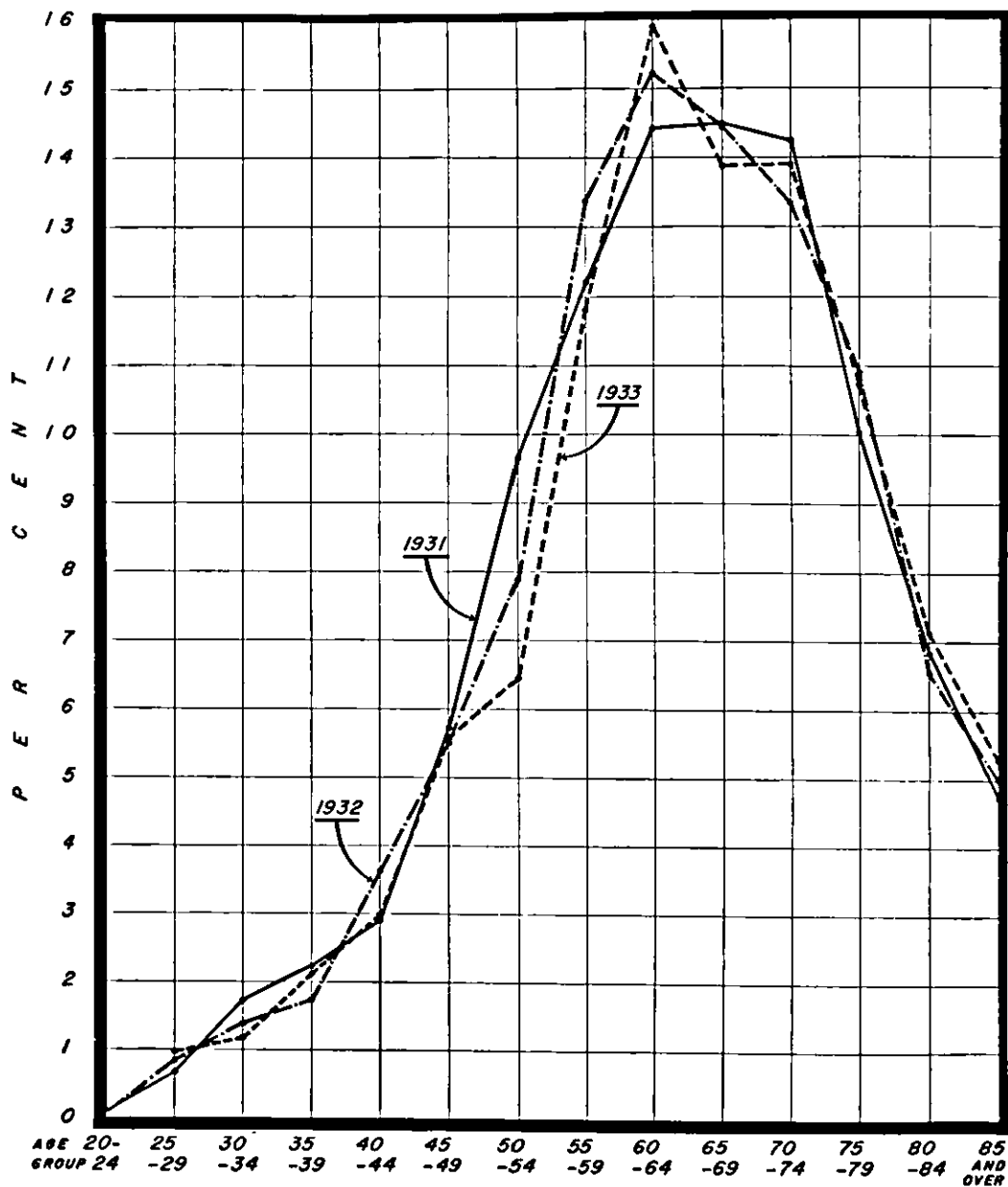


Chart 2 (based on table 2).—Percentage of deaths among physicians according to age groups for the years 1931, 1932 and 1933.

PHYSICIANS IN RELATION TO POPULATION

As a background for the present study table 3 was prepared, based on previous medical directories. It has been impossible to determine to what extent, if any, the early medical directories included names of persons other than Doctors of Medicine. It is believed, however, that if there is some error in these figures by the inclusion of some names which should have been omitted, this error may have been approximately the same for each of the first nine or ten enumerations. If there is any secular trend (chart 3 shows graphically the trend of the figures in table 3) it would seem to indicate that the number of physicians in

TABLE 3.—*Number of Physicians in the United States and Relation to Population Based on Medical Directories*

Directory	Population*	Number of Physicians	Population per Physician
1886 Polk.....	57,937,540	87,521	662
1890 Polk.....	63,036,438	100,180	629
1893 Polk.....	66,970,496	103,090	650
1896 Polk.....	70,884,534	104,554	678
1898 Polk.....	73,493,926	115,524	636
1900 Polk.....	76,129,408	119,749	636
1902 Polk.....	79,365,396	123,196	644
1904 Polk.....	82,601,384	128,950	641
1906 Polk.....	85,837,372	134,688	637
1909 A. M. A.....	90,691,354	133,487	679
1912 A. M. A.....	95,097,298	137,199	693
1914 A. M. A.....	97,927,516	142,332	688
1916 A. M. A.....	100,757,735	145,241	694
1918 A. M. A.....	103,587,955	146,174	709
1921 A. M. A.....	108,207,853	145,404	744
1923 A. M. A.....	111,537,497	145,966	764
1925 A. M. A.....	114,867,141	147,010	781
1927 A. M. A.....	118,196,785	149,521	791
1929 A. M. A.....	121,526,429	152,503	797
1931 A. M. A.....	124,070,000	156,339	794
1934 A. M. A.....	126,425,000	161,359	784

* Annual Midyear Estimates for Continental United States. U. S. Dept. of Commerce, Statistical Abstract of the United States, 1934. p. 10.

relation to population, when the term of forty-eight years is considered, is decreasing. This tendency is substantiated by chart 4 (on a semi-logarithmic scale). The steepness of the population curve as compared with the physician curve indicates that the rate of increase of physicians is less than the rate of increase of population. Between 1886-1934 the population has increased 118.2 per cent whereas the number of physicians has increased 84.3 per cent. The number of persons per physician in 1890, the lowest point in the period studied, was 629. At the highest point in the period studied, 1929, there were 797 persons per physician. Since 1929 there has been a gradual decrease in population per physician. A similar decreasing cycle occurred in the period 1902 to 1906.

The entire period, which includes all the years for which there are approximately accurate statistics, is still too short to permit of any final

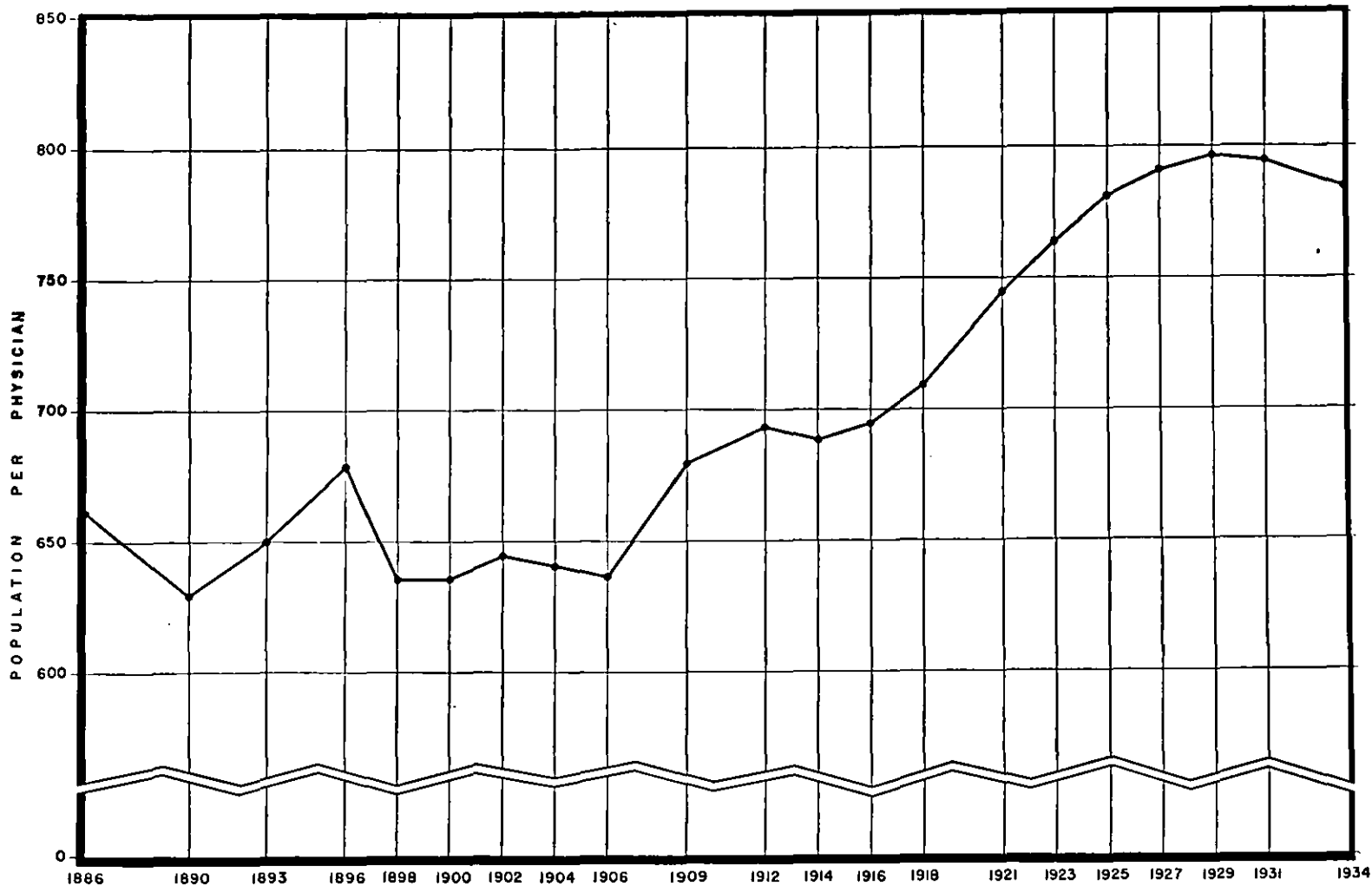


Chart 3 (based on table 3).—Population per physician. Based on medical directory enumerations: 1886-1906, Polk's Directory; 1909-1934, American Medical Directory. Population estimates by Bureau of the Census.

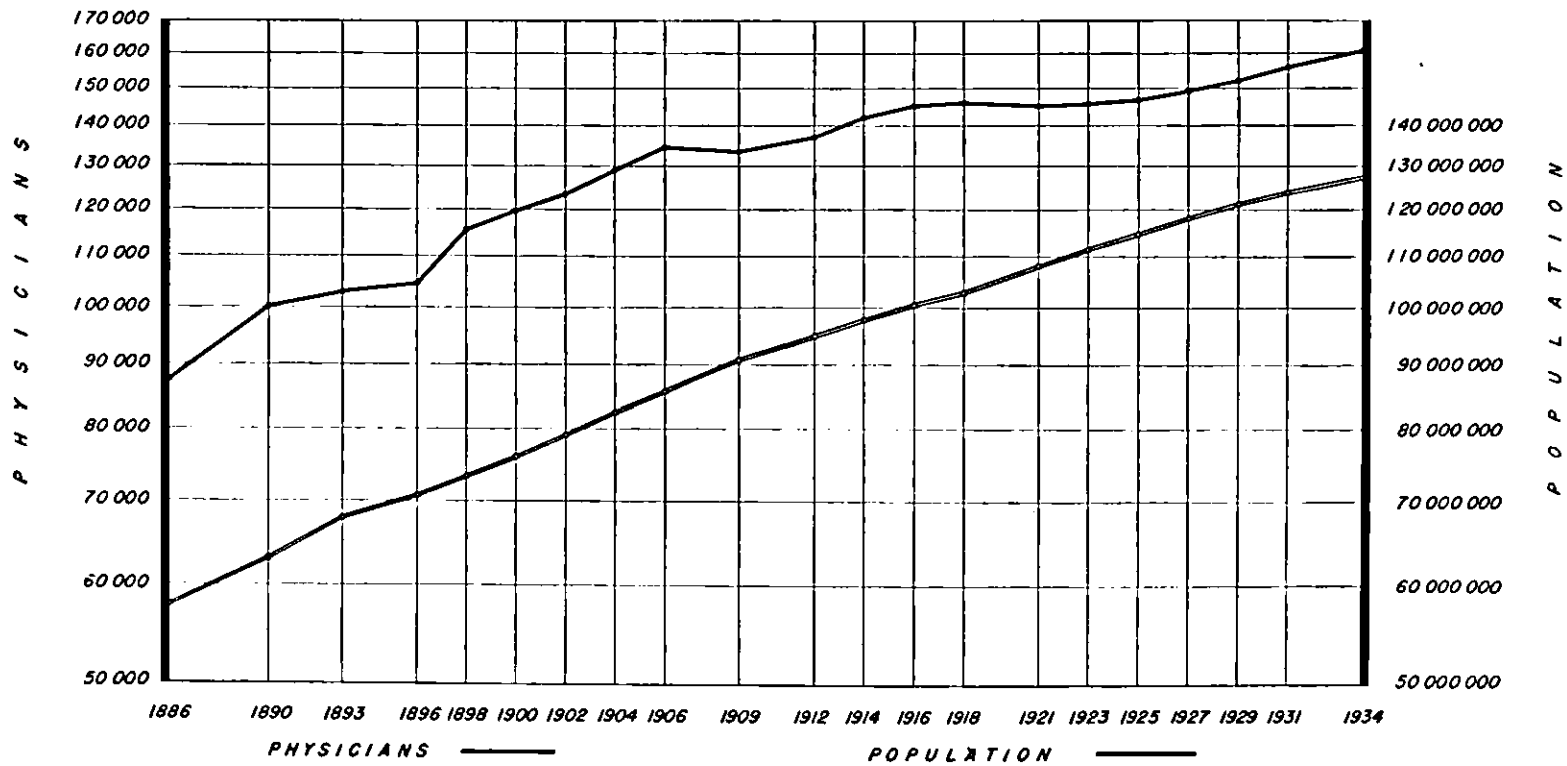


Chart 4 (based on table 31).—The increase in the number of physicians and population of the United States.

conclusions. It is difficult to tell whether at present there is a movement toward a larger number of persons per physician or in the reverse direction.¹ This cyclic movement is even more evident from an examination of table 4, which shows the increase or decrease in the number of names in the directory at different periods. This table shows periods of rapid increase in 1886-1890, 1896-1898, 1902-1906 and 1912-1914, with conspicuous decrease in the number of physicians in most of the intervening periods. One of the most probable causes of this decrease in the years from 1914 to 1925 was the elimination of many low grade medical schools through the activities of the American Medical Association in forcing higher standards of medical education.

TABLE 4.—*Periodic Increase in Number of Physicians*

Year	Number of Physicians	Year	Number of Physicians	Period Increase	Average Annual Increase
1886	87,521	1890	100,180	12,659	3,165
1890	100,180	1893	103,090	2,910	970
1893	103,090	1896	104,554	1,464	488
1896	104,554	1898	115,524	10,970	5,485
1898	115,524	1900	119,749	4,225	2,113
1900	119,749	1902	123,196	3,447	1,724
1902	123,196	1904	128,950	5,754	2,877
1904	128,950	1906	134,688	5,738	2,869
1906	134,688	1909	133,487	1,201*	601*
1909	133,487	1912	137,109	3,712	1,856
1912	137,109	1914	142,332	5,133	2,567
1914	142,332	1916	145,241	2,909	1,455
1916	145,241	1918	146,174	933	467
1918	146,174	1921	145,404	770*	385*
1921	145,404	1923	145,966	562	281
1923	145,966	1925	147,010	1,044	522
1925	147,010	1927	149,521	2,511	1,256
1927	149,521	1929	152,503	2,982	1,491
1929	152,503	1931	156,339	3,836	1,918
1931	156,339	1934	161,350	5,020	1,673

* Decrease.

1886-1906 inclusive, Polk Directory.

1909-1934 inclusive, A. M. A. Directory.

The period 1906-1909 marks a change from the Polk listings to the American Medical Directory. The decrease of 1,201 physicians in this period may be accounted for by the difference in methods of enumeration used in compiling the two directories.

The periodic changes in the enumerations of physicians in the United States are reflected with remarkable similarity and uniformity in the several states. If the movement in each of the states should be graphed on chart 3, the resulting lines would closely correspond to that for the entire United States. These figures by states, including physicians who were retired and not in practice, arranged according to the census grouping of geographic divisions, are given in tables 5 to 13. No

1. See Final Report of the Commission on Medical Education, chapter III, on the Supply and Distribution of Physicians, for arguments to indicate that an oversupply of physicians is being faced.

TABLE 5.—Population per Physician in New England States for Certain Years Since 1886 *

Year	Maine		New Hampshire		Vermont		Massachusetts		Rhode Island		Connecticut	
	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.
1886 Polk.....	879	738	610	569	659	504	2,845	627	396	698	952	654
1890.....	1,172	564	668	547	658	505	3,723	601	496	697	1,149	649
1893.....	1,083	610	634	594	619	537	3,739	599	478	723	1,133	659
1896.....	1,164	568	669	563	626	531	4,032	555	543	646	1,139	655
1898.....	1,129	586	724	520	693	480	4,833	463	608	568	1,282	582
1900.....	1,248	556	730	564	732	469	5,003	561	619	692	1,323	687
1902.....	1,304	533	732	562	735	468	4,832	581	652	657	1,365	660
1904.....	1,291	538	730	564	722	470	5,235	536	671	639	1,434	633
1906.....	1,295	536	735	560	724	475	5,434	516	715	599	1,494	608
1909 A. M. A....	1,193	580	679	606	663	518	5,577	503	720	595	1,424	638
1912.....	1,176	631	704	612	670	524	5,648	506	751	723	1,504	713
1914.....	1,200	619	705	611	685	520	5,798	581	761	713	1,630	684
1916.....	1,205	616	690	624	668	533	5,860	574	772	703	1,678	664
1918.....	1,179	630	666	647	653	545	5,926	568	762	722	1,701	655
1921.....	1,105	695	641	691	594	593	5,959	640	778	777	1,729	799
1923.....	1,067	720	615	720	556	634	5,977	645	754	802	1,727	799
1925.....	1,037	741	601	737	537	656	6,187	623	771	784	1,884	733
1927.....	1,029	746	584	759	529	666	6,242	617	779	776	1,966	702
1929.....	1,013	758	575	771	497	709	6,375	604	799	750	2,011	687
1931.....	989	806	567	821	499	721	6,595	644	844	815	2,165	742

* Population per physician based on estimates of population except for census years.

TABLE 6.—Population per Physician in Middle Atlantic States for Certain Years Since 1886

Year	New York		New Jersey		Pennsylvania	
	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.
1886 Polk.....	9,272	548	1,595	709	7,042	608
1890.....	10,120	593	1,797	804	7,696	633
1893.....	10,667	563	1,842	784	8,248	638
1896.....	11,132	539	1,844	784	8,439	623
1898.....	11,912	504	2,051	765	9,009	584
1900.....	12,045	603	2,201	856	9,526	642
1902.....	12,279	502	2,281	826	9,684	651
1904.....	13,638	533	2,360	798	10,670	627
1906.....	14,233	511	2,634	715	10,954	575
1909 A. M. A....	14,117	515	2,455	767	11,056	570
1912.....	14,815	615	2,884	860	11,345	676
1914.....	15,301	596	3,012	842	11,611	690
1916.....	15,670	582	3,239	783	11,592	666
1918.....	15,877	574	3,133	805	11,405	667
1921.....	16,284	638	3,260	968	11,348	768
1923.....	16,857	616	3,362	939	11,241	770
1925.....	17,671	588	3,567	885	11,140	783
1927.....	18,634	557	3,755	840	11,405	765
1929.....	19,817	524	4,045	780	11,795	739
1931.....	21,003	599	4,357	928	12,051	790

TABLE 7.—Population per Physician in East North Central States for Certain Years Since 1886

Year	Ohio		Indiana		Illinois		Michigan		Wisconsin	
	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.
1886 Polk.....	6,393	500	4,993	396	5,899	522	2,924	560	1,549	849
1890.....	6,504	565	4,657	471	7,210	531	3,558	589	1,615	1,049
1893.....	6,604	551	4,804	456	7,257	527	3,627	577	1,763	960
1896.....	7,575	485	4,778	459	7,331	522	3,730	561	1,974	858
1898.....	8,231	440	5,076	432	8,551	447	3,935	532	2,109	803
1900.....	8,507	489	5,096	494	8,582	562	4,244	570	2,212	935
1902.....	8,426	493	4,958	508	8,849	545	4,250	570	2,389	866
1904.....	8,275	502	5,132	491	9,172	526	4,440	544	2,607	794
1906.....	8,582	484	5,203	484	9,609	502	4,651	521	2,660	778
1909 A. M. A.....	7,838	530	5,306	474	9,744	495	4,109	589	2,518	822
1912.....	7,513	635	4,984	542	9,988	565	4,104	685	2,652	880
1914.....	7,912	603	5,001	540	10,286	548	4,180	672	2,737	853
1916.....	8,045	593	4,872	554	10,648	530	4,360	645	2,803	833
1918.....	8,089	589	4,765	567	11,095	508	4,598	611	2,817	828
1921.....	8,092	712	4,446	659	10,051	609	4,593	799	2,750	957
1923.....	8,086	712	4,353	673	10,716	605	4,653	788	2,772	950
1925.....	8,113	710	4,251	689	10,743	604	4,837	758	2,826	931
1927.....	8,287	695	4,164	704	10,893	595	5,145	713	2,896	909
1929.....	8,432	683	4,102	714	11,105	584	5,319	690	2,987	881
1931.....	8,653	768	4,073	795	11,382	670	5,589	866	3,104	947

TABLE 8.—Population per Physician in West North Central States for Certain Years Since 1886

Year	Minnesota		Iowa		Missouri		North Dakota		South Dakota		Nebraska		Kansas	
	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.
1886 Polk.....	914	854	3,035	535	4,550	477	...	...	...	...	878	515	1,964	507
1890.....	1,363	961	3,369	568	4,848	553	...	...	...	...	1,495	711	2,891	494
1893.....	1,323	990	3,757	509	5,002	538	191	1,000	383	910	1,530	695	2,613	547
1896.....	1,576	831	3,400	562	4,736	566	203	941	365	955	1,595	666	2,210	646
1898.....	1,647	796	3,620	528	5,861	457	233	820	396	880	1,423	747	2,404	594
1900.....	1,745	1,004	3,666	609	6,123	507	282	1,132	449	894	1,473	724	2,649	555
1902.....	1,862	941	4,117	542	6,314	492	294	1,086	485	823	1,532	696	2,709	543
1904.....	2,000	876	3,989	560	6,367	488	370	863	537	748	1,644	649	2,675	550
1906.....	2,141	818	3,835	582	6,439	482	446	716	536	749	1,727	617	2,732	538
1909 A. M. A.....	2,204	795	3,624	616	6,332	491	552	578	607	662	1,776	800	2,850	556
1912.....	2,292	918	3,653	609	6,037	546	594	971	651	897	1,796	664	2,688	629
1914.....	2,381	872	3,733	596	6,224	529	577	1,000	674	860	1,867	639	2,840	595
1916.....	2,447	848	3,751	593	6,399	515	586	985	676	804	1,911	624	2,683	630
1918.....	2,566	809	4,004	556	6,063	543	604	955	695	840	1,960	608	2,668	634
1921.....	2,628	908	3,536	680	5,921	575	554	1,168	658	967	1,965	660	2,550	694
1923.....	2,774	861	3,490	689	5,827	584	517	1,251	630	1,010	1,913	678	2,492	710
1925.....	2,823	846	3,378	712	5,806	586	485	1,334	604	1,054	1,869	694	2,364	748
1927.....	2,982	801	3,302	728	5,713	596	497	1,302	603	1,056	1,846	702	2,296	771
1929.....	3,084	774	3,154	762	5,650	602	501	1,291	588	1,083	1,800	720	2,214	799
1931.....	3,075	834	3,125	791	5,640	644	515	1,322	585	1,184	1,785	772	2,168	868

TABLE 9.—Population per Physician in South Atlantic States for Certain Years Since 1886

Year	Delaware		Maryland		District of Columbia		Virginia		West Virginia		North Carolina		South Carolina		Georgia		Florida	
	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.
1886 Polk.....	217	676	1,390	673	423	420	1,898	797	939	659	1,360	1,029	919	1,083	1,995	773	374	721
1890.....	244	691	1,553	671	627	367	2,316	715	850	897	1,294	1,250	1,017	1,132	2,345	784	620	631
1893.....	252	669	1,709	610	714	323	1,932	857	1,073	711	1,432	1,130	1,002	1,054	2,293	801	729	537
1896.....	239	705	2,003	520	857	269	1,978	837	1,236	617	1,358	1,191	1,060	1,086	2,021	909	704	512
1898.....	264	638	2,019	516	1,139	202	2,187	757	1,311	582	1,528	1,059	1,111	1,036	2,556	710	703	557
1900.....	266	604	2,104	565	1,000	279	2,201	842	1,438	667	1,592	1,190	1,194	1,123	2,890	767	704	751
1902.....	271	682	2,152	552	987	282	2,215	837	1,445	664	1,556	1,217	1,198	1,119	2,861	775	695	760
1904.....	259	713	2,162	550	1,076	239	2,301	806	1,501	639	1,801	1,052	1,271	1,055	2,840	780	716	738
1906.....	267	692	2,258	526	1,086	257	2,293	809	1,845	520	1,812	1,045	1,255	1,068	2,855	776	786	672
1909 A. M. A.	220	840	2,012	500	1,231	226	2,215	837	1,608	596	1,761	1,075	1,141	1,175	2,887	768	786	672
1912.....	246	822	1,972	657	1,350	245	2,350	874	1,639	745	1,849	1,193	1,275	1,189	3,022	863	974	773
1914.....	263	769	2,232	580	1,421	233	2,420	852	1,678	728	1,987	1,110	1,362	1,113	3,255	802	1,177	659
1916.....	261	775	2,292	565	1,482	223	2,547	809	1,729	706	2,102	1,050	1,399	1,083	3,421	763	1,321	570
1918.....	264	766	2,268	571	1,237	268	2,552	808	1,759	694	2,257	978	1,433	1,058	3,442	758	1,296	581
1921.....	262	851	2,364	613	1,689	259	2,545	907	1,717	852	2,236	1,145	1,452	1,160	3,406	850	1,281	756
1923.....	265	842	2,349	617	1,924	227	2,563	923	1,751	836	2,226	1,150	1,368	1,231	3,274	884	1,348	718
1925.....	256	871	2,313	627	1,813	241	2,534	911	1,753	845	2,281	1,122	1,317	1,278	3,122	928	1,452	667
1927.....	251	888	2,387	607	1,848	237	2,506	921	1,747	838	2,323	1,099	1,309	1,286	2,935	967	1,787	542
1929.....	261	854	2,419	599	1,956	224	2,516	918	1,765	829	2,355	1,087	1,303	1,292	2,917	973	1,770	547
1931.....	278	857	2,480	658	1,827	266	2,584	937	1,782	970	2,372	1,337	1,292	1,346	2,588	1,007	1,762	833

TABLE 10.—*Population per Physician in East South Central States for Certain Years Since 1886*

Year	Kentucky		Tennessee		Alabama		Mississippi	
	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.
1886 Polk.....	2,985	552	2,688	574	1,552	813	1,682	673
1890.....	3,076	604	2,571	687	2,397	631	1,006	803
1893.....	3,246	573	3,154	560	2,281	663	1,465	880
1896.....	3,104	599	3,079	574	1,609	941	1,367	943
1898.....	3,338	557	3,620	488	2,033	744	1,550	832
1900.....	3,436	625	3,635	556	1,966	930	1,510	1,027
1902.....	3,507	612	3,688	548	2,190	835	1,555	998
1904.....	3,536	607	3,692	547	2,206	829	1,696	915
1906.....	3,628	592	3,802	531	2,261	809	1,749	887
1909 A. M. A.....	3,708	579	3,303	612	2,287	800	2,054	755
1912.....	3,601	636	3,338	655	2,418	884	2,009	895
1914.....	3,621	632	3,389	645	2,518	849	2,047	878
1916.....	3,584	639	3,457	632	2,569	832	2,048	877
1918.....	3,483	637	3,481	623	2,530	845	1,975	910
1921.....	3,316	729	3,328	703	2,405	976	1,761	1,017
1923.....	3,155	766	3,228	724	2,313	1,015	1,792	999
1925.....	3,041	795	3,128	747	2,234	1,028	1,702	1,052
1927.....	2,971	813	3,016	775	2,254	1,042	1,680	1,066
1929.....	2,904	832	2,997	780	2,257	1,040	1,633	1,097
1931.....	2,867	912	2,962	883	2,207	1,199	1,567	1,283

TABLE 11.—*Population per Physician in West South Central States for Certain Years Since 1886*

Year	Arkansas		Louisiana		Oklahoma		Texas	
	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.
1886 Polk.....	1,892	424	1,033	910	...	...	3,003	530
1890.....	1,868	604	1,160	964	...	...	3,829	534
1893.....	2,177	518	1,185	944	233	337	4,149	539
1896.....	1,841	613	1,460	766	326	241	4,617	484
1898.....	2,395	471	1,390	805	450	174	4,828	463
1900.....	2,402	546	1,403	985	563	708	4,979	612
1902.....	2,573	510	1,469	941	819	486	5,241	582
1904.....	2,685	488	1,529	904	1,067	373	5,468	558
1906.....	2,780	472	1,664	830	1,003	397	5,694	535
1909 A. M. A.....	2,535	517	1,798	768	2,703	292	5,789	527
1912.....	2,596	606	1,930	858	2,620	633	5,888	662
1914.....	2,652	694	2,030	816	2,612	634	6,024	647
1916.....	2,637	597	2,060	804	2,634	629	6,240	624
1918.....	2,587	609	2,060	804	2,672	620	6,246	624
1921.....	2,441	718	2,001	899	2,622	774	6,205	752
1923.....	2,303	761	2,058	874	2,800	780	6,094	765
1925.....	2,212	792	1,991	903	2,524	804	6,063	769
1927.....	2,103	833	2,039	882	2,458	825	6,123	762
1929.....	2,034	861	2,047	879	2,435	833	6,204	752
1931.....	1,977	938	2,076	1,012	2,484	965	6,475	900

TABLE 12.—Population per Physican in Mountain States for Certain Years Since 1886

Year	Montana		Idaho		Wyoming		Colorado		New Mexico		Arizona		Utah		Nevada	
	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.
1886 Polk.....	77	509	51	640	30	693	570	341	89	1,495	71	570	139	1,036	134	465
1890.....	175	817	103	860	47	1,331	1,818	227	106	1,512	64	1,379	155	1,360	54	877
1893.....	225	635	135	656	66	948	973	425	125	1,282	86	1,026	293	710	50	947
1896.....	247	579	109	812	60	1,043	918	450	97	1,652	95	929	254	830	48	987
1898.....	288	496	173	512	87	719	1,097	377	139	1,233	143	617	265	795	53	893
1900.....	311	782	216	749	96	964	1,195	452	140	1,395	163	754	279	992	60	706
1902.....	322	756	216	749	128	723	1,265	427	165	1,184	177	695	297	932	69	614
1904.....	373	652	238	680	142	652	1,543	350	229	853	235	523	324	854	89	476
1906.....	380	640	284	570	147	629	1,670	323	281	695	239	514	351	788	131	323
1909 A. M. A.	417	584	343	472	202	458	1,690	319	367	532	246	500	359	771	177	230
1912.....	512	734	420	775	235	621	1,772	451	430	761	247	827	427	874	144	569
1914.....	578	651	446	730	237	616	1,782	448	447	732	291	792	446	837	155	528
1916.....	636	591	439	742	251	582	1,733	461	430	761	307	666	465	803	154	532
1918.....	661	569	458	711	254	575	1,713	466	456	718	333	614	483	765	159	515
1921.....	610	900	478	903	267	728	1,817	517	428	842	380	879	496	906	147	527
1923.....	568	966	452	955	263	739	1,882	499	399	903	372	898	497	904	140	553
1925.....	525	1,046	416	1,038	255	782	1,837	512	365	987	378	884	505	890	129	600
1927.....	507	1,083	401	1,077	238	817	1,805	521	357	1,009	393	850	516	871	129	600
1929.....	501	1,096	393	1,099	232	838	1,802	521	367	982	411	813	507	886	130	595
1931.....	484	1,111	383	1,162	234	964	1,898	546	374	1,132	494	882	489	1,039	131	695

responsibility is assumed for the accuracy of the figures given in these tables for the first few directory years. The number of physicians and the population per physician in several states show some discrepancies which cannot be reconciled by any available data.

In these tables the number of physicians listed by states in the directories prior to 1931 includes those who were retired and not in practice. To make the population per physician for 1931 comparable

TABLE 13.—*Population per Physician in Pacific States for Certain Years Since 1886*

Year	Washington		Oregon		California	
	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.	Phys.	Pop. per Phys.
1886 Polk.....	152	494	495	353	2,148	403
1890.....	562	630	625	508	3,032	400
1893.....	739	483	697	456	2,907	417
1896.....	650	550	653	487	3,152	385
1898.....	461	775	635	500	3,535	343
1900.....	680	762	648	638	3,566	416
1902.....	770	673	635	651	3,869	384
1904.....	1,012	512	726	570	3,908	380
1906.....	1,158	447	807	512	4,369	340
1909 A. M. A.....	1,404	360	782	529	4,313	344
1912.....	1,630	701	1,041	646	4,767	499
1914.....	1,644	695	1,150	585	5,353	444
1916.....	1,695	674	1,187	567	5,687	418
1918.....	1,698	673	1,157	581	5,929	401
1921.....	1,797	755	1,145	684	6,766	506
1923.....	1,756	773	1,158	677	7,549	454
1925.....	1,781	762	1,176	666	8,363	410
1927.....	1,807	751	1,225	640	8,854	387
1929.....	1,838	738	1,265	619	9,421	364
1931.....	1,920	814	1,275	748	10,109	562

with previous years, the retired and not in practice figures have been included; therefore the totals in these tables for 1931 do not agree with the totals in other tables in this study in which the retired and not in practice have been deducted.

There are important variations between the states in the number of persons per physician. But these differences have remained about the same for forty-five years. The relative changes within each state have been largely parallel.

DISTRIBUTION OF PHYSICIANS ACCORDING TO GEOGRAPHIC DIVISIONS
AND POPULATION GROUPS

In the American Medical Directory all Members and Fellows of the American Medical Association and members of special societies are classified according to type of practice—whether in general practice or devoting special attention to a subject, or restricting their practice to

TABLE 14.—*Distribution of All Physicians by States According to General Practice, Specialties, Special Attention, Retired and Not in Practice*

	General Practice	Specialists	Special Attention	Total In Active Practice	Retired	Not In Practice	Total
Alabama.....	1,600	275	260	2,144	25	39	2,208
Arizona.....	272	89	98	459	11	24	494
Arkansas.....	1,487	167	250	1,904	26	47	1,977
California.....	6,030	1,815	1,302	9,147	339	603	10,089
Colorado.....	1,114	341	321	1,776	47	74	1,897
Connecticut.....	1,306	412	308	2,026	37	68	2,131
Delaware.....	192	37	35	264	4	9	277
District of Columbia.....	1,210	346	171	1,727	28	72	1,827
Florida.....	999	275	281	1,555	103	105	1,763
Georgia.....	2,061	392	337	2,790	37	58	2,885
Idaho.....	278	20	63	361	11	11	383
Illinois.....	7,230	1,718	2,068	11,016	88	260	11,364
Indiana.....	2,682	562	663	3,907	47	119	4,073
Iowa.....	2,016	399	603	3,018	33	74	3,125
Kansas.....	1,494	260	411	2,075	23	70	2,168
Kentucky.....	2,086	299	394	2,779	31	57	2,867
Louisiana.....	1,429	325	267	2,021	23	32	2,076
Maine.....	635	141	161	937	22	30	989
Maryland.....	1,710	456	206	2,372	26	82	2,480
Massachusetts.....	4,169	1,270	895	6,334	99	101	6,534
Michigan.....	3,588	887	949	5,424	63	103	5,590
Minnesota.....	1,666	624	507	2,997	28	50	3,075
Mississippi.....	1,186	129	182	1,497	22	50	1,569
Missouri.....	3,826	875	747	5,448	69	123	5,640
Montana.....	327	55	91	473	5	5	483
Nebraska.....	1,157	271	298	1,726	27	32	1,785
Nevada.....	88	17	22	127	2	2	131
New Hampshire.....	367	58	103	528	14	25	567
New Jersey.....	2,830	564	789	4,183	62	113	4,358
New Mexico.....	243	42	73	358	5	11	374
New York.....	13,594	3,958	2,950	20,502	171	309	20,982
North Carolina.....	1,580	430	301	2,311	28	32	2,371
North Dakota.....	334	69	105	508	1	4	513
Ohio.....	5,668	1,444	1,266	8,378	129	149	8,656
Oklahoma.....	1,661	340	404	2,405	33	46	2,484
Oregon.....	800	218	178	1,196	32	47	1,275
Pennsylvania.....	7,831	1,967	1,894	11,692	119	240	12,051
Rhode Island.....	526	160	121	807	21	16	844
South Carolina.....	967	173	162	1,242	17	30	1,290
South Dakota.....	412	52	100	564	11	10	585
Tennessee.....	2,072	394	370	2,836	49	77	2,962
Texas.....	4,383	809	982	6,264	85	127	6,476
Utah.....	285	87	110	482	5	2	489
Vermont.....	341	46	82	469	8	22	499
Virginia.....	1,760	398	343	2,501	34	40	2,574
Washington.....	1,114	374	343	1,831	48	41	1,920
West Virginia.....	1,297	228	218	1,743	17	23	1,783
Wisconsin.....	2,046	447	538	3,031	43	29	3,103
Wyoming.....	152	21	50	223	4	7	234
Totals.....	102,151	24,826	23,381	150,358	2,212	3,769	156,339

one of the several specialties. It is believed that the small number of unclassified nonmembers, who are counted as general practitioners, would not materially alter the distribution according to type of practice. The Directory also classifies physicians according to status of practice—whether in active practice, retired, or not in practice. Table 14 shows the entire count of all physicians listed in the 1931 edition of the Direc-

tory. In nearly all subsequent tables the number of physicians who reported that they had retired or were not in practice at the time of the publication of the Directory are excluded.

There are 2,212 retired and 3,769 not in practice, giving a total of 5,981, which is subtracted from the grand total of 156,339 names in the Directory, giving 150,358 physicians who are engaged in practice. Only the latter number should be considered in determining the extent of medical service furnished by physicians.

There is no absolutely accurate method by which to determine the number of persons served by physicians according to the size of the town in which they are located. It is manifestly evident that the extent of patronage in any locality is determined by such diverse factors as good roads, telephones, average income, competition of medical facilities in adjoining communities, recommendations of friends and relations, and perhaps other factors which vary from the pernicious practice of self-medication and "patent medicine" purchasing to the contract or quasi-insurance schemes in which the provision of medical care and the selection of a physician are removed from individual choice.

In preparing tables 16 to 26 (table 15 is given for comparison with state and geographic division populations) it has been arbitrarily assumed that the number of people outside incorporated towns and dependent on medical facilities in each city is approximately equal, that is, that nearly the same number of persons would be drawn to a city of 1,000 or 5,000 as to one of 100,000 or over. Therefore the total population outside of cities, which amounted to 44,636,770, was divided by the total number of incorporated places to obtain the number to be added to each incorporated city population. The resulting quotient was then multiplied by the number of cities in each of the population groups of the several geographic divisions. The population figures in the tables then represent a total of the Bureau of the Census city population estimates for each population group, plus an arbitrarily estimated rural population surrounding the cities of the several population groups. This method is acknowledged not to be altogether accurate or satisfactory and it is quite certain that the amount of population dependent on the small cities is thus somewhat exaggerated. However, since the method was used throughout the United States, the resulting percentages carry the same errors and should thus be comparable. In many cases the medical facilities in cities of about 25,000, for example, are so superior to those to be found in the smaller cities that they will attract people from a much wider area and include a considerable percentage of those which this calculation assigns to the cities of less than 5,000.

It is believed that this method is superior to the one that is sometimes used of assuming that the population served by each incorporated community is equal to the population included in the corporation. In this tabulation the population included within the corporation is added to the number derived by the method that has been explained.

In view of these considerations, it must be assumed that there is a definite exaggeration of the population per physician in the cities under 5,000 and a corresponding underestimation of those served by physicians in the larger cities and especially those between 25,000 and 100,000.

TABLE 15.—Number of Physicians in Active Practice and Population per Physician, According to Geographic Divisions

Geographic Divisions	Population	Total Number of Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
United States.....	123,775,041	150,358	817	123,732	978	24,826	4,915
New England.....	8,166,339	11,101	736	9,014	900	2,087	3,913
Middle Atlantic.....	26,260,750	36,377	722	29,888	879	6,489	4,047
East North Central...	23,297,184	31,750	797	26,698	948	5,058	5,001
West North Central...	13,296,915	16,336	814	13,786	965	2,550	5,214
South Atlantic.....	15,793,589	16,503	957	13,770	1,147	2,735	5,775
East South Central...	9,587,213	9,256	1,068	8,159	1,212	1,097	9,013
West South Central...	12,176,830	12,594	967	10,563	1,121	1,731	7,035
Mountain.....	3,701,788	4,259	869	3,587	1,032	672	5,769
Pacific.....	8,194,433	12,174	673	9,767	839	2,407	3,404
New England							
Maine.....	797,422	937	851	796	1,002	141	5,655
New Hampshire.....	465,223	523	811	470	990	58	8,022
Vermont.....	359,611	469	767	423	850	46	7,818
Massachusetts.....	4,249,614	6,334	671	5,064	830	1,270	3,349
Rhode Island.....	687,436	807	852	647	1,063	160	4,247
Connecticut.....	1,606,903	2,026	793	1,614	990	412	3,900
Middle Atlantic							
New York.....	12,588,066	20,502	614	16,544	761	3,958	3,180
New Jersey.....	4,041,334	4,183	966	3,619	1,117	564	7,165
Pennsylvania.....	9,631,350	11,692	824	9,725	990	1,967	4,896
East North Central							
Ohio.....	6,646,697	8,378	793	6,934	959	1,444	4,693
Indiana.....	3,238,503	3,907	829	3,345	963	562	5,762
Illinois.....	7,630,654	11,016	693	9,298	821	1,718	4,442
Michigan.....	4,842,324	5,424	893	4,537	1,067	887	5,459
Wisconsin.....	2,939,006	3,031	970	2,584	1,137	447	6,575
West North Central							
Minnesota.....	2,563,953	2,997	836	2,373	1,080	624	4,109
Iowa.....	2,470,939	3,018	819	2,619	943	399	6,193
Missouri.....	3,629,367	5,448	666	4,573	794	875	4,148
North Dakota.....	680,845	508	1,340	439	1,551	69	9,867
South Dakota.....	692,849	564	1,238	512	1,353	52	13,321
Nebraska.....	1,377,963	1,726	798	1,455	947	271	5,045
Kansas.....	1,880,999	2,075	907	1,815	1,036	260	7,235
South Atlantic							
Delaware.....	233,580	264	903	227	1,050	37	6,443
Maryland.....	1,631,526	2,372	658	1,916	852	456	3,578
District of Columbia..	486,869	1,727	282	1,381	353	346	1,407
Virginia.....	2,421,831	2,501	968	2,103	1,152	398	6,085
West Virginia.....	1,729,205	1,743	992	1,515	1,141	228	7,584
North Carolina.....	3,176,276	2,311	1,372	1,881	1,685	430	7,373
South Carolina.....	1,738,765	1,242	1,400	1,069	1,627	173	10,951
Georgia.....	2,908,506	2,790	1,042	2,398	1,213	392	7,420
Florida.....	1,468,211	1,555	944	1,260	1,147	275	5,339
East South Central							
Kentucky.....	2,614,589	2,770	941	2,480	1,054	290	8,744
Tennessee.....	2,616,556	2,836	923	2,442	1,071	394	6,641
Alabama.....	2,646,247	2,144	1,234	1,869	1,416	275	9,823
Mississippi.....	2,009,821	1,497	1,343	1,368	1,469	129	15,580
West South Central							
Arkansas.....	1,854,482	1,904	974	1,737	1,068	167	11,105
Louisiana.....	2,101,593	2,021	1,040	1,696	1,239	325	6,409
Oklahoma.....	2,396,040	2,405	996	2,065	1,160	340	7,047
Texas.....	5,824,715	6,264	930	5,365	1,086	899	6,479
Mountain							
Montana.....	537,606	473	1,137	418	1,246	55	9,775
Idaho.....	443,032	361	1,233	341	1,305	20	22,252
Wyoming.....	225,565	223	1,012	262	1,117	21	10,741
Colorado.....	1,035,791	1,776	683	1,435	722	341	3,038
New Mexico.....	423,317	358	1,182	316	1,340	42	10,079
Arizona.....	433,573	459	949	370	1,177	89	4,894
Utah.....	507,846	482	1,034	395	1,286	87	5,837
Nevada.....	91,058	127	717	110	828	17	5,326
Pacific							
Washington.....	1,563,396	1,831	854	1,457	1,073	374	4,180
Oregon.....	953,786	1,196	797	978	975	218	4,375
California.....	5,677,251	9,147	621	7,332	774	1,915	3,128

TABLE 16.—*Number of Physicians in Active Practice and Population per Physician, in the United States*

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Less than 5,000	52,777,368	39,229	1,345	37,972	1,290	1,257	41,967
5,000-9,999	8,521,379	8,962	951	7,963	1,070	999	8,530
10,000-24,999	10,998,635	13,450	818	11,295	974	2,155	5,104
25,000-99,999	13,856,104	10,152	723	14,932	928	4,220	3,283
100,000 and over	36,621,555	69,565	526	53,370	686	10,195	2,261
Totals.....	122,775,041	150,358	817	125,532	978	24,826	4,945

TABLE 17.—*Number of Physicians in Active Practice and Population per Physician, in the New England States*

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Less than 5,000	900,646	1,619	556	1,525	591	94	9,581
5,000-9,999	832,724	670	1,243	622	1,339	48	17,348
10,000-24,999	1,670,587	1,394	1,198	1,244	1,343	150	11,137
25,000-99,999	2,197,348	2,159	1,018	1,814	1,211	345	6,369
100,000 and over	2,565,034	5,259	488	3,809	673	1,450	1,769
Totals.....	8,166,339	11,101	736	9,014	906	2,087	3,913

TABLE 18.—*Number of Physicians in Active Practice and Population per Physician, in the Middle Atlantic States*

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Less than 5,000	5,884,078	5,040	1,167	4,805	1,225	235	25,039
5,000-9,999	1,819,318	1,555	1,170	1,392	1,307	163	11,161
10,000-24,999	2,883,784	2,864	1,007	2,490	1,158	374	7,711
25,000-99,999	2,981,407	3,769	791	3,066	972	703	4,241
100,000 and over	12,692,163	23,149	548	18,135	700	5,014	2,531
Totals.....	26,260,750	36,377	722	29,888	879	6,469	4,047

TABLE 19.—*Number of Physicians in Active Practice and Population per Physician, in the East North Central States*

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Less than 5,000	8,644,359	6,701	1,290	6,564	1,317	137	63,098
5,000-9,999	1,633,104	1,847	884	1,673	976	174	9,386
10,000-24,999	2,020,511	2,308	875	1,999	1,011	309	6,539
25,000-99,999	3,557,355	4,698	757	3,782	941	816	3,884
100,000 and over	9,441,855	16,202	583	12,680	745	3,522	2,681
Totals.....	25,297,184	31,756	797	26,698	948	5,058	5,001

TABLE 20.—*Number of Physicians in Active Practice and Population per Physician, in the West North Central States*

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Less than 5,000	8,126,718	6,486	1,233	6,306	1,289	180	45,148
5,000- 9,999	674,792	1,002	673	852	792	150	4,409
10,000-24,999	976,534	1,971	495	1,500	651	471	2,073
25,000-99,999	857,419	1,419	604	1,045	820	374	2,293
100,000 and over	2,601,452	5,458	488	4,083	652	1,375	1,936
Totals.....	13,296,915	16,336	814	13,786	965	2,550	5,214

TABLE 21.—*Number of Physicians in Active Practice and Population per Physician, in the South Atlantic States*

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Less than 5,000	9,911,819	5,906	1,678	5,066	1,749	240	41,239
5,000- 9,999	939,819	1,140	824	977	902	163	5,766
10,000-24,999	946,658	1,243	762	978	968	265	3,572
25,000-99,999	1,644,116	2,740	600	1,946	845	794	2,071
100,000 and over	2,351,177	5,476	429	4,203	559	1,273	1,847
Totals.....	15,793,589	16,505	957	13,770	1,147	2,735	5,775

TABLE 22.—*Number of Physicians in Active Practice and Population per Physician, in the East South Central States*

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Less than 5,000	6,959,555	4,637	1,501	4,521	1,539	116	59,096
5,000- 9,999	552,308	589	938	523	1,046	61	9,054
10,000-24,999	645,400	897	720	748	863	140	4,332
25,000-99,999	492,569	774	636	595	828	179	2,752
100,000 and over	1,237,381	2,359	525	1,787	700	592	2,060
Totals.....	9,887,213	9,256	1,068	8,159	1,212	1,007	9,013

TABLE 23.—*Number of Physicians in Active Practice and Population per Physician, in the West South Central States*

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Less than 5,000	7,652,314	5,203	1,454	5,147	1,487	116	65,068
5,000- 9,999	992,001	1,103	890	970	1,023	133	7,459
10,000-24,999	800,497	1,341	597	1,122	713	219	3,055
25,000-99,999	860,167	1,450	593	1,094	794	366	2,350
100,000 and over	1,871,851	3,437	545	2,540	737	897	2,087
Totals.....	12,176,830	12,594	967	10,863	1,121	1,731	7,035

In fact, any assumption that the medical service of the average community can be measured by the number of physicians within its immediate geographic limits is contrary to well known facts. In many states there are central medical institutions such as state universities with attached medical schools and hospitals that serve a large portion of the state. In such states as Wisconsin and Iowa, for example, there are special legislative provisions that encourage the sending of certain types of cases to these central medical establishments. In the two states mentioned, such great numbers have been sent as to give cause for sharp

TABLE 24.—*Number of Physicians in Active Practice and Population per Physician, in the Mountain States*

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Less than 5,000	2,278,442	1,634	1,394	1,583	1,439	51	44,675
5,000- 9,999	385,989	426	906	372	1,038	54	7,148
10,000-24,999	277,769	435	639	363	765	72	3,858
25,000-99,999	323,820	657	500	462	712	195	1,686
100,000 and over	430,768	1,107	389	807	534	300	1,436
Totals.....	3,701,788	4,259	869	3,587	1,032	672	5,509

TABLE 25.—*Number of Physicians in Active Practice and Population per Physician, in the Pacific States*

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Less than 5,000	2,419,437	1,943	1,245	1,855	1,304	88	27,494
5,000- 9,999	691,324	630	1,097	577	1,198	53	13,044
10,000-24,999	776,895	997	779	851	913	146	5,321
25,000-99,999	936,903	1,436	630	1,138	823	348	2,692
100,000 and over	3,369,874	7,118	473	5,346	630	1,772	1,902
Totals.....	8,194,433	12,174	678	9,767	839	2,407	3,404

complaint from the physicians in localities outside this medical center and to demands for revision of such legislation. There are some medical centers that draw from the entire United States and even from foreign countries. This is especially true of certain groups of specialists and of some medical schools and hospitals.

The figures given in these tables must therefore be interpreted with such recognition and evaluation of these facts as will keep in mind any obvious inaccuracy. Nevertheless, it is believed that these figures give a sufficiently helpful picture of the general distribution of physicians actively engaged in medical practice in relation to population to be of value in any study of this problem.

TABLE 26.—Population per Physician in Active Practice According to Population Groups and Geographic Divisions

Geographic Divisions	Less Than 5,000			5,000-9,999			10,000-24,999			25,000-99,999			100,000 and Over		
	General Practice and Special Attention	Specialists	All Physicians	General Practice and Special Attention	Specialists	All Physicians	General Practice and Special Attention	Specialists	All Physicians	General Practice and Special Attention	Specialists	All Physicians	General Practice and Special Attention	Specialists	All Physicians
United States.....	1,390	41,897	1,345	1,070	8,530	951	974	5,104	818	928	3,283	723	686	2,261	526
New England.....	591	9,581	556	1,339	17,348	1,243	1,343	11,137	1,198	1,211	6,369	1,018	673	1,769	489
Middle Atlantic.....	1,225	25,039	1,167	1,307	11,161	1,170	1,158	7,711	1,007	972	4,241	791	700	2,531	546
East North Central.....	1,317	63,098	1,290	976	9,386	884	1,011	6,539	875	941	3,884	757	745	2,681	583
West North Central.....	1,289	45,148	1,253	792	4,499	673	651	2,073	495	820	2,293	604	652	1,936	489
South Atlantic.....	1,749	41,299	1,678	962	5,766	824	968	3,572	762	845	2,071	600	559	1,847	429
East South Central.....	1,539	59,996	1,501	1,046	9,054	938	863	4,332	720	828	2,752	636	700	2,090	525
West South Central.....	1,487	65,968	1,454	1,023	7,459	899	713	3,655	597	794	2,350	593	737	2,087	545
Mountain.....	1,439	44,675	1,394	1,038	7,148	906	765	3,858	639	712	1,686	500	534	1,436	389
Pacific.....	1,304	27,494	1,245	1,198	13,044	1,097	913	5,321	770	823	2,692	630	630	1,992	473

One characteristic of these geographic division tables does incline to give greater confidence in their approximate accuracy. Covering the entire nation and yet diversified so as to include extremes of variation as to population, economic conditions, diversity of rural and urban population and other features that might affect the figures, the population per physician in each of the divisions, for each of the classes of medical practice and in each of the population groups, show a close similarity. This would indicate that the figures are probably as accurate as could be obtained by any analysis (if such an analysis were possible) that took into consideration all the modifying features that have been suggested. Nevertheless it is well to bear in mind these modifying characteristics in considering the tables.

If then this arbitrary method of population distribution may be accepted for this study, the errors of which are constant for all sections of the United States, some significant conditions are found with respect to the number of persons per physician. In the entire United States (table 26) there are approximately 256 per cent more people per physician in communities of less than 5,000 population than in communities of 100,000 population and over. Characteristics of population and its distribution present some exceptions to this generalization. In New England the communities of less than 5,000 and more than 100,000 population show a similar number of persons per physician, but the communities of 5,000 to 100,000 population show more than twice the number of persons per physician found in the smaller and larger places. An exception is also found in the Middle Atlantic states, in which the number of persons per physician is high in places of 25,000 population and less.

The Mountain and South Atlantic states present the most extreme conditions. In these divisions there are respectively 358 per cent and 390 per cent more persons per physician in communities of less than 5,000 population than in places of 100,000 population and over. This may, of course, be due to some extent to the preponderance of the number of small communities over those of 100,000 or more population.

In the remaining divisions of the United States, with the exception of communities of from 5,000 to 10,000 population in the Pacific states, the difference in the number of persons per physician appears to vary by less than 100 per cent. In the places of from 5,000 to 10,000 population in the Pacific states the number of persons per physician is 232 per cent greater than in places of 100,000 and over and only 11.9 per cent less than in communities of 5,000 or less population.

ANALYSIS BY STATES ACCORDING TO POPULATION GROUPS

Table 27 shows the analysis according to population groups in detail in the various states, where the differences between the states are often considerable. This is most evident in the relation of population to specialists and particularly in the smaller population groups. This may be largely accounted for by some quite evident factors, viz., the number of specialists is so small that the ratio is exaggerated by a slight change in that number; it is also impossible to make an accurate allowance for the accessibility of the smaller cities to larger places where specialists may be ample.

TABLE 27.—Number of Physicians in Active Practice and Population per Physician, According to Population Groups and States

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Alabama							
Less than 5,000	1,851,616	1,087	1,703	1,058	1,750	29	63,849
5,000- 9,999	133,628	93	1,437	80	1,670	13	10,279
10,000-24,999	249,596	354	705	303	824	51	4,894
25,000-99,999	145,913	194	752	136	1,073	58	2,516
100,000 and over	205,494	416	638	292	909	124	2,141
Totals.....	2,646,247	2,144	1,234	1,869	1,416	275	9,623
Arizona							
Less than 5,000	249,163	175	1,424	168	1,483	7	35,595
5,000- 9,999	90,395	66	1,370	56	1,614	10	9,040
25,000-99,999	96,015	218	440	146	658	72	1,334
Totals.....	435,573	459	949	370	1,177	89	4,894
Arkansas							
Less than 5,000	1,517,911	1,169	1,298	1,149	1,321	20	75,896
5,000- 9,999	85,927	128	671	116	741	12	7,161
10,000-24,999	116,935	313	374	262	446	51	2,293
25,000-99,999	133,709	294	455	210	637	84	1,592
Totals.....	1,854,482	1,904	974	1,737	1,068	167	11,105
California							
Less than 5,000	1,242,264	1,217	1,021	1,144	1,086	73	17,017
5,000- 9,999	575,970	486	1,185	455	1,266	31	18,580
10,000-24,999	545,697	610	895	521	1,047	89	6,131
25,000-99,999	842,459	1,341	628	1,020	826	321	2,624
100,000 and over	2,470,861	5,493	450	4,192	589	1,301	1,899
Totals.....	5,677,251	9,147	621	7,332	774	1,815	3,128
Colorado							
Less than 5,000	517,341	452	1,145	435	1,189	17	30,432
5,000- 9,999	77,275	113	684	98	789	15	5,152
10,000-24,999	65,073	119	547	104	626	15	4,338
25,000-99,999	86,605	221	392	157	552	64	1,353
100,000 and over	289,497	871	332	641	452	230	1,259
Totals.....	1,035,791	1,776	583	1,435	722	341	3,038
Connecticut							
Less than 5,000	195,162	211	925	194	1,006	17	11,480
5,000- 9,999	84,826	132	643	125	679	7	12,118
10,000-24,999	332,078	255	1,302	224	1,462	31	10,712
25,000-99,999	490,749	455	1,079	371	1,323	84	5,842
100,000 and over	504,088	973	518	700	720	273	1,846
Totals.....	1,606,903	2,026	793	1,614	996	412	3,000
Delaware							
Less than 5,000	130,178	108	1,205	100	1,302	8	16,272
100,000 and over	108,202	156	694	127	852	29	3,731
Totals.....	238,380	264	903	227	1,050	37	6,443
District of Columbia							
100,000 and over	486,869	1,727	282	1,381	353	346	1,407
Florida							
Less than 5,000	737,629	472	1,563	458	1,611	14	52,638
5,000- 9,999	145,191	191	760	164	885	27	5,377
10,000-24,999	104,730	123	851	98	1,069	25	4,189
25,000-99,999	133,584	220	607	162	825	58	2,303
100,000 and over	347,077	549	632	318	872	151	2,290
Totals.....	1,468,211	1,555	944	1,250	1,147	275	5,330

TABLE 27.—Number of Physicians in Active Practice and Population per Physician, According to Population Groups and States—Continued

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Georgia							
Less than 5,000	2,039,448	1,222	1,669	1,198	1,702	24	84,977
5,000-9,999	160,012	209	766	181	884	28	5,715
10,000-24,999	181,909	223	816	177	1,028	46	3,955
25,000-99,999	253,882	422	602	318	788	104	2,441
100,000 and over	273,255	714	383	524	521	190	1,438
Totals.....	2,908,506	2,790	1,042	2,398	1,213	392	7,420
Idaho							
Less than 5,000	351,684	216	1,628	212	1,659	4	87,921
5,000-9,999	52,130	67	778	60	869	7	7,447
10,000-24,999	41,218	78	528	69	597	9	4,580
Totals.....	445,032	361	1,233	341	1,305	20	22,252
Illinois							
Less than 5,000	2,132,173	1,861	1,146	1,829	1,166	32	66,630
5,000-9,999	460,373	546	844	489	942	57	8,080
10,000-24,999	522,904	680	769	584	895	96	5,447
25,000-99,999	1,031,217	1,499	688	1,196	862	303	3,403
100,000 and over	3,483,787	6,430	542	5,200	670	1,230	2,832
Totals.....	7,630,654	11,016	693	9,298	821	1,718	4,442
Indiana							
Less than 5,000	1,434,723	1,241	1,156	1,212	1,184	20	49,473
5,000-9,999	231,701	308	752	283	819	25	9,268
10,000-24,999	274,848	378	727	325	846	53	5,186
25,000-99,999	500,362	620	807	501	909	119	4,205
100,000 and over	796,869	1,360	586	1,024	778	336	2,372
Totals.....	3,238,503	3,907	829	3,345	968	562	5,762
Iowa							
Less than 5,000	1,621,109	1,538	1,054	1,486	1,091	52	31,175
5,000-9,999	109,848	181	607	153	718	28	3,923
10,000-24,999	179,721	421	427	330	545	91	1,975
25,000-99,999	416,582	616	676	460	906	156	2,670
100,000 and over	143,679	262	548	190	756	72	1,996
Totals.....	2,470,939	3,018	819	2,619	943	399	6,193
Kansas							
Less than 5,000	1,211,301	1,016	1,192	985	1,230	31	39,074
5,000-9,999	99,335	160	621	130	764	30	3,311
10,000-24,999	240,351	385	624	315	763	70	3,434
25,000-99,999	94,125	168	560	124	759	44	2,139
100,000 and over	235,887	346	682	261	904	85	2,775
Totals.....	1,880,999	2,075	907	1,815	1,036	260	7,235
Kentucky							
Less than 5,000	1,775,757	1,341	1,324	1,310	1,356	31	57,282
5,000-9,999	181,846	215	846	196	928	19	9,571
10,000-24,999	119,871	178	673	158	759	20	5,994
25,000-99,999	225,033	381	591	306	735	75	3,000
100,000 and over	312,082	664	470	510	612	154	2,027
Totals.....	2,614,589	2,779	941	2,480	1,054	299	8,744
Louisiana							
Less than 5,000	1,266,775	712	1,779	696	1,820	16	79,173
5,000-9,999	131,364	100	1,320	92	1,434	8	16,496
10,000-24,999	89,680	123	724	105	848	18	4,049
25,000-99,999	149,612	286	523	210	712	76	1,969
100,000 and over	464,162	800	580	593	783	207	2,242
Totals.....	2,101,593	2,021	1,040	1,696	1,239	325	6,466

TABLE 27.—Number of Physicians in Active Practice and Population per Physician, According to Population Groups and States—Continued

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Maine							
Less than 5,000	334,730	430	778	417	803	13	25,748
5,000- 9,999	149,822	109	1,375	96	1,561	13	11,525
10,000-24,999	150,076	125	1,201	106	1,416	19	7,889
25,000-99,999	162,794	273	596	177	920	90	1,690
Totals.....	797,422	937	851	796	1,002	141	5,655
Maryland							
Less than 5,000	661,576	537	1,232	506	1,307	31	21,341
5,000- 9,999	33,200	23	1,186	24	1,383	4	8,300
10,000-24,999	50,615	86	589	70	723	16	3,163
25,000-99,999	77,043	108	713	80	963	23	2,752
100,000 and over	809,092	1,613	502	1,230	655	377	2,140
Totals.....	1,631,526	2,372	688	1,916	852	456	3,578
Massachusetts							
Less than 5,000	73,084	432	169	393	196	39	1,874
5,000- 9,999	421,622	291	1,449	276	1,528	15	28,106
10,000-24,999	840,822	697	1,206	643	1,308	54	15,571
25,000-99,999	1,108,861	1,134	978	1,008	1,100	123	8,800
100,000 and over	1,895,225	3,780	478	2,744	658	1,033	1,742
Totals.....	4,249,614	6,334	671	5,064	839	1,270	3,346
Michigan							
Less than 5,000	1,506,088	1,020	1,477	989	1,523	31	48,583
5,000- 9,999	297,638	253	1,164	233	1,277	25	11,906
10,000-24,999	387,672	342	1,134	300	1,292	42	9,230
25,000-99,999	749,311	1,041	720	845	897	206	3,637
100,000 and over	1,901,615	2,763	688	2,180	872	583	3,262
Totals.....	4,842,324	5,424	893	4,537	1,067	887	5,459
Minnesota							
Less than 5,000	1,400,987	893	1,587	854	1,641	29	48,310
5,000- 9,999	147,384	171	862	150	983	21	7,018
10,000-24,999	174,176	501	310	382	456	179	973
100,000 and over	841,406	1,322	609	967	852	395	2,130
Totals.....	2,563,953	2,997	856	2,373	1,080	624	4,100
Mississippi							
Less than 5,000	1,668,169	1,006	1,658	985	1,694	21	70,437
5,000- 9,999	42,463	60	708	51	833	9	4,718
10,000-24,999	209,445	280	748	217	965	63	3,325
25,000-99,999	89,744	151	594	115	780	36	2,493
Totals.....	2,009,821	1,497	1,343	1,368	1,469	129	15,560
Missouri							
Less than 5,000	1,827,290	1,591	1,149	1,563	1,169	28	65,260
5,000- 9,999	188,851	268	705	237	797	31	6,092
10,000-24,999	183,019	268	633	230	798	38	4,810
25,000-99,999	204,009	317	646	214	876	83	2,469
100,000 and over	1,225,298	3,004	408	2,309	531	695	1,763
Totals.....	3,629,367	5,448	666	4,573	704	875	4,148
Montana							
Less than 5,000	346,067	221	1,566	216	1,602	5	69,213
5,000- 9,999	53,048	63	842	53	1,001	10	5,395
10,000-24,999	65,203	86	758	74	881	12	5,434
25,000-99,999	73,288	103	712	75	977	28	2,617
Totals.....	537,606	473	1,137	418	1,286	55	9,775

TABLE 27.—Number of Physicians in Active Practice and Population per Physician, According to Population Groups and States—Continued

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Nebraska							
Less than 5,000	927,805	796	1,166	772	1,202	24	38,659
5,000-9,999	72,799	134	543	110	662	24	3,033
10,000-24,999	85,008	142	599	103	826	39	2,181
25,000-99,999	77,109	190	406	134	575	56	1,377
100,000 and over	215,182	464	464	336	640	128	1,681
Totals.....	1,377,063	1,726	798	1,455	947	271	5,085
Nevada							
Less than 5,000	61,516	76	809	73	843	3	20,305
5,000-9,999	8,089	8	1,011	8	1,011	..	.....
10,000-24,999	21,453	43	499	29	740	14	1,532
Totals.....	91,058	127	717	110	828	17	5,356
New Hampshire							
Less than 5,000	60,871	228	267	218	279	10	6,087
5,000-9,999	67,174	27	2,488	25	2,687	2	33,587
10,000-24,999	171,687	151	1,137	134	1,281	17	10,099
25,000-99,999	165,501	122	1,357	93	1,780	29	5,709
Totals.....	465,233	528	581	470	990	58	8,022
New Jersey							
Less than 5,000	714,816	637	1,122	608	1,176	29	24,649
5,000-9,999	426,988	343	1,245	326	1,310	17	25,117
10,000-24,999	669,814	522	1,283	453	1,479	69	9,707
25,000-99,999	966,432	970	996	811	1,192	159	6,078
100,000 and over	1,263,284	1,711	738	1,421	889	290	4,356
Totals.....	4,041,334	4,183	966	3,619	1,117	564	7,165
New Mexico							
Less than 5,000	313,014	213	1,470	208	1,542	10	31,301
5,000-9,999	46,185	37	1,248	35	1,320	2	23,093
10,000-24,999	32,482	40	812	32	1,015	8	4,000
25,000-99,999	31,036	68	465	46	688	22	1,438
Totals.....	423,317	358	1,182	316	1,340	42	10,079
New York							
Less than 5,000	2,057,969	2,135	964	2,015	1,021	120	17,150
5,000-9,999	394,028	419	943	373	1,059	46	8,585
10,000-24,999	864,582	969	892	821	1,053	148	5,842
25,000-99,999	845,817	1,226	690	978	865	248	3,411
100,000 and over	8,424,770	15,753	535	12,357	682	3,396	2,481
Totals.....	12,588,066	20,502	614	16,544	761	3,958	3,180
North Carolina							
Less than 5,000	2,304,710	1,039	2,218	982	2,347	57	40,434
5,000-9,999	184,851	231	800	189	978	42	4,401
10,000-24,999	227,087	314	723	244	931	70	3,244
25,000-99,999	453,628	727	624	466	973	261	1,738
Totals.....	3,170,276	2,311	1,372	1,881	1,685	430	7,378
North Dakota							
Less than 5,000	560,673	263	1,981	280	2,002	3	186,891
5,000-9,999	41,981	64	656	52	807	12	3,498
10,000-24,999	48,254	99	487	69	699	30	1,606
25,000-99,999	29,937	62	483	38	788	24	1,247
Totals.....	680,845	508	1,340	439	1,551	69	9,867

TABLE 27.—Number of Physicians in Active Practice and Population per Physician, According to Population Groups and States—Continued

Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Ohio							
Less than 5,000	2,159,291	1,632	1,323	1,603	1,347	29	74,458
5,000- 9,999	457,853	544	842	502	912	42	10,901
10,000-24,999	580,863	617	941	543	1,070	74	7,850
25,000-99,999	769,527	850	905	700	1,009	150	5,130
100,000 and over	2,679,163	4,735	560	3,586	747	1,149	2,332
Totals.....	6,646,697	8,378	703	6,934	959	1,444	4,603
Oklahoma							
Less than 5,000	1,585,214	1,029	1,541	1,000	1,585	20	54,063
5,000- 9,999	217,183	306	710	253	858	53	4,068
10,000-24,999	198,603	312	637	264	752	48	4,138
25,000-99,999	63,409	122	520	91	697	31	2,045
100,000 and over	331,631	636	521	457	726	179	1,853
Totals.....	2,396,040	2,405	996	2,065	1,160	340	7,047
Oregon							
Less than 5,000	481,176	297	1,620	295	1,631	2	240,588
5,000- 9,999	77,395	103	751	85	911	18	4,300
10,000-24,999	63,540	111	572	94	676	17	3,738
25,000-99,999	28,063	62	453	48	585	14	2,005
100,000 and over	303,612	623	487	456	666	167	1,818
Totals.....	953,786	1,106	707	978	975	218	4,375
Pennsylvania							
Less than 5,000	3,111,293	2,268	1,372	2,182	1,426	86	36,178
5,000- 9,999	897,402	793	1,258	693	1,439	100	9,974
10,000-24,999	1,349,388	1,373	983	1,215	1,111	158	8,540
25,000-99,999	1,169,158	1,573	743	1,277	916	296	3,950
100,000 and over	3,004,109	5,685	528	4,358	689	1,327	2,294
Totals.....	9,631,350	11,692	824	9,725	990	1,907	4,896
Rhode Island							
Less than 5,000	6,406	71	90	63	102	8	801
5,000- 9,999	41,132	17	2,420	17	2,430	..	.....
10,000-24,999	114,854	38	3,022	37	3,104	1	114,874
25,000-99,999	269,383	175	1,539	165	1,633	10	26,938
100,000 and over	255,721	506	505	365	701	141	1,814
Totals.....	687,496	807	832	647	1,063	160	4,257
South Carolina							
Less than 5,000	1,333,432	592	2,252	578	2,307	14	95,245
5,000- 9,999	128,984	130	992	119	1,084	11	11,726
10,000-24,999	86,250	131	658	107	606	24	3,594
25,000-99,999	190,069	389	489	265	717	124	1,533
Totals.....	1,738,765	1,242	1,400	1,069	1,627	173	10,951
South Dakota							
Less than 5,000	577,553	379	1,524	366	1,578	13	44,427
5,000- 9,999	14,594	24	608	20	730	4	3,649
10,000-24,999	65,945	95	694	71	929	24	2,748
25,000-99,999	34,757	66	527	55	632	11	3,160
Totals.....	692,849	564	1,228	512	1,353	52	13,324
Tennessee							
Less than 5,000	1,664,013	1,293	1,383	1,168	1,424	35	47,543
5,000- 9,999	194,371	221	880	201	967	20	9,719
10,000-24,999	66,488	85	782	70	950	15	4,433
25,000-99,999	31,879	48	604	38	839	10	3,188
100,000 and over	659,805	1,279	516	965	684	314	2,101
Totals.....	2,616,566	2,836	923	2,442	1,071	394	6,641

TABLE 27.—Number of Physicians in Active Practice and Population per Physician, According to Population Groups and States—Continued

Population Population Groups	Population	Total Physicians		Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Pop. per Phys.	Number	Pop. per Phys.	Number	Pop. per Phys.
Texas							
Less than 5,000	3,282,414	2,353	1,395	2,302	1,426	51	64,361
5,000- 9,999	556,927	569	979	509	1,094	60	9,282
10,000-24,999	395,879	593	668	491	806	102	3,881
25,000-99,999	513,437	748	686	573	896	175	2,934
100,000 and over	1,076,058	2,001	538	1,490	722	511	2,106
Totals.....	5,824,715	6,264	930	5,365	1,086	899	6,479
Utah							
Less than 5,000	280,133	152	1,843	152	1,843	..	.....
5,000- 9,999	29,396	28	1,050	24	1,225	4	7,349
10,000-24,999	15,770	19	830	15	1,051	4	3,943
25,000-99,999	41,276	47	878	38	1,086	9	4,586
100,000 and over	141,271	236	599	166	851	70	2,018
Totals.....	507,846	482	1,054	395	1,286	87	5,837
Vermont							
Less than 5,000	230,393	247	933	240	960	7	32,913
5,000- 9,999	68,148	94	725	83	821	11	6,195
10,000-24,999	61,070	128	477	100	611	28	2,181
Totals.....	359,611	469	767	423	850	46	7,818
Virginia							
Less than 5,000	1,520,285	1,105	1,376	1,034	1,470	71	21,412
5,000- 9,999	139,205	144	967	125	1,114	19	7,327
10,000-24,999	182,021	185	984	145	1,255	40	4,551
25,000-99,999	253,658	350	725	262	968	88	2,882
100,000 and over	326,682	717	456	537	608	180	1,815
Totals.....	2,421,851	2,501	968	2,103	1,152	396	6,085
Washington							
Less than 5,000	695,997	429	1,622	416	1,673	13	53,538
5,000- 9,999	37,959	41	926	37	1,026	4	9,490
10,000-24,999	167,658	276	607	236	710	40	4,191
25,000-99,999	66,381	83	800	70	948	13	5,106
100,000 and over	595,401	1,002	594	698	853	304	1,959
Totals.....	1,563,396	1,831	854	1,457	1,073	374	4,180
West Virginia							
Less than 5,000	1,184,561	831	1,425	810	1,462	21	56,408
5,000- 9,999	148,376	207	717	175	848	32	4,637
10,000-24,999	114,046	181	630	137	832	44	2,592
25,000-99,999	282,222	524	539	393	718	131	2,154
Totals.....	1,729,205	1,743	992	1,515	1,141	228	7,584
Wisconsin							
Less than 5,000	1,412,084	947	1,491	931	1,517	16	88,255
5,000- 9,999	183,339	191	970	166	1,117	25	7,414
10,000-24,999	274,224	291	874	247	1,029	44	5,778
25,000-99,999	506,938	688	737	550	922	138	3,673
100,000 and over	580,421	914	635	690	841	224	2,591
Totals.....	2,939,006	3,031	970	2,584	1,137	447	6,575
Wyoming							
Less than 5,000	159,524	129	1,237	124	1,296	5	31,905
5,000- 9,999	29,471	44	670	38	776	6	4,912
10,000-24,999	36,570	50	731	40	914	10	3,657
Totals.....	225,565	223	1,012	202	1,117	21	10,741

DISTRIBUTION ACCORDING TO SIZE OF CITY

One of the questions that have been much discussed in recent years is the tendency of physicians to congregate in large cities. There has been no previous nation-wide study to determine the extent of this movement. In tables 28 to 37, the exact distribution of total physicians in active practice, general practitioners, specialists, and those giving special attention to a subject are given according to their location in the several sized population groups.

Table 28 gives the number of physicians for the entire United States, classified as general practitioners, specialists and special attention, according to the size of the city in which they are located. This shows a steady increase in degree of specialization with growth in size of the city up to and including the 500,000 to 1,000,000 population group. There is then a slight decrease in the last classifications. It is more

TABLE 28.—*Number of Physicians in Active Practice in the United States Distributed According to Population Groups and by Number and Percentage in General Practice, Limited Specialty or Special Attention Within Each Population Group*

Population Groups	Total Physicians in Practice	General Practice		Specialists		Special Attention	
		Total	Per Cent	Total	Per Cent	Total	Per Cent
Less than 1,000.....	19,114	17,278	90.4	376	2.0	1,460	7.6
1,000- 2,499.....	11,335	9,473	83.6	323	2.8	1,539	13.6
2,500- 4,999.....	8,780	6,621	75.4	558	6.4	1,601	18.2
5,000- 9,999.....	8,962	5,989	66.8	999	11.2	1,974	22.0
10,000- 24,999.....	13,450	8,400	62.5	2,155	16.0	2,895	21.5
25,000- 49,999.....	9,218	5,341	57.9	1,862	20.2	2,015	21.9
50,000- 99,999.....	9,034	5,779	58.2	2,358	23.7	1,797	18.1
100,000-249,999.....	13,269	7,782	58.7	3,215	24.2	2,272	17.1
250,000-499,999.....	15,591	9,427	60.5	3,969	25.1	2,255	14.4
500,000-999,999.....	12,631	7,930	62.8	3,201	25.3	1,500	11.9
1,000,000 and over.....	23,074	18,131	64.6	5,870	20.9	4,073	14.5
Totals.....	150,358	102,151	67.9	24,826	16.5	23,381	15.6

significant, when considering adaptability to the demands for service, that even in the cities where specialization is greatest the number of complete specialists is in only a few instances more than 25 per cent of all the physicians. For the entire United States the number of specialists is 16.5 per cent of all actively practicing physicians (chart 5). When it is recalled that the specialists in the larger centers usually extend their services beyond the limits of the cities in which they are located, these figures seem to indicate that the general distribution of physicians in regard to specialization is not greatly at variance with the demand for these services.

This conclusion receives further confirmation from an examination of tables 29 to 37, giving the same information by geographic divisions. Nowhere is there any greater deviation from the rate of distribution of services than can be accounted for by economic and racial conditions, which have produced corresponding differences in the distribution of nearly all other goods and services.

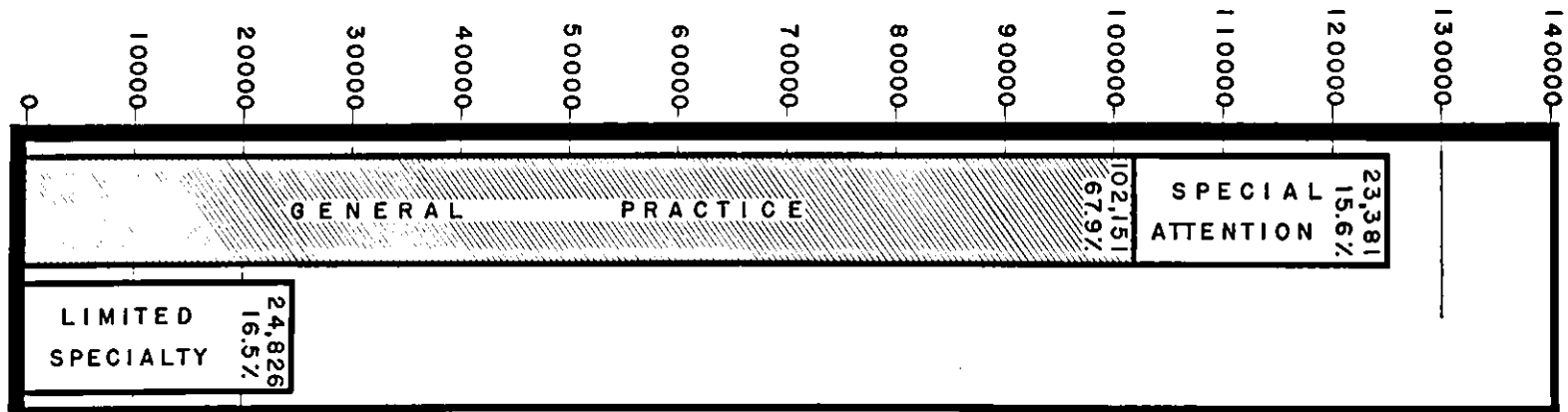


Chart 5 (based on table 28).—Number and percentage of physicians in active practice in the United States classified as general practitioners, limited specialists and giving special attention. (American Medical Directory, 1931.)

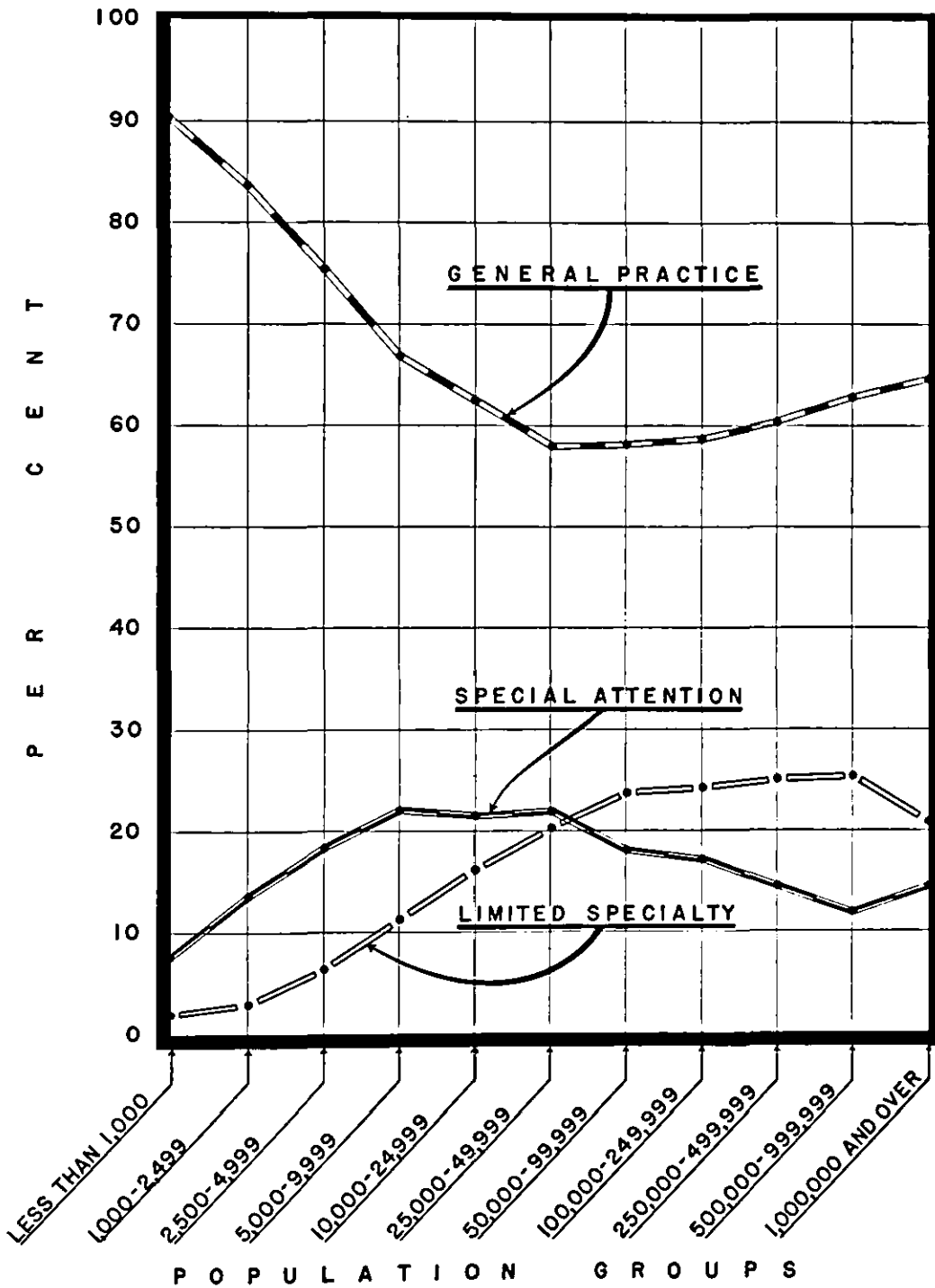


Chart 6 (based on table 28).—The percentage of physicians in active practice in the United States who, in specified population groups, are designated as general practitioners, limited practitioners or devoting special attention to a specialty. (American Medical Directory, 1931.)

TABLE 29.—*Number of Physicians in Active Practice in the New England States Distributed According to Population Groups and by Number and Percentage in General Practice, Limited Specialty or Special Attention Within Each Population Group*

Population Groups	Total Physicians in Practice	General Practice		Specialists		Special Attention	
		Total	Per Cent	Total	Per Cent	Total	Per Cent
Less than 1,000.....	443	382	86.2	26	5.9	35	7.9
1,000- 2,499.....	666	551	82.7	42	6.3	73	11.0
2,500- 4,999.....	510	412	80.8	26	5.1	72	14.1
5,000- 9,999.....	670	508	75.8	48	7.2	114	17.0
10,000- 24,999.....	1,304	948	68.0	150	10.8	296	21.2
25,000- 49,999.....	1,143	783	68.5	153	13.4	207	18.1
50,000- 99,999.....	1,016	636	62.6	192	18.9	188	18.5
100,000-249,999.....	2,819	1,721	61.0	670	23.8	428	15.2
250,000-499,999.....	.....	.....	.....	.....	.....	.....	.....
500,000-999,999.....	2,440	1,403	57.5	780	32.0	257	10.5
1,000,000 and over.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	11,101	7,344	66.2	2,087	18.8	1,670	15.0

TABLE 30.—*Number of Physicians in Active Practice in the Middle Atlantic States Distributed According to Population Groups and by Number and Percentage in General Practice, Limited Specialty or Special Attention Within Each Population Group*

Population Groups	Total Physicians in Practice	General Practice		Specialists		Special Attention	
		Total	Per Cent	Total	Per Cent	Total	Per Cent
Less than 1,000.....	2,139	1,835	85.8	97	4.5	207	9.7
1,000- 2,499.....	1,363	1,110	81.4	54	4.0	199	14.6
2,500- 4,999.....	1,538	1,192	77.5	84	5.5	262	17.0
5,000- 9,999.....	1,555	1,067	68.8	163	10.5	325	20.9
10,000- 24,999.....	2,864	1,916	66.9	374	13.1	574	20.0
25,000- 49,999.....	1,455	831	57.1	269	18.5	355	24.4
50,000- 99,999.....	2,314	1,426	61.6	434	18.8	454	19.6
100,000-249,999.....	2,346	1,390	59.2	497	21.2	459	19.6
250,000-499,999.....	1,673	1,077	64.4	323	19.3	273	16.3
500,000-999,999.....	2,339	1,438	61.5	592	25.3	309	13.2
1,000,000 and over.....	16,701	10,973	65.3	3,602	21.5	2,216	13.2
Totals.....	36,377	24,255	66.7	6,480	17.8	5,633	15.5

TABLE 31.—*Number of Physicians in Active Practice in the East North Central States Distributed According to Population Groups and by Number and Percentage in General Practice, Limited Specialty or Special Attention Within Each Population Group*

Population Groups	Total Physicians in Practice	General Practice		Specialists		Special Attention	
		Total	Per Cent	Total	Per Cent	Total	Per Cent
Less than 1,000.....	3,287	2,985	90.8	38	1.2	264	8.0
1,000- 2,499.....	2,036	1,724	84.7	38	1.9	274	13.4
2,500- 4,999.....	1,378	1,048	76.1	61	4.4	269	19.5
5,000- 9,999.....	1,847	1,244	67.4	174	9.4	429	23.2
10,000- 24,999.....	2,308	1,422	61.6	309	13.4	577	25.0
25,000- 49,999.....	2,706	1,580	58.4	461	17.8	645	23.8
50,000- 99,999.....	1,992	1,138	57.1	435	21.9	419	21.0
100,000-249,999.....	1,885	1,075	57.0	462	24.5	348	18.5
250,000-499,999.....	3,180	1,932	60.8	840	26.4	408	12.8
500,000-999,999.....	2,564	1,649	64.3	572	22.3	343	13.4
1,000,000 and over.....	8,573	5,417	63.2	1,648	19.2	1,508	17.6
Totals.....	31,756	21,214	66.8	5,058	15.9	5,484	17.3

TABLE 32.—Number of Physicians in Active Practice in the West North Central States Distributed According to Population Groups and by Number and Percentage in General Practice, Limited Specialty or Special Attention Within Each Population Group

Population Groups	Total Physicians in Practice	General Practice		Specialists		Special Attention	
		Total	Per Cent	Total	Per Cent	Total	Per Cent
Less than 1,000.....	3,335	2,958	88.7	38	1.1	339	10.2
1,000- 2,499.....	1,910	1,519	79.5	49	2.6	342	17.9
2,500- 4,999.....	1,241	848	68.3	93	7.5	300	24.2
5,000- 9,999.....	1,002	580	57.9	150	15.0	272	27.1
10,000- 24,999.....	1,971	1,087	55.1	471	23.9	413	21.0
25,000- 49,999.....	524	272	51.9	120	22.9	132	25.2
50,000- 99,999.....	895	464	51.8	254	28.4	177	19.8
100,000-249,999.....	1,202	656	54.6	335	27.9	211	17.5
250,000-499,999.....	2,225	1,325	59.6	581	26.1	319	14.3
500,000-999,999.....	2,031	1,308	64.3	459	22.6	266	13.1
1,000,000 and over.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	16,336	11,015	67.4	2,550	15.6	2,771	17.0

TABLE 33.—Number of Physicians in Active Practice in the South Atlantic States Distributed According to Population Groups and by Number and Percentage in General Practice, Limited Specialty or Special Attention Within Each Population Group

Population Groups	Total Physicians in Practice	General Practice		Specialists		Special Attention	
		Total	Per Cent	Total	Per Cent	Total	Per Cent
Less than 1,000.....	3,115	2,831	90.9	68	2.2	216	6.9
1,000- 2,499.....	1,644	1,400	85.1	67	4.1	177	10.8
2,500- 4,999.....	1,147	854	74.5	105	9.1	188	16.4
5,000- 9,999.....	1,140	769	67.5	163	14.3	208	18.2
10,000- 24,999.....	1,243	736	59.2	265	21.3	242	19.5
25,000- 49,999.....	1,049	601	57.3	266	25.4	182	17.3
50,000- 99,999.....	1,691	919	54.4	528	31.2	244	14.4
100,000-249,999.....	1,422	845	59.4	360	25.3	217	15.3
250,000-499,999.....	2,441	1,643	67.3	530	22.0	262	10.7
500,000-999,999.....	1,613	1,118	69.3	377	23.4	118	7.3
1,000,000 and over.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	16,505	11,716	71.0	2,735	16.6	2,054	12.4

TABLE 34.—Number of Physicians in Active Practice in the East South Central States Distributed According to Population Groups and by Number and Percentage in General Practice, Limited Specialty or Special Attention Within Each Population Group

Population Groups	Total Physicians in Practice	General Practice		Specialists		Special Attention	
		Total	Per Cent	Total	Per Cent	Total	Per Cent
Less than 1,000.....	2,690	2,502	93.0	38	1.4	150	5.6
1,000- 2,499.....	1,071	912	85.2	27	2.5	132	12.3
2,500- 4,999.....	876	685	78.2	51	5.8	140	16.0
5,000- 9,999.....	589	413	70.1	61	10.4	115	19.5
10,000- 24,999.....	897	572	63.8	149	16.6	176	19.6
25,000- 49,999.....	498	290	58.2	114	22.9	94	18.9
50,000- 99,999.....	276	173	62.7	65	23.5	38	13.8
100,000-249,999.....	775	469	60.5	178	23.0	128	16.5
250,000-499,999.....	1,584	928	58.6	414	26.1	242	15.3
500,000-999,999.....	.....	.....	.....	.....	.....	.....	.....
1,000,000 and over.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	9,256	6,944	75.0	1,097	11.9	1,215	13.1

TABLE 35.—Number of Physicians in Active Practice in the West South Central States Distributed According to Population Groups and by Number and Percentage in General Practice, Limited Specialty or Special Attention Within Each Population Group

Population Groups	Total Physicians in Practice	General Practice		Specialists		Special Attention	
		Total	Per Cent	Total	Per Cent	Total	Per Cent
Less than 1,000.....	2,509	2,381	94.9	12	0.5	116	4.6
1,000- 2,499.....	1,580	1,370	86.7	23	1.5	187	11.8
2,500- 4,999.....	1,174	859	75.7	81	6.9	204	17.4
5,000- 9,999.....	1,103	710	64.9	133	12.1	254	23.0
10,000- 24,999.....	1,341	814	60.7	219	16.3	308	23.0
25,000- 49,999.....	615	333	54.2	144	23.4	138	22.4
50,000- 99,999.....	835	477	57.1	222	26.6	136	16.3
100,000-249,999.....	1,587	808	57.2	406	25.6	273	17.2
250,000-499,999.....	1,850	1,072	58.0	491	26.5	287	15.5
500,000-999,999.....	.....	.....	.....	.....	.....	.....	.....
1,000,000 and over.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	12,594	8,960	71.2	1,731	13.7	1,903	15.1

TABLE 36.—Number of Physicians in Active Practice in the Mountain States Distributed According to Population Groups and by Number and Percentage in General Practice, Limited Specialty or Special Attention Within Each Population Group

Population Groups	Total Physicians in Practice	General Practice		Specialists		Special Attention	
		Total	Per Cent	Total	Per Cent	Total	Per Cent
Less than 1,000.....	743	665	89.5	18	2.4	60	8.1
1,000- 2,499.....	533	436	81.8	9	1.7	88	16.5
2,500- 4,999.....	358	265	74.0	24	6.7	69	19.3
5,000- 9,999.....	426	237	55.6	54	12.7	135	31.7
10,000- 24,999.....	435	246	56.6	72	16.5	117	26.9
25,000- 49,999.....	562	269	47.9	166	29.5	127	22.6
50,000- 99,999.....	95	49	51.6	29	30.5	17	17.9
100,000-249,999.....	236	110	46.6	70	29.7	56	23.7
250,000-499,999.....	871	482	55.3	230	26.4	159	18.3
500,000-999,999.....	.....	.....	.....	.....	.....	.....	.....
1,000,000 and over.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	4,259	2,759	64.8	672	15.8	828	19.4

TABLE 37.—Number of Physicians in Active Practice in the Pacific States Distributed According to Population Groups and by Number and Percentage in General Practice, Limited Specialty or Special Attention Within Each Population Group

Population Groups	Total Physicians in Practice	General Practice		Specialists		Special Attention	
		Total	Per Cent	Total	Per Cent	Total	Per Cent
Less than 1,000.....	853	739	86.6	41	4.8	73	8.6
1,000- 2,499.....	532	451	84.8	14	2.6	67	12.6
2,500- 4,999.....	558	423	76.7	33	5.9	97	17.4
5,000- 9,999.....	630	455	72.2	53	8.4	122	19.4
10,000- 24,999.....	997	659	66.1	146	14.6	192	19.3
25,000- 49,999.....	666	382	57.3	149	22.4	135	20.3
50,000- 99,999.....	820	497	60.6	199	24.3	124	15.1
100,000-249,999.....	997	608	61.0	237	23.8	152	15.2
250,000-499,999.....	1,767	968	54.8	494	27.9	305	17.3
500,000-999,999.....	1,644	1,016	61.8	421	25.6	207	12.6
1,000,000 and over.....	2,710	1,741	64.2	620	22.9	349	12.9
Totals.....	12,174	7,944	65.2	2,407	19.8	1,823	15.0

COMMENT ON SPECIALIZATION

There has been much discussion of specialization in recent years. It appears that some of this discussion has been based on incorrect or incomplete information as to the extent to which specialization has proceeded.

The Committee on the Costs of Medical Care² presents the results of a series of studies which seem to indicate that from 24 to 39 per cent of the physicians in the United States today are complete specialists.

The same conclusion has been accepted by the Commission on Medical Education.³

The results of a complete analysis of all physicians listed in the 1931 Directory seem to indicate that there is a fundamental defect in any conclusion drawn on the subject of specialization from sampling through questionnaires. This defect may be due to the tendency of a disproportionately large percentage of those who consider themselves specialists to respond to such a questionnaire. There may be a corresponding tendency of general practitioners to neglect such a questionnaire.

It is hard to account in any other way for the uniform tendency of such sampling to show a much higher degree of specialization than a complete analysis proves to exist.

Any classification of physicians according to specialties must lack accuracy because of the absence of any clear definitions or standards. In the American Medical Directory, which is now the only source of information on this subject, including all physicians, the physicians classify themselves. There is no universal, national standard of specialization that can be satisfactorily applied at present to check this self classification. The survey of the Michigan State Medical Society⁴ offers almost the only example of an attempt to go behind this classification to determine to what extent the physicians classifying themselves as specialists were so considered by their immediate confrères. The committee in charge of this study asked the public relations committee of each county society to list its classification of the society's members. The result⁵ shows that in the opinion of the local public relations committee a considerable percentage of those who had classified themselves as "partial specialists" in the American Medical Directory were considered as general practitioners.

It seems fair to assume that in many cases physicians who classified themselves as giving "special attention" to a subject should be classified as general practitioners so far as their service to the community is concerned. Their statement to the Directory may indicate a situation varying all the way from a mere wish, interest or intention to a real

2. Leven, Maurice: *The Incomes of Physicians*, p. 51. Prebles, A.: *Medical Facilities in the United States*, pp. 25-27 and appendix 3. Weiskotten, W. G.: *Tendencies in Medical Practice*, J. A. Am. M. Colleges, March, 1932, pp. 65-85.

3. *Final Report of the Commission on Medical Education*, 1932, pp. 114-119.

4. *Report of the Committee on Survey of Medical Services and Health Agencies*, 1933, pp. 57-64.

5. *Report of the Committee on Survey of Medical Services and Health Agencies*, p. 63.

entrance into the field of specialization. Moreover, in this study it has been impossible to measure the extent to which this wish, interest or intention will be or may have been converted into actual specialization.

If all those who classified themselves as giving "special attention" to a subject are transferred to the list of general practitioners, there are in the United States 83.5 per cent general practitioners and 16.5 per cent specialists (table 38). Chart 7 is a graphic presentation of the geographic division totals in table 38. The bar divisions represent actual numbers and show the rank of geographic divisions according to number of physicians. Chart 8 is drawn in such a way that percentages of general practitioners and specialists in each geographic division can be compared one with the other.

Recently, certain special boards of examiners have been created for the purpose of testing thoroughly the candidate's ability in one of the special branches of medicine. The certificate of one of these boards, generally speaking, may be taken as a fair indication of competence. As this report goes to press there are only about a half dozen specialties which have thus far established examining boards. Moreover, since these examining boards have no legal status, the submission of an applicant to a board examination is purely voluntary and the certificate of the board cannot be adopted universally as the sole criterion of ability.

If, however, some such means is generally accepted by the medical profession as a measure of competence for limited specialization, it is conceivable that the list of limited specialists may be reduced in actual numbers but is likely to represent a greater degree of certitude regarding the physician's qualifications. If and when the time arrives that all specialists will be thus more accurately listed, medical directory figures will assume a new and more dependable meaning. In the meantime, revisions, within certain limitations, can be undertaken for those specialties that have undertaken the more dependable methods of certification.

It seems to be generally agreed that about 85 per cent of human ills can be satisfactorily managed by a general practitioner. If this conclusion is correct, there seems to be no justification for the claim that specialization has proceeded to a degree that is harmful to the best interests of both the public and the medical profession.

The distribution according to types of practice, in table 39, is intended to show the percentage of physicians in each geographic division who in 1931 were devoting themselves to a particular specialty. The general practice and special attention groups are combined in the first percentage, since throughout this study special attention has been considered essentially general practice for the purpose of professional and statistical classification, although it must be recognized that where no limited specialists are found the community may benefit from the greater familiarity with special subjects that should come from more thorough study or additional experience.

TABLE 38.—Percentage of Physicians in Active Practice in Each State, According to the Classifications "General Practice and Special Attention" and "Limited Specialists"

Geographic Divisions	Total Number of Physicians	Physicians Classified as General Practice and Special Attention		Physicians Classified as Specialists	
		Number	Per Cent	Number	Per Cent
United States.....	150,358	125,532	83.5	24,826	16.5
New England.....	11,101	9,014	81.2	2,087	18.8
Middle Atlantic.....	36,377	29,888	82.2	6,489	17.8
East North Central.....	31,756	26,098	84.1	5,658	15.9
West North Central.....	16,330	13,786	84.4	2,550	15.6
South Atlantic.....	16,505	13,770	83.4	2,735	16.6
East South Central.....	9,256	8,159	88.1	1,097	11.9
West South Central.....	12,594	10,863	86.3	1,731	13.7
Mountain.....	4,259	3,587	84.2	672	15.8
Pacific.....	12,174	9,767	80.2	2,407	19.8
New England:					
Maine.....	937	796	85.0	141	15.0
New Hampshire.....	528	470	89.0	58	11.0
Vermont.....	469	423	90.2	46	9.8
Massachusetts.....	6,334	5,064	79.9	1,270	20.1
Rhode Island.....	807	647	80.2	160	19.8
Connecticut.....	2,026	1,614	79.7	412	20.3
Middle Atlantic:					
New York.....	20,502	16,544	80.7	3,958	19.3
New Jersey.....	4,183	3,619	86.5	564	13.5
Pennsylvania.....	11,692	9,725	83.2	1,967	16.8
East North Central:					
Ohio.....	8,378	6,934	82.8	1,444	17.2
Indiana.....	3,907	3,345	85.6	562	14.4
Illinois.....	11,016	9,298	84.4	1,718	15.6
Michigan.....	5,424	4,537	83.6	887	16.4
Wisconsin.....	3,031	2,584	85.3	447	14.7
West North Central:					
Minnesota.....	2,997	2,373	79.2	624	20.8
Iowa.....	3,018	2,619	86.8	399	13.2
Missouri.....	5,448	4,573	83.9	875	16.1
North Dakota.....	508	439	86.4	69	13.6
South Dakota.....	564	512	90.8	52	9.2
Nebraska.....	1,726	1,455	84.3	271	15.7
Kansas.....	2,075	1,815	87.5	260	12.5
South Atlantic:					
Delaware.....	264	227	86.0	37	14.0
Maryland.....	2,372	1,916	80.8	456	19.2
District of Columbia.....	1,727	1,381	80.0	346	20.0
Virginia.....	2,501	2,103	84.1	398	15.9
West Virginia.....	1,743	1,515	86.9	228	13.1
North Carolina.....	2,311	1,881	81.4	430	18.6
South Carolina.....	1,242	1,069	86.1	173	13.9
Georgia.....	2,790	2,398	85.9	392	14.1
Florida.....	1,555	1,280	82.3	275	17.7
East South Central:					
Kentucky.....	2,779	2,480	89.2	299	10.8
Tennessee.....	2,836	2,442	86.1	394	13.9
Alabama.....	2,144	1,869	87.2	275	12.8
Mississippi.....	1,497	1,368	91.4	129	8.6
West South Central:					
Arkansas.....	1,904	1,737	91.2	167	8.8
Louisiana.....	2,021	1,696	83.9	325	16.1
Oklahoma.....	2,405	2,065	85.9	340	14.1
Texas.....	6,264	5,365	85.6	899	14.4
Mountain:					
Montana.....	473	418	88.4	55	11.6
Idaho.....	361	341	94.5	20	5.5
Wyoming.....	223	202	90.6	21	9.4
Colorado.....	1,776	1,435	80.8	341	19.2
New Mexico.....	358	316	88.3	42	11.7
Arizona.....	459	370	80.6	89	19.4
Utah.....	482	395	82.0	87	18.0
Nevada.....	127	110	86.6	17	13.4
Pacific:					
Washington.....	1,831	1,457	79.6	374	20.4
Oregon.....	1,166	978	81.8	218	18.2
California.....	9,147	7,332	80.2	1,815	19.8

THOUSANDS

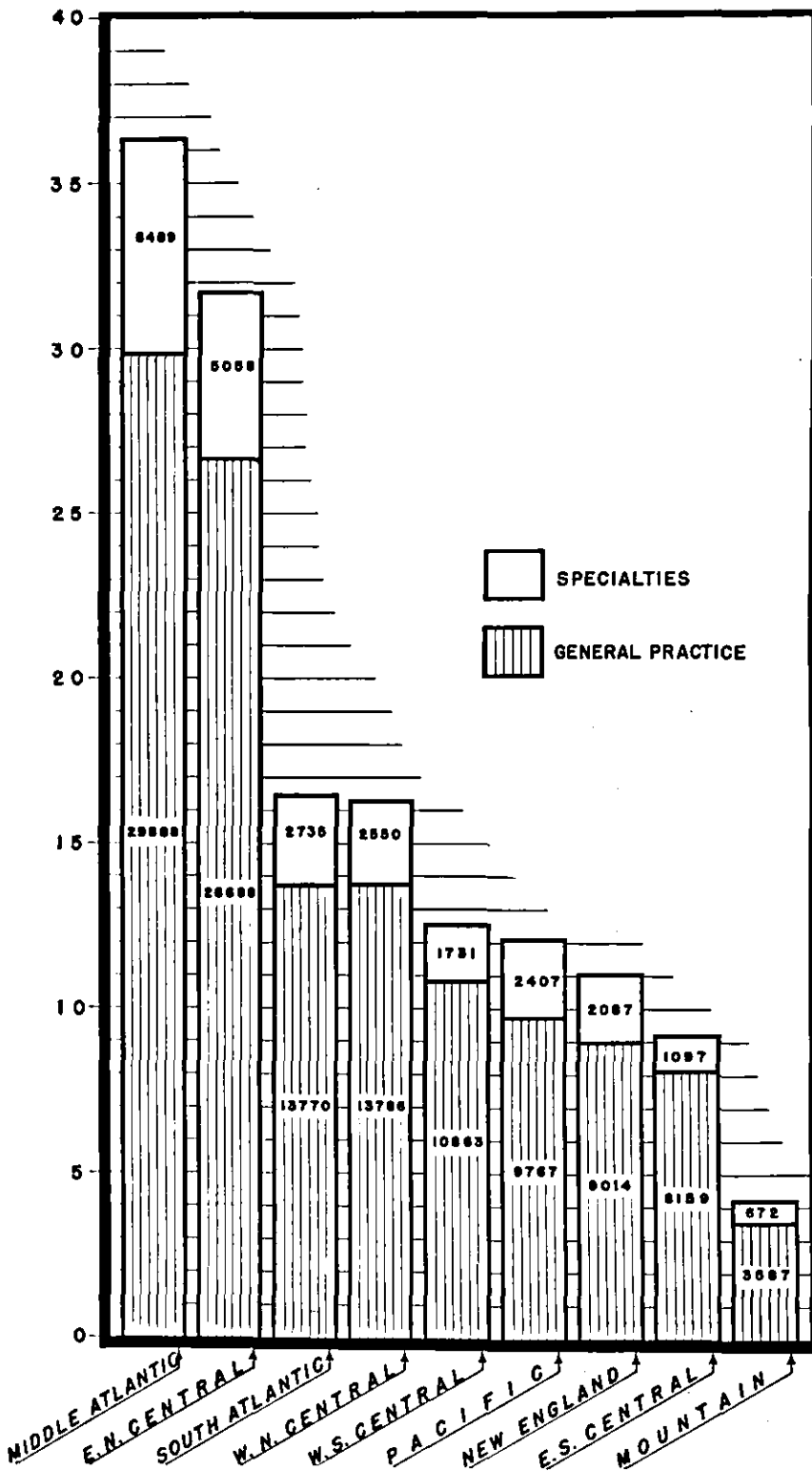


Chart 7 (based on table 38).—Number of physicians in general and special practice in the several geographic divisions of the United States. (American Medical Directory, 1931.)

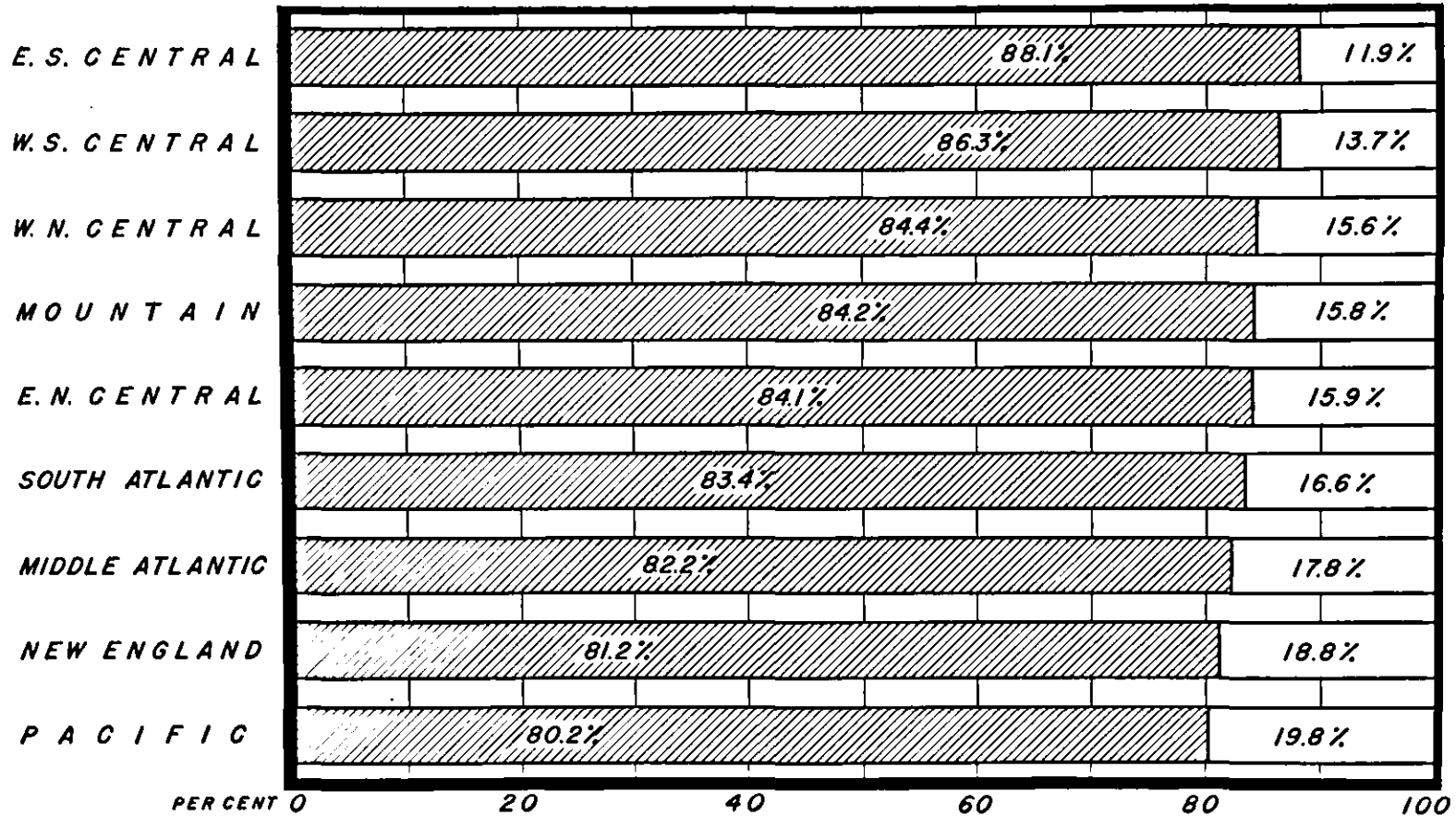


Chart 8 (based on table 38).—Percentage of physicians in general practice and limited specialties by geographic divisions.

The data in table 39 were prepared in units corresponding to the geographic divisions to make it possible to compare these geographic divisions more easily, one with the other.

On the other hand, table 40 utilizes the same data as shown in table 39 but makes the distribution in a different manner. In this table the figures represent the percentages of the physicians in active practice in the entire United States who practice in a stated specialty in any geographic division. Totals are obtained, therefore, by adding horizontally in this table. In table 39 it is possible to compare within the geographic division the percentages of physicians in each specialty, whereas in table 40 the percentages of physicians in a stated specialty are comparable for the several geographic divisions.

Table 41 summarizes the actual numbers of physicians in each specialty by states. The totals of table 41 are shown graphically in chart 9, which indicates strikingly those fields in medical practice in which there are the largest numbers of physicians who have a hope or an ambition to become a limited specialist, sometime.

TABLE G 1.—*Specialization in Germany*

Groups of Cities	Population	Physicians in Practice	General Practice	Specialists	Per Cent Specialists
1. 52 over 100,000.....	19,782,000	18,007	9,610	8,397	46.6
2. 49 with 50,000-100,000.....	3,578,300	2,902	1,432	1,470	50.7
3. 158 with 20,000-50,000.....	4,805,600	3,725	1,993	1,732	46.5
4. 270 with 10,000-20,000.....	3,589,900	2,469	1,740	729	29.5
529 Total.....	31,755,800	27,103	14,775	12,328	45.5

The total number of physicians in active practice in 1931 were again distributed in table 42 by actual numbers according to population groups within the several geographic divisions. At the bottom of each geographic division will be found numbers which represent the percentages of physicians in a stated type of practice in that geographic division. Near the top of the table will be found a summary giving numbers that represent the percentages of physicians in the entire United States who are engaged in general practice or a stated specialty in a particular geographic division.

It is difficult to compare the extent of specialization in various countries. The standards of specialization are so different that it is not safe to assume that the same things are being measured. A recent study in Germany gives certain figures according to groups of cities that are presented in table G 1 for what they are worth in making such a comparison.⁶ The context does not state whether the population as given is only that included in the corporate limits of the city or all those in the surrounding rural territory who might be supposed to receive their medical service from the physicians in such cities. It would seem, however,

6. Deutsches Aerzteblatt, May 19, 1934, p. 529.

TABLE 39.—Percentage of All Physicians in Each Geographic Subdivision According to General Practice and Special Attention, Specialties, Retired and Not in Practice

	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	United States
General practice and special attention*.....	77.547	79.934	81.432	81.617	79.784	84.94	83.478	79.977	73.524	80.30
O. A. L. R.	4.069	4.381	4.063	4.304	3.616	2.88	4.042	4.704	4.532	4.10
Surgery.....	2.934	2.511	2.736	3.043	2.810	2.12	2.121	2.230	2.695	2.63
Internal medicine.....	2.624	2.910	2.522	2.516	2.631	1.55	1.875	2.232	3.086	2.56
Pediatrics.....	1.170	1.155	1.000	0.841	1.078	0.71	0.761	0.691	1.059	1.00
Obstetrics and gynecology..	0.981	1.332	0.814	0.681	0.823	0.36	0.461	0.468	1.257	0.91
Neurology, psychiatry.....	1.764	1.161	0.763	0.805	0.782	0.48	0.546	0.580	0.738	0.90
Urology.....	0.748	0.861	0.793	0.681	1.060	0.70	0.909	0.736	1.122	0.80
Roentgenology.....	0.714	0.746	0.625	0.491	0.620	0.41	0.622	0.550	0.768	0.64
Public health.....	0.533	0.281	0.424	0.338	0.973	1.10	0.377	0.557	0.504	0.50
Dermatology.....	0.525	0.522	0.354	0.355	0.319	0.25	0.377	0.223	0.437	0.41
Orthopedic surgery.....	0.843	0.441	0.278	0.337	0.336	0.26	0.207	0.334	0.550	0.39
Pathology.....	0.301	0.345	0.268	0.243	0.284	0.21	0.353	0.424	0.437	0.31
Tuberculosis.....	0.413	0.241	0.235	0.237	0.272	0.24	0.246	0.959	0.459	0.30
Industrial medicine.....	0.077	0.163	0.275	0.036	0.075	0.05	0.069	0.045	0.083	0.13
Proctology.....	0.060	0.160	0.146	0.118	0.087	0.07	0.092	0.067	0.173	0.12
Anesthesia.....	0.164	0.118	0.082	0.047	0.058	0.03	0.140	0.089	0.135	0.10
Bacteriology.....	0.034	0.027	0.018	0.024	0.023	....	0.008	0.045	0.015	0.02
Total percentage in active practice.....	95.501	97.289	96.858	96.714	95.631	96.30	93.780	94.961	91.644	96.18
Not in practice.....	2.770	1.770	2.013	2.149	2.665	2.32	1.937	3.032	5.202	2.41
Retired.....	1.729	0.941	1.129	1.137	1.704	1.32	1.283	2.607	3.154	1.41
Total percentage.....	100	100	100	100	100	100	100	100	100	100
*The percentage of:										
General practice.....	63.150	64.809	64.705	65.212	67.883	72.29	68.854	61.516	59.801	65.34
Special attention.....	14.367	15.065	16.727	16.405	11.901	12.65	14.624	18.461	13.723	14.96

TABLE 40.—Percentage of All Physicians in the United States According to Geographic Subdivision and Specialty

	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	United States
General practice and special attention*.....	7.18	23.81	21.27	10.98	10.97	6.50	8.65	2.86	7.78	100
O. A. L. R.	7.38	25.55	20.78	11.34	9.74	4.32	8.21	3.29	9.39	100
Surgery.....	8.29	22.83	21.80	12.49	11.79	4.96	6.71	2.43	8.70	100
Internal medicine.....	7.62	27.18	20.66	10.62	11.34	3.72	6.10	2.52	10.24	100
Pediatrics.....	8.67	27.55	20.92	9.06	11.86	4.34	6.31	1.98	9.31	100
Obstetrics and gynecology..	8.04	35.12	18.83	8.11	10.01	2.40	4.23	1.48	11.78	100
Neurology, psychiatry.....	14.60	31.00	17.80	9.70	9.00	3.30	5.10	1.90	7.00	100
Urology.....	6.46	23.92	19.32	8.54	13.60	4.98	9.66	2.45	11.07	100
Roentgenology.....	8.26	27.76	20.40	8.26	10.64	3.88	8.06	2.50	10.15	100
Public health.....	7.97	13.50	17.87	7.33	21.59	13.62	6.30	3.21	8.61	100
Dermatology.....	9.56	30.56	19.75	9.41	8.62	3.76	7.68	1.57	9.09	100
Orthopedic surgery.....	16.09	27.09	14.04	9.36	9.53	4.11	4.43	2.46	11.09	100
Pathology.....	7.22	26.60	18.14	8.45	10.10	4.12	9.49	3.92	11.96	100
Tuberculosis.....	10.32	19.35	16.56	8.60	10.11	4.05	6.88	0.25	13.96	100
Industrial medicine.....	4.36	29.61	43.69	2.91	6.31	2.43	4.37	0.97	5.34	100
Proctology.....	3.59	30.77	24.62	10.26	7.69	3.59	6.15	1.54	11.79	100
Anesthesia.....	12.50	28.95	17.76	5.26	6.58	1.98	12.50	2.63	11.84	100
Bacteriology.....	12.12	30.31	18.18	12.12	12.12	....	3.03	6.06	6.06	100
Total percentage in active practice.....	7.38	24.19	21.12	10.86	10.98	6.16	8.38	2.83	8.10	100
Not in practice.....	8.54	17.56	17.51	9.63	12.21	5.92	6.69	3.61	18.33	100
Retired.....	9.09	15.91	16.73	8.68	13.29	5.74	7.55	4.07	18.94	100
Total percentage of all physicians.....	7.44	23.92	20.97	10.80	11.04	6.14	8.32	2.87	8.50	100
*The percentage of:										
General practice.....	7.19	23.74	20.77	10.78	11.47	6.80	8.77	2.70	7.78	100
Special attention.....	7.14	24.09	23.46	11.85	8.78	5.20	8.14	3.54	7.60	100

TABLE 41.—Distribution of Physicians by States According to General Practice and to Limited Practice and Special Attention in the Specialities

States	General Practice	Internal Medicine	Public Health	O. A. L. R.		Surgery		Pediatrics		Obstetrics and Gynecology		Neurology Psychiatry		Urology		Roentgenology	
				Specialists	Special Attention	Specialists	Special Attention	Specialists	Special Attention	Specialists	Special Attention	Specialists	Special Attention	Specialists	Special Attention	Specialists	Special Attention
Alabama.....	1,600	38	42	66	10	47	119	23	38	9	58	9	3	16	9	5	9
Arizona.....	242	18	5	25	4	9	46	4	5	6	15	1	2	4	5	2	3
Arkansas.....	1,487	33	11	53	15	22	96	5	29	4	44	5	6	10	29	11	8
California.....	6,030	324	53	421	75	271	559	113	70	122	300	79	36	107	57	79	24
Colorado.....	1,114	51	4	100	17	54	137	18	22	9	59	15	6	17	9	18	8
Connecticut.....	1,390	60	19	92	20	59	105	34	34	20	71	33	24	15	11	19	5
Delaware.....	192	1	3	10	2	8	12	2	4	1	6	4	2	4	1	2	1
District of Columbia..	1,210	65	38	68	19	45	37	14	14	24	38	21	16	23	9	15	6
Florida.....	959	44	12	75	21	44	117	17	23	14	72	7	5	23	12	17	6
Georgia.....	2,061	77	19	86	9	66	151	37	42	18	75	15	6	30	16	11	12
Idaho.....	278	1	1	11	4	3	33	1	4	..	9	1	..	1	1	..	2
Illinois.....	7,230	294	39	469	143	286	787	120	154	103	498	80	52	94	97	58	57
Indiana.....	2,682	73	9	178	74	112	241	21	63	23	117	26	12	35	29	23	27
Iowa.....	2,010	63	9	139	64	82	266	21	50	11	131	20	7	14	13	10	27
Kansas.....	1,404	35	14	88	56	60	158	6	25	5	90	13	10	10	11	10	18
Kentucky.....	2,086	43	9	83	42	73	129	7	61	7	75	14	5	16	17	11	26
Louisiana.....	1,429	48	16	90	13	40	115	24	16	12	69	16	8	25	13	17	6
Maine.....	635	17	7	48	21	18	73	5	7	3	26	9	5	7	5	6	7
Maryland.....	1,710	92	20	76	19	76	42	23	42	45	42	35	20	25	9	16	5
Massachusetts.....	4,169	199	25	263	61	207	343	84	99	81	160	142	47	54	37	47	34
Michigan.....	3,588	159	24	204	86	148	346	67	75	58	257	36	30	42	34	40	34
Minnesota.....	1,866	129	12	148	47	110	277	41	25	26	93	38	4	18	11	22	7
Mississippi.....	1,186	13	16	39	5	24	80	8	24	3	38	9	3	6	11	3	6
Missouri.....	3,826	137	14	238	78	159	289	56	62	56	147	47	27	60	27	28	15
Montana.....	327	12	3	22	7	10	44	..	8	1	14	2	1	2	4	1	5
Nebraska.....	1,157	45	3	68	23	74	138	15	24	13	69	12	11	11	6	9	15
Nevada.....	88	1	..	5	1	6	9	..	2	..	5	1	..	1	1	2	..
New Hampshire.....	867	4	3	22	5	14	54	2	14	1	11	3	2	1	2	1	6
New Jersey.....	2,830	91	7	151	73	79	233	50	81	39	184	25	24	25	37	32	28
New Mexico.....	243	4	8	9	3	2	28	1	7	2	12	..	1	3	1	1	2
New York.....	13,594	663	77	908	249	583	850	281	396	319	641	305	127	201	130	148	99
North Carolina.....	1,580	63	29	107	21	97	87	31	56	10	65	15	7	29	15	10	10
North Dakota.....	334	11	4	25	10	15	53	1	6	3	23	2	2	1	6	3	..
Ohio.....	5,668	227	51	355	128	269	393	92	125	67	289	80	27	69	52	65	63
Oklahoma.....	1,661	40	6	102	34	74	134	15	53	15	86	16	6	27	26	7	11
Oregon.....	800	34	5	68	7	35	95	10	6	16	36	6	4	14	3	5	4
Pennsylvania.....	7,831	334	21	579	282	277	518	101	202	140	377	104	71	96	100	99	80
Rhode Island.....	526	22	6	33	10	35	38	0	12	8	27	12	6	6	8	7	4
South Carolina.....	907	14	13	36	16	36	50	15	32	7	21	9	7	17	4	9	10
South Dakota.....	412	5	1	21	10	14	49	2	5	1	21	4	2	1	4	1	5
Tennessee.....	2,672	55	39	89	24	60	169	30	27	15	92	14	10	29	9	20	9
Texas.....	4,383	123	10	281	57	140	420	55	81	29	219	34	21	68	55	46	37
Utah.....	285	14	4	29	8	9	55	7	5	3	25	3	2	4	5	2	3
Vermont.....	341	3	2	15	12	8	27	2	7	1	18	6	2	4	2	3	5
Virginia.....	1,760	68	17	105	24	62	121	31	34	10	85	24	8	19	18	19	17
Washington.....	1,114	52	9	113	18	52	188	23	8	29	79	13	7	28	9	18	4
West Virginia.....	1,297	30	17	61	17	51	80	16	19	7	49	5	3	13	15	8	5
Wisconsin.....	2,046	74	16	126	43	82	224	28	33	16	112	28	16	20	30	19	16
Wyoming.....	152	..	..	10	4	7	31	..	1	..	6	3	2	1	2	..	1
Totals.....	102,151	4,003	778	6,410	1,991	4,114	8,636	1,568	2,232	1,418	5,036	1,401	699	1,346	1,023	1,005	780

States	Tuberculosis		Dermatology		Pathology		Orthopedic Surgery		Industrial Medicine		Proctology		Anesthesia		Bacteriology		Totals		Grand Total
	Specialists	Special Attention	Specialists	Special Attention	Specialists	Special Attention	Specialists	Special Attention	Specialists	Special Attention	Specialists	Special Attention	Specialists	Special Attention	Specialists	Special Attention	Specialists	Special Attention	
Alabama.....	1	4	7	4	4	..	6	1	1	8	1	8	..	3	275	269	2,144
Arizona.....	10	..	1	4	2	..	1	1	2	5	..	..	1	1	..	89	98	459
Arkansas.....	3	..	4	2	2	..	1	3	..	5	2	9	..	3	..	167	250	1,904	
California.....	52	30	45	10	44	19	57	23	11	73	18	8	17	22	2	1,815	1,302	9,147	
Colorado.....	20	34	6	..	14	4	7	7	..	10	2	5	3	7	2	341	321	1,776	
Connecticut.....	10	6	18	6	3	2	22	9	3	3	2	3	3	5	..	412	308	2,026	
Delaware.....	1	1	..	2	3	..	..	..	..	1	1	1	..	1	..	37	35	264
District of Columbia.....	2	6	9	5	8	9	6	2	2	4	..	1	5	13	1	346	171	1,727	
Florida.....	4	3	7	4	4	..	4	1	1	5	1	7	1	4	..	275	281	1,555	
Georgia.....	3	3	8	1	9	2	9	2	1	9	1	1	2	3	..	392	337	2,760	
Idaho.....	1	..	..	..	..	..	..	..	..	2	..	3	..	..	..	20	63	361
Illinois.....	17	49	40	21	31	15	32	32	39	115	10	28	3	20	3	1,718	2,068	11,016	
Indiana.....	11	12	12	11	8	3	7	7	8	28	7	20	10	19	1	562	663	3,907	
Iowa.....	5	3	8	5	5	4	7	1	2	11	..	8	3	13	..	399	603	3,618	
Kansas.....	3	1	6	2	2	1	4	4	..	9	2	2	2	9	..	260	411	2,675	
Kentucky.....	8	7	8	5	5	2	6	3	3	12	3	7	3	10	1	299	394	2,779	
Louisiana.....	2	2	10	..	11	6	6	3	2	12	2	2	5	4	1	325	267	2,021	
Maine.....	5	3	2	2	3	1	9	9	..	5	..	2	2	3	..	141	161	937	
Maryland.....	6	7	10	4	8	4	11	1	6	4	3	1	2	6	2	456	206	2,372	
Massachusetts.....	25	24	37	14	22	5	59	23	5	18	4	8	12	10	4	1,270	895	6,334	
Michigan.....	23	10	28	8	16	5	12	8	16	35	12	13	1	6	1	837	949	5,424	
Minnesota.....	19	9	16	7	16	5	17	3	1	15	7	3	1	1	3	624	507	2,997	
Mississippi.....	5	4	1	2	2	1	..	1	..	1	..	3	..	3	..	129	182	1,497	
Missouri.....	9	13	22	12	15	5	21	4	3	30	7	16	2	20	1	875	747	5,448	
Montana.....	1	1	..	..	1	1	..	3	..	2	..	1	..	..	..	55	91	473
Nebraska.....	1	1	8	2	1	2	7	1	..	5	..	4	..	..	..	271	298	1,726
Nevada.....	..	..	..	..	1	..	..	..	..	3	..	..	..	1	..	17	22	127
New Hampshire.....	4	1	..	..	..	2	..	..	..	..	..	3	..	3	..	58	103	529
New Jersey.....	9	15	17	15	11	12	16	17	6	26	3	12	2	25	1	564	789	4,183	
New Mexico.....	11	14	..	..	..	1	1	..	..	2	..	..	2	..	..	42	73	358
New York.....	56	106	130	75	66	52	111	55	31	68	37	35	36	56	6	3,953	2,970	20,562	
North Carolina.....	14	19	8	3	5	1	7	3	1	3	4	9	..	2	..	430	301	2,311	
North Dakota.....	2	1	..	2	1	..	1	..	..	1	..	1	..	..	..	69	105	508
Ohio.....	20	35	38	18	25	12	33	13	23	44	17	24	12	43	1	1,444	1,246	8,378	
Oklahoma.....	5	6	14	11	5	3	5	3	3	7	2	20	4	4	..	340	404	2,405	
Oregon.....	6	1	5	3	5	..	6	2	..	13	3	3	..	1	..	218	178	1,196	
Pennsylvania.....	25	57	48	32	32	32	38	23	24	63	20	26	6	28	3	1,947	1,894	11,692	
Rhode Island.....	3	4	4	2	5	2	6	3	1	2	1	2	2	1	..	160	121	867	
South Carolina.....	2	4	1	4	7	..	4	1	..	3	2	3	..	6	1	173	162	1,242	
South Dakota.....	1	..	..	..	1	..	..	3	..	..	..	1	..	..	..	52	100	564
Tennessee.....	9	9	8	3	9	2	13	1	1	7	3	5	..	3	..	394	376	2,395	
Texas.....	22	15	21	9	28	9	16	7	4	27	6	12	9	12	1	859	682	6,264	
Utah.....	..	..	3	2	..	..	6	..	..	..	..	..	1	..	..	87	110	482
Vermont.....	1	1	..	2	1	..	..	1	..	4	..	..	..	3	..	46	82	469
Virginia.....	11	8	7	4	4	4	12	1	1	11	2	5	..	3	..	358	343	2,501	
Washington.....	7	7	8	1	9	3	10	6	..	7	2	4	1	2	..	374	343	1,831	
West Virginia.....	4	5	5	2	4	..	5	2	1	13	1	4	..	4	..	228	219	1,743	
Wisconsin.....	6	21	8	9	10	2	7	4	4	21	2	5	1	2	..	447	568	3,031	
Wyoming.....	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	21	50	223
Totals.....	465	577	638	319	455	228	609	284	206	762	195	364	152	394	33	30	24,526	23,281	150,378

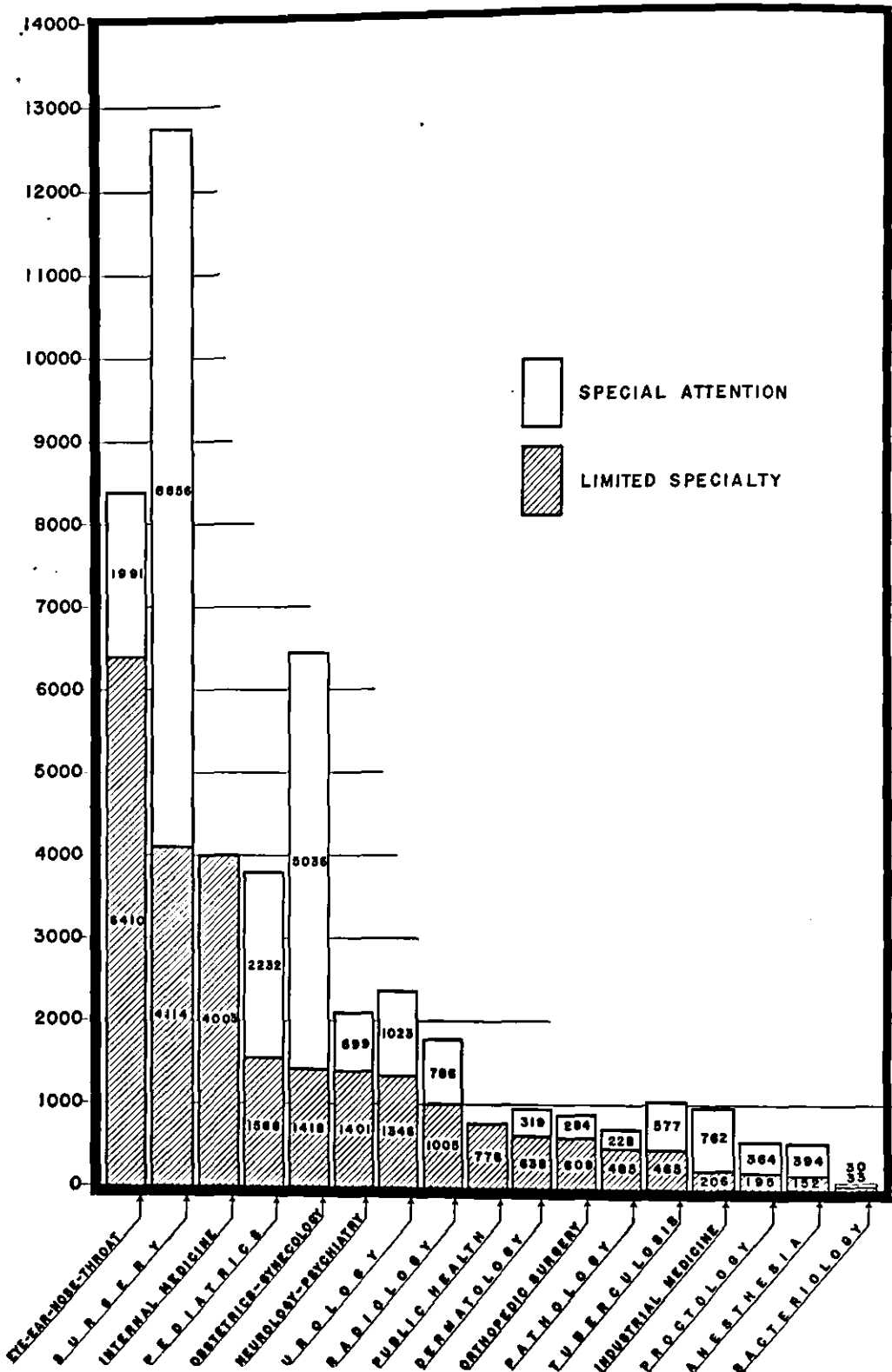


Chart 9 (based on table 41).—Number of physicians who are classified as limited specialists or as giving special attention arranged according to type of practice. (American Medical Directory, 1931.)

from the fact that the total population of the cities is a little less than half of the total population of Germany, that only those living within the city limits are included. It will be noted that, measured in this manner, there are more than 1,000 persons per physician. Since the total number of persons per physician in Germany is about 1,300, it would seem that the criticism, which is as extensive in Germany as in this country, of the tendency of physicians to flock to the great cities is hardly borne out by these figures. The really significant comparison is in the proportion of specialists which is 45.5 per cent, a much higher percentage than exists even in the larger cities in the United States.

The same study also lists the number of physicians in the various specialties. An examination of this table G 2 shows that this distribution is somewhat different than in the United States. When the several groups limiting themselves to the practice of eye, ear, nose and

TABLE G 2.—*Specialization in Germany*

	52 Cities over 100,000 Popula- tion	49 Cities with 50,000 to 100,000 Popula- tion	158 Cities with 20,000 to 50,000 Popula- tion	207 Cities with 10,000 to 20,000 Popula- tion	Total
Gynecology.....	1,082	170	180	58	1,490
Surgery.....	697	114	119	75	1,005
Surgery and gynecology.....	199	70	129	124	522
Dermatology.....	1,306	177	200	41	1,724
Urology.....	117	3	...	2	122
Internal medicine.....	1,317	229	281	87	1,914
Neurology and psychiatry.....	566	96	79	18	759
Ophthalmology.....	732	166	242	119	1,259
Otology, rhinology, laryngology.....	814	177	252	142	1,385
Pediatrics.....	665	119	147	43	974
Gastro-enterology.....	170	15	11	..	196
Orthopedics.....	183	26	12	2	223
Surgery and orthopedics.....	138	38	25	5	206
Tuberculosis.....	156	37	28	8	229
Stomatology.....	91	14	12	2	119
Roentgenology.....	160	19	15	3	197
Other.....	4	..	..	..	4
Total.....	8,397	1,470	1,732	720	12,328

throat specialties are combined, these take a leading place as in the United States. The next to follow is internal medicine, then dermatology and gynecology. The principal difference is the prominence of dermatology in Germany as compared with the United States.

COMPARISONS WITH PREVIOUS YEARS

The only previous investigation that is sufficiently extensive to be used for purposes of comparison is that of the General Education Board.⁷ The methods by which the figures were arrived at in that investigation, while sufficiently close to those used in this study, have some significant differences, which should be considered in examining the accompanying tables.

Because of the fact stated elsewhere in this report that the practice in New England in regard to incorporation of municipalities differs

7. Mayers, Lewis and Harrison, L. V.: *The Distribution of Physicians in the United States*, General Education Board, 1924.

from that in other states, the study of the General Education Board excluded New England from its figures in towns of less than 25,000 population and then gave the table for the United States excluding New England. It will be noted that the population per physician, table 43, for the United States in 1931 differs from that given in table 15 because of the omission of New England.

It would seem, however, safe to assume that these differences are so small that they do not affect the relative ratios in the various population groups. It is the latter point that is sought to be illustrated in table 43.

The most striking point brought out from this table is the steady increase in the number of persons per physician in cities over 25,000 and the slight decrease in the last eight years in the population per physician in cities of more than 100,000. This is a natural result of the lessening influence of the small town and cannot, without information as to the detailed conditions in those towns, which is not now

TABLE 43.—*Ratio of Physicians to Population in the United States* According to Size of Community for the Years 1906, 1923, 1931*

Size of Community	Population per Physician		
	1906*	1923*	1931*
Less than 1,000.....	997	1,338	1,602
1,000- 2,499.....	590	910	1,265
2,500- 4,999.....	557	749	1,023
5,000- 9,999.....	604	688	927
10,000-24,999.....	571	721	774
25,000-49,999.....	530	647	714
50,000-99,999.....	597	628	661
100,000 and over.....	492	536	530
United States*.....	675	763	823

* Excluding New England states.

Data for 1906 and 1923 from Mayers and Harrison: *The Distribution of Physicians in the United States*.

available, be accepted as an indication of a lack of adequate medical service for the people dependent on these smaller places.

This movement of physicians to the larger cities is shown more clearly in table 44, in which the figures of the Mayers and Harrison study are compared with the condition in 1931. Although the total number of physicians has steadily increased, the number in cities under 2,500 has absolutely decreased in twenty-five years by about 36 per cent. The percentage of the whole number of physicians in cities under 5,000 has also decreased and the reduction is far greater in the smaller cities.

At the same time there has been a correspondingly rapid increase in the number and percentage of total physicians in the larger cities. This table, unlike the previous one, takes no account of accompanying changes in population due to the great cityward drift, and the two tables must be compared to arrive at any significant conclusions as to the extent and effect of this changed distribution of physicians and population. It would require a large amount of time and research to deter-

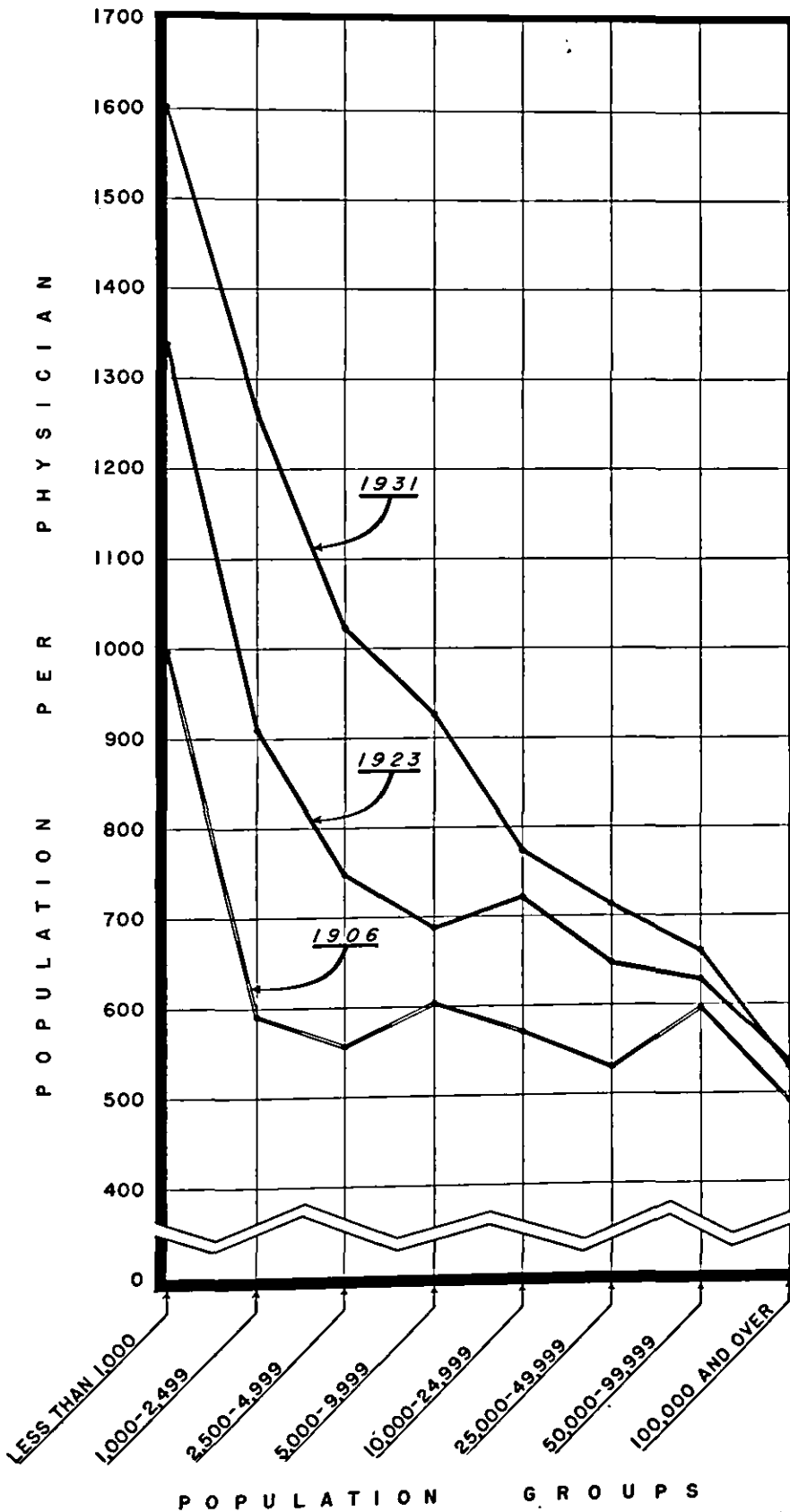


Chart 10 (based on table 43).—Population per physician for specified size of communities compared for 1906, 1923 and 1931. (Note: Population per physician has increased noticeably in communities of 50,000 and less.)

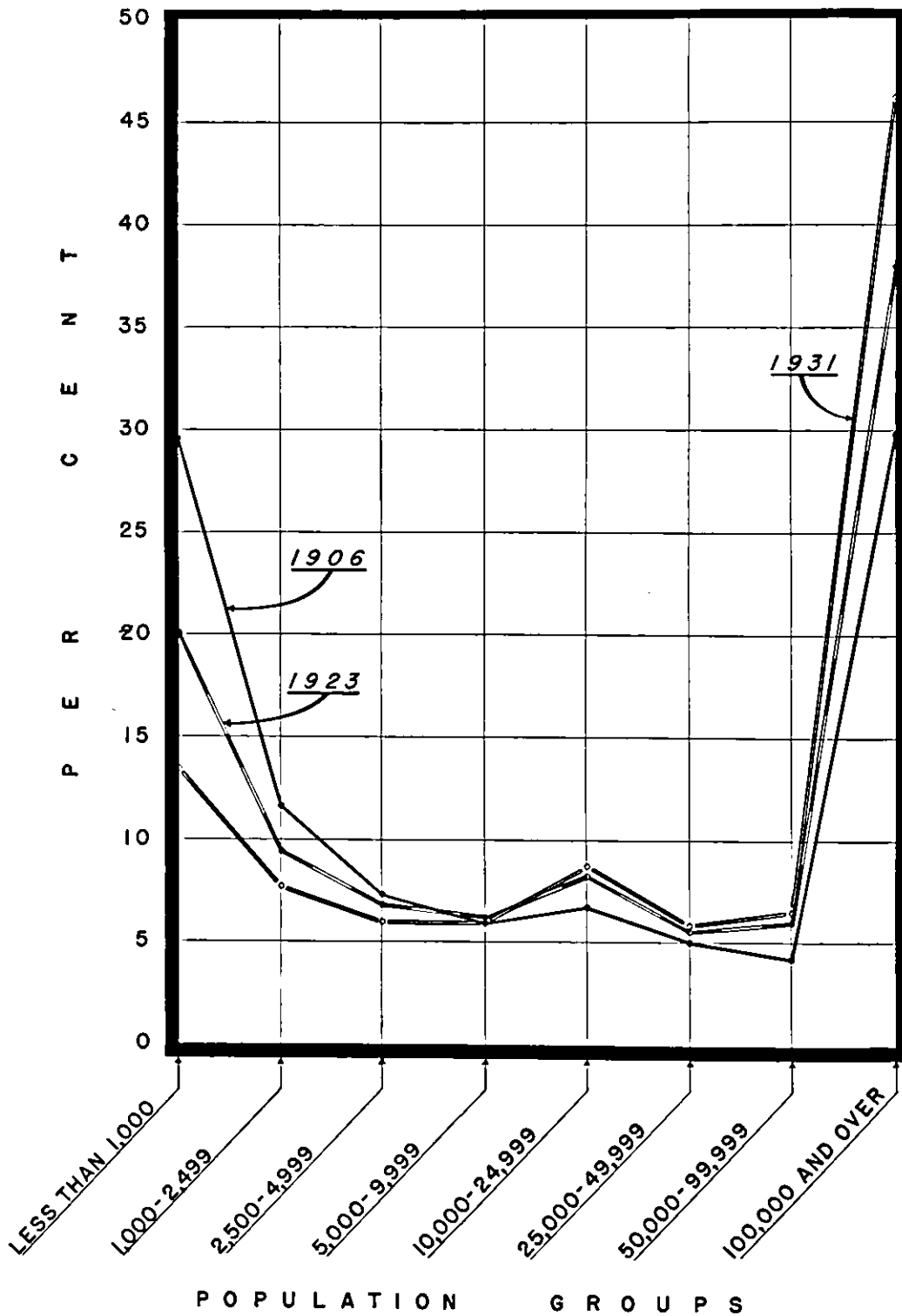


Chart 11 (based on table 44).—Percentage of physicians practicing in communities of a specified size compared for the years 1906-1923 and 1931.

mine the extent to which the situation in 1931 may have been due either to actual movements of physicians from a small city to a larger one or to young physicians taking up their first practice in the larger urban places.

TABLE 44.—*Comparison of the Number and Percentage of Physicians Practicing in the United States in Communities of a Specified Size for the Years 1906, 1923, 1931*

Note.—This does not imply that the same group of physicians was traced from 1906 through 1931. The table is intended to convey an idea of the extent of the drift of physicians away from small communities.

Size of Community	1906*		1923*		1931	
	Number of Physicians†	Per Cent	Number of Physicians†	Per Cent	Number of Physicians†	Per Cent
Less than 1,000.....	33,099	29.5	26,992	20.1	18,671	13.4
1,000-2,499.....	12,805	11.6	12,705	9.4	10,669	7.7
2,500-4,999.....	8,159	7.3	9,210	6.8	8,270	5.9
5,000-9,999.....	6,636	5.9	8,438	6.2	8,292	5.9
10,000-24,999.....	7,753	6.7	11,126	8.2	12,056	8.7
25,000-49,999.....	5,588	5.0	7,373	5.5	8,075	5.8
50,000-99,999.....	4,614	4.2	7,072	5.0	8,018	6.4
100,000 and over.....	33,534	29.8	50,965	37.9	64,306	46.2
Totals.....	112,186	100	134,786	100	139,257	100

* Figures from "The Distribution of Physicians in the United States" General Education Board, 1924.

† Excluding New England states.

SPECIAL CLASSIFICATION ACCORDING TO AGE

A study of the age of physicians was undertaken for sixteen states and the District of Columbia. Chart 15 shows the states selected and table 45 gives the entire tabulation by age groups of all physicians in the selected states in 1931.

The actual number of physicians in the sixteen states and the District of Columbia engaged in general practice and stated specialties according to the size of community in which they were practicing is shown in table 46.

TABLE 45.—*Distribution of All Physicians in 1931 in Sixteen Selected States and the District of Columbia by Age Groups, According to General Practice and Special Attention, Specialists, Retired, and Not in Practice*

Age Groups	General Practice and Special Attention		Total in Active Practice		Not in Practice	Grand Total
	Specialists		Retired			
20-24.....	172	1	173	..	..	173
25-29.....	5,518	135	5,653	..	15	5,668
30-34.....	7,344	1,170	8,514	1	41	8,555
35-39.....	6,289	2,001	8,290	4	64	8,358
40-44.....	5,983	2,058	8,041	10	80	8,131
45-49.....	6,162	1,998	8,160	20	138	8,318
50-54.....	6,172	1,778	7,950	45	191	8,186
55-59.....	6,239	1,476	7,715	84	241	8,040
60-64.....	5,017	891	5,908	129	256	6,293
65-69.....	3,312	443	3,755	139	238	4,123
70-74.....	2,180	221	2,401	207	215	2,823
75-79.....	1,125	71	1,196	202	158	1,556
80 and over.....	566	25	591	210	135	696
Total in age groups.....	56,079	12,268	68,347	1,051	1,772	71,170
Unclassified as to age.....	2,346	82	2,428	81	211	2,720
Grand total.....	58,425	12,350	70,775	1,132	1,983	73,890

TABLE 46.—Distribution of Physicians in Active Practice in 1931 in 16 Selected States and District of Columbia Distributed According to Size of Community and Type of Practice

	Less than 1,000	1,000 to 2,499	2,500 to 4,999	5,000 to 9,999	10,000 to 24,999	25,000 to 49,999	50,000 to 99,999	100,000 to 249,999	250,000 to 499,999	500,000 to 999,999	1,000,000 and Over	Total
General practice and special attention*	7,011	3,938	3,038	3,223	4,345	3,219	3,180	3,713	6,010	3,333	17,365	58,425
O. A. L. R.	12	15	42	146	323	285	262	278	439	193	1,054	3,049
Internal medicine.....	19	18	27	40	91	122	185	177	359	193	812	2,043
Surgery.....	14	25	35	71	151	145	182	203	324	155	685	1,990
Pediatrics.....	1	3	4	11	38	57	98	83	134	67	318	814
Obstetrics and gynecology..	3	3	3	0	9	28	46	75	120	62	397	752
Neurology, psychiatry.....	38	22	20	33	33	47	28	61	98	50	268	698
Urology.....	2	..	4	5	18	41	66	85	131	54	273	679
Roentgenology.....	6	..	6	5	31	42	51	56	83	36	170	486
Public health.....	14	21	37	25	50	29	42	41	69	23	65	416
Dermatology.....	..	..	..	2	2	10	27	43	62	36	151	333
Orthopedic surgery.....	..	1	..	2	4	11	24	37	57	35	133	304
Tuberculosis.....	52	7	10	18	17	23	18	19	26	10	27	227
Pathology.....	4	4	3	2	11	14	20	23	47	21	74	223
Industrial medicine.....	2	1	2	6	5	13	7	11	13	10	52	123
Proctology.....	..	..	1	1	2	4	6	11	18	11	50	104
Anesthesia.....	1	1	..	1	2	10	4	7	21	12	34	93
Bacteriology.....	..	..	..	..	..	1	2	1	5	..	7	16
Total in active practice....	7,179	4,109	3,232	3,597	5,132	4,101	4,248	4,924	8,016	4,301	21,936	70,775
Not in practice.....	264	120	127	155	205	153	158	150	211	62	372	1,983
Retired.....	178	93	79	98	93	97	76	78	116	32	192	1,132
Total.....	7,621	4,328	3,438	3,850	5,430	4,351	4,482	5,152	8,343	4,395	22,500	73,890
*The numbers for:												
General practice.....	6,508	3,461	2,465	2,440	3,219	2,312	2,454	2,698	4,949	2,759	14,172	47,637
Special attention.....	503	527	573	783	1,126	907	726	815	1,061	574	3,193	10,788

Table 47 shows the percentage distribution of all physicians according to type of practice for the selected states compared with a similar percentage distribution for the United States. Likewise, table 48 compares the percentage distribution according to population groups. It is apparent from the similarity of the two distributions that the sample for the selected states is representative of the distribution for the entire

TABLE 47.—*Percentage Distribution of All Physicians According to Type of Practice*

	16 States and the District of Columbia	United States
General practice and special attention.....	79.08	80.30
O. A. L. R.....	4.13	4.10
Internal medicine.....	2.77	2.56
Surgery.....	2.69	2.63
Pediatrics.....	1.10	1.00
Obstetrics and gynecology.....	1.02	.91
Neurology, psychiatry.....	.94	.90
Urology.....	.92	.86
Röntgenology.....	.68	.64
Public health.....	.56	.50
Dermatology.....	.45	.41
Orthopedic surgery.....	.41	.39
Tuberculosis.....	.31	.30
Pathology.....	.30	.31
Industrial medicine.....	.17	.13
Proctology.....	.14	.12
Anesthesia.....	.12	.10
Bacteriology.....	.02	.02
Total in active practice.....	95.79	96.18
Not in practice.....	2.68	2.41
Retired.....	1.53	1.41
Total percentage.....	100.00	100.00

TABLE 48.—*Percentage Distribution of All Physicians According to Population Groups*

Population Groups	16 States and the District of Columbia	United States
Less than 5,000.....	20.82	26.39
5,000-9,999.....	5.21	6.04
10,000-24,999.....	7.35	8.99
25,000-99,999.....	11.96	12.79
100,000 and over.....	54.66	45.79
Total percentage.....	100.00	100.00

country. Because of the large number of physicians included in the selected states, the probable error of the age distribution is small and the sample is adequate.

Since the states are selected from all geographic divisions and show little deviation in other respects from the total figures, it may be assumed that a similar tabulation of the age distribution for all physicians in the entire forty-eight states would have shown no important change.

The data in table 51 analyze the distribution according to age groups. The boldface type in the table indicates the maximum age group number and percentage in each population group. If these boldface figures are followed down the table, a clearly defined trend is visible from the towns between 1,000 and 9,999 inclusive, in which the maximum number of practicing physicians is between the ages of 55 to 59. The trend is toward a constantly lower age to the cities of 500,000 and over, in which the maximum number and percentage are found to be between the ages of 30 to 34. This tendency seems to show that the younger physicians are locating in the larger cities. So great is the preponderance of younger physicians in the larger cities that it dominates the total, and the largest percentage of all the physicians in the United States is found in the general age class of 30 to 34 years. The data presented in table 51 are shown graphically in charts 13 and 14.

Table 49 shows for general practice and special attention the same distributions as are shown for all physicians in table 51. Any attempt to interpret these figures must be in the nature of a conjecture. It may be supposed that in the cities under 50,000 there may be a more stationary or declining character of the population than in the communities of larger size. Furthermore, since it appears from other studies that a larger percentage of physicians were located in these cities in previous years, there has been a natural tendency for these physicians to move upward toward the higher age groups. On the other hand, a larger percentage of more recent graduates seem to have selected cities above 50,000. It would not be safe, however, to accept this conclusion without further proof. Any inquiry into this situation would need to recognize the movement from one size population group to another.

Table 50, for the distribution of specialists, shows the same trend but still in a very irregular form. Tracing the boldface figures again, it will be noticed that in the cities under 10,000 the majority of specialists are in the age class from 45 to 59 but are fairly evenly distributed within the three population groups covered by this age distribution. In the cities above 10,000, the highest percentages of specialists by age group periods are included in the age distribution of 35 to 49 and are fairly well distributed among the three divisions within this age distribution. Naturally, owing to the fact that until recently few became limited specialists in the first five or even ten years after graduation, it should not be surprising that a large percentage of specialists are not found in the group under 35 years of age. It will be noted, however, that there is a fairly steady increase in the growth of specialization with the increase in size of the cities within the years 30 to 34, although in no case does this reach the maximum percentage. The maximum percentage of all specialists is found in the years 40 to 44, but there is a very slight difference in any of the age classifications between the ages 35 and 49.

Table 52 shows the number and percentage of general practitioners and specialists in each age group, according to states. Chart 15 shows

TABLE 49.—Number and Percentage of Physicians in Sixteen States and the Under General Practice or Special Attention Arranged According Percentage Attained in Each

Age groups	20-24		25-29		30-34		35-39		40-44		45-49	
	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians
Population Group												
Less than 1,000.....	4	0.1	254	3.9	413	6.3	394	6.0	551	8.4	701	10.7
1,000- 2,499.....	2	0.05	102	4.26	271	7.65	259	6.81	375	9.86	460	12.1
2,500- 4,999.....	1	0.03	150	5.14	275	9.42	242	8.29	296	10.14	372	12.74
5,000- 9,999.....	2	0.06	134	4.27	328	10.46	303	9.66	321	10.24	365	11.64
10,000- 24,999.....	4	0.1	254	6.1	465	11.1	473	11.3	441	10.5	496	11.8
25,000- 49,999.....	4	0.1	187	5.9	343	10.9	352	11.2	326	10.3	384	12.2
50,000- 99,999.....	11	0.4	281	9.2	422	13.7	321	10.4	341	11.1	381	12.4
100,000-249,999.....	16	0.4	414	11.4	508	14.0	466	12.9	429	11.8	370	10.2
250,000-499,999.....	29	0.5	743	12.7	790	13.5	638	10.9	662	11.3	596	10.2
500,000-999,999.....	15	0.5	509	15.8	500	15.5	414	12.8	336	10.4	296	9.2
1,000,000 and over.....	84	0.5	2,430	14.7	3,009	18.2	2,427	14.7	1,905	11.5	1,741	10.5
Totals.....	172	0.31	5,518	9.84	7,344	13.09	6,259	11.21	5,983	10.67	6,162	10.99

TABLE 50.—Number and Percentage of Physicians in Sixteen States and the as Specialists, Arranged According to Age and Population Groups, Showing in

Age groups	20-24		25-29		30-34		35-39		40-44		45-49	
	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians
Population Group												
Less than 1,000.....	..	..	6	3.6	9	5.3	16	9.5	22	13.1	23	13.7
1,000- 2,499.....	..	..	2	1.7	9	7.5	12	10.0	19	15.8	12	10.0
2,500- 4,999.....	..	..	5	2.6	10	5.2	23	11.9	23	11.9	39	20.1
5,000- 9,999.....	..	..	4	1.1	30	8.0	46	12.3	51	13.6	59	15.8
10,000- 24,999.....	..	..	7	0.9	59	7.5	100	12.7	130	16.6	125	15.9
25,000- 49,999.....	..	..	14	1.6	94	10.7	131	14.9	144	16.4	143	16.2
50,000- 99,999.....	..	..	12	1.1	105	9.9	172	16.3	194	18.4	192	18.2
100,000-249,999.....	..	..	7	0.6	99	8.2	237	19.6	205	17.0	211	17.5
250,000-499,999.....	1	0.05	25	1.25	206	10.3	321	16.06	340	17.01	325	16.26
500,000-999,999.....	..	..	8	0.8	102	10.6	172	17.9	161	16.7	155	16.1
1,000,000 and over.....	..	..	45	1.0	447	9.89	771	17.05	789	17.01	714	15.79
Totals.....	1	0.01	135	1.1	1,170	9.54	2,001	16.31	2,058	16.78	1,998	16.29

TABLE 51.—Summary of All Physicians in Active Practice in Sixteen States and Showing in Bold Face Type the Highest Percen

Age groups	20-24		25-29		30-34		35-39		40-44		45-49	
	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians
Population Group												
Less than 1,000.....	4	0.1	260	3.9	422	6.3	410	6.1	573	8.5	724	10.7
1,000- 2,499.....	2	0.1	164	4.2	300	7.7	271	6.9	394	10.0	472	12.0
2,500- 4,999.....	1	0.03	155	4.88	285	9.15	265	8.51	319	10.25	411	13.2
5,000- 9,999.....	2	0.1	138	3.9	358	10.2	349	9.9	372	10.6	424	12.1
10,000- 24,999.....	4	0.1	261	5.3	524	10.5	573	11.5	571	11.5	621	12.5
25,000- 49,999.....	4	0.1	201	5.0	437	10.8	483	12.0	470	11.6	527	13.1
50,000- 99,999.....	11	0.3	293	7.1	527	12.8	493	11.9	535	13.0	573	13.9
100,000-249,999.....	16	0.3	421	8.7	607	12.6	703	14.8	634	13.1	581	12.0
250,000-499,999.....	30	0.4	768	9.8	996	12.7	959	12.2	1,002	12.8	921	11.7
500,000-999,999.....	15	0.4	517	12.3	802	14.4	586	14.0	497	11.9	451	10.6
1,000,000 and over.....	84	0.4	2,475	11.7	3,456	16.4	3,198	15.2	2,674	12.7	2,455	11.7
Totals.....	173	0.3	5,653	8.3	8,514	12.5	8,290	12.1	8,041	11.8	8,160	11.9

District of Columbia Who Were Classified in the 1931 American Medical Directory to Age and Population Groups, Showing in Boldface Type the Highest Age and Population Group

50-54		55-59		60-64		65-69		70-74		75-79		80 and Up		Total	
No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians
907	13.8	994	15.1	918	14.0	604	9.2	448	6.8	247	3.7	134	2.0	6,509	100
515	13.55	547	14.39	465	12.23	329	8.65	229	6.02	115	3.03	53	1.4	3,892	100
394	13.49	390	13.36	348	11.58	205	7.02	140	4.79	74	2.53	43	1.47	2,620	100
397	12.66	413	13.17	355	11.32	209	6.66	167	5.33	98	3.13	44	1.4	3,130	100
518	12.4	522	12.5	416	9.9	273	6.5	182	4.3	94	2.2	53	1.3	4,191	100
417	13.2	411	13.0	300	9.5	191	6.1	128	4.1	71	2.3	38	1.2	3,152	100
396	12.9	338	11.9	251	8.2	164	5.3	95	3.1	46	1.5	25	0.8	3,072	100
362	10.0	385	10.6	278	7.7	166	4.6	136	3.8	60	1.7	33	0.9	3,623	100
610	10.4	633	10.8	484	8.3	329	5.6	196	3.4	100	1.7	43	0.7	5,853	100
310	9.6	317	9.8	236	7.3	158	4.9	72	2.2	44	1.3	22	0.7	3,229	100
1,346	8.2	1,289	7.8	976	5.9	684	4.1	387	2.3	176	1.1	78	0.5	16,532	100
6,172	11.0	6,239	11.12	5,017	8.95	3,312	5.91	2,150	3.89	1,123	2.01	566	1.01	56,079	100

District of Columbia Who Were Classified in the 1931 American Medical Directory Bold Face Type the Highest Percentage Attained in Each Age and Population Group

50-54		55-59		60-64		65-69		70-74		75-79		80 and Up		Total	
No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians
36	21.4	18	10.7	16	9.5	10	6.0	7	4.2	2	1.2	3	1.8	168	100
22	18.4	26	21.7	10	8.3	4	3.3	4	3.3	...	...	...	...	120	100
26	13.4	33	17.0	22	11.3	5	2.6	2	1.0	3	1.5	3	1.5	104	100
58	15.5	56	15.0	43	11.5	13	3.5	8	2.1	5	1.3	1	0.3	374	100
124	15.8	117	14.9	63	8.0	37	4.7	16	2.1	5	0.6	2	0.3	785	100
136	15.5	96	10.9	64	7.3	38	4.3	12	1.4	4	0.4	4	0.4	880	100
138	13.1	120	11.3	80	7.6	30	2.8	11	1.0	1	0.1	2	0.2	1,057	100
176	14.6	134	11.1	80	6.6	35	2.9	16	1.3	6	0.5	2	0.1	1,298	100
304	15.21	215	10.76	139	6.95	73	3.65	31	1.55	16	0.8	3	0.15	1,969	100
130	13.5	116	12.1	64	6.7	33	3.4	18	1.9	3	0.3	...	...	962	100
628	13.89	545	12.05	310	6.86	165	3.65	96	2.12	26	0.58	5	0.11	4,521	100
1,778	14.49	1,476	12.03	891	7.26	443	3.61	221	1.8	71	0.58	25	0.2	12,268	100

the District of Columbia Arranged According to Age and Population groups, tage Attained in Each Age and Population Group

50-54		55-59		60-64		65-69		70-74		75-79		80 and Up		Total	
No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians
943	14.0	1,012	15.0	934	13.9	614	9.1	455	6.7	249	3.7	137	2.0	6,737	100
537	13.7	573	14.6	475	12.1	333	8.5	233	5.9	115	2.9	53	1.4	3,922	100
420	13.49	423	13.58	360	11.56	210	6.74	142	4.56	77	2.47	46	1.48	3,114	100
455	13.0	469	13.4	398	11.3	222	6.3	175	5.0	103	2.9	45	1.3	2,510	100
642	12.9	639	12.8	479	9.6	310	6.2	198	4.0	90	2.0	55	1.1	4,976	100
553	13.7	507	12.6	364	9.0	229	5.7	140	3.5	75	1.9	42	1.0	4,032	100
534	12.9	458	11.1	331	8.0	194	4.7	106	2.8	47	1.1	27	0.6	4,129	100
538	11.1	519	10.7	358	7.4	201	4.2	152	3.2	66	1.4	35	0.7	4,831	100
914	11.6	848	10.8	623	7.9	402	5.1	227	2.9	116	1.5	46	0.6	7,352	100
440	10.5	433	10.3	300	7.2	191	4.5	90	2.1	47	1.1	22	0.5	4,191	100
1,974	9.4	1,834	8.7	1,286	6.1	849	4.0	483	2.3	202	1.0	83	0.4	21,033	100
7,950	11.6	7,716	11.3	5,908	8.6	3,755	5.5	2,401	3.5	1,196	1.7	591	0.9	68,347	100

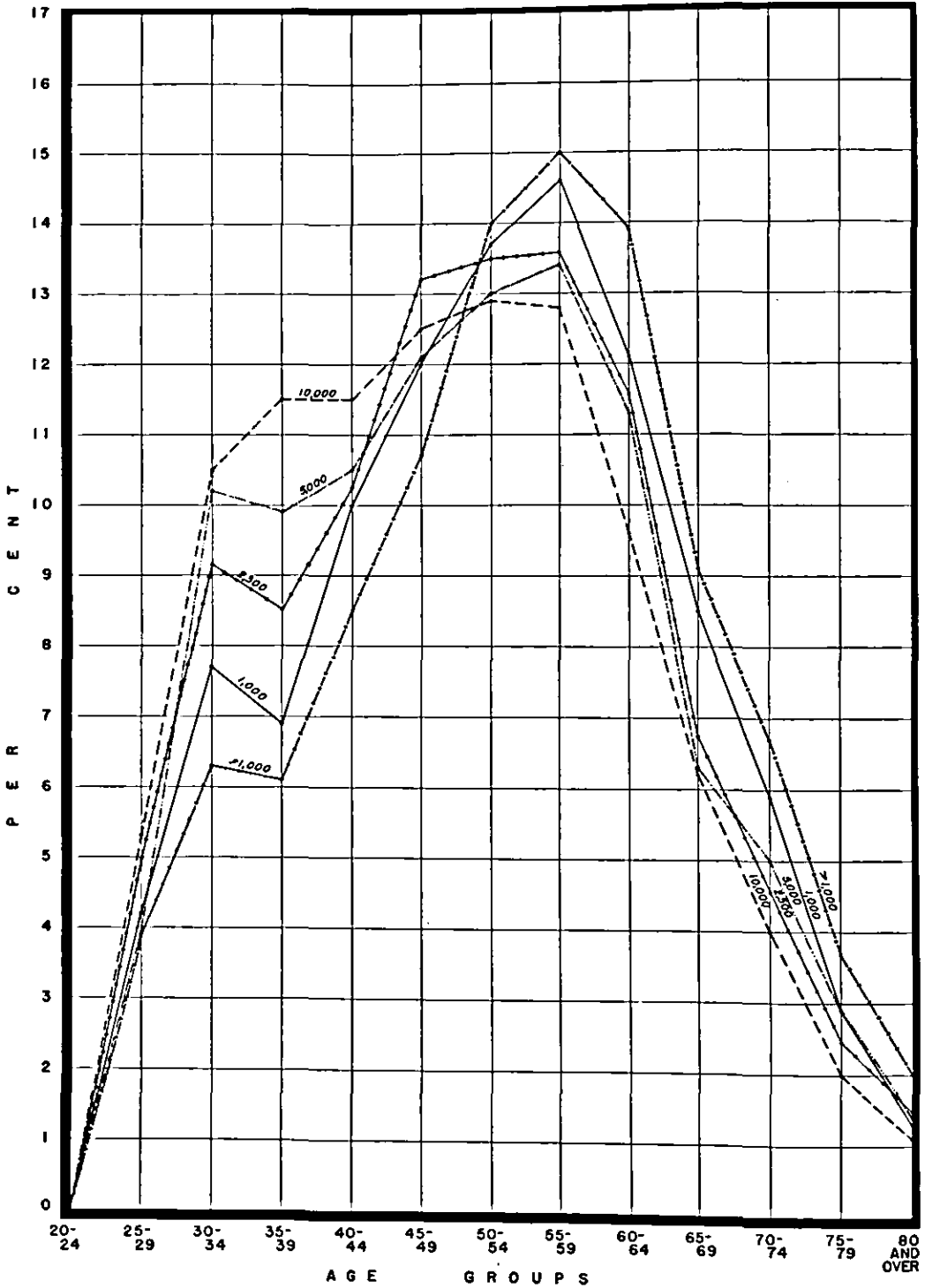


Chart 13 (based on table 51).—Percentage of physicians who at a specified age were practicing in communities of a particular population size (less than 1,000 to 10,000). (American Medical Directory, 1931.)

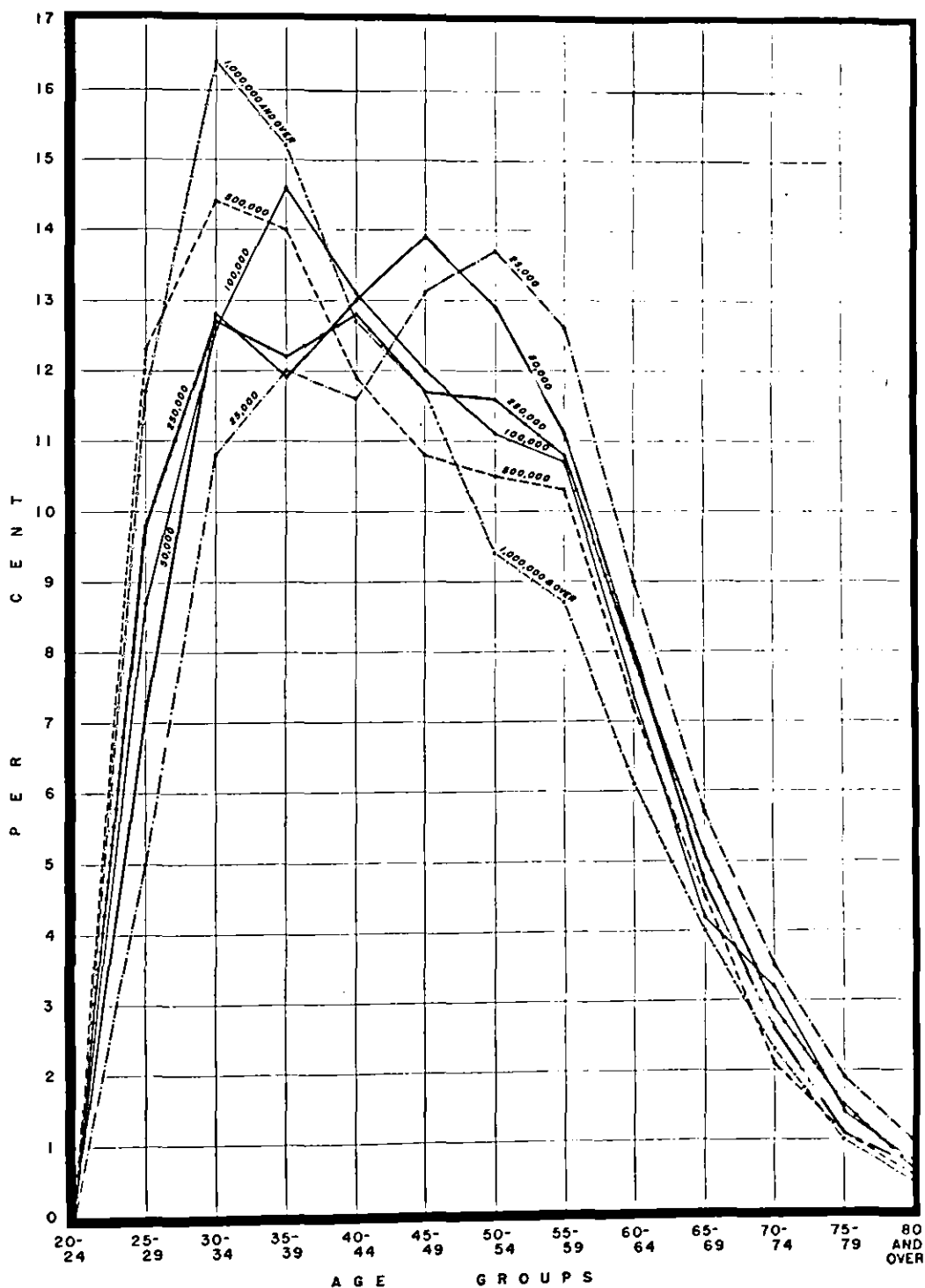


Chart 14 (based on table 51).—Percentage of Physicians who at a specified age were practicing in communities of a particular population size (10,000 to 1,000,000 and over). (American Medical Directory, 1931.)

TABLE 52.—Physicians in Active Practice in Sixteen States and the District of Age Group Classified as Specialists and General

	20-24		25-29		30-34		35-39		40-44		45-49	
	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians
ALABAMA												
Specialists.....	..	....	12	0.63	30	1.57	29	1.52	55	2.88	48	2.51
General practitioners and special attention	6	0.31	95	4.97	140	7.33	118	6.17	183	9.57	267	13.97
Total.....	6	0.31	107	5.60	170	8.90	147	7.69	238	12.45	315	16.48
ARIZONA												
Specialists.....	..	....	2	0.44	10	2.18	14	3.05	13	2.83	25	5.45
General practitioners and special attention	1	0.22	22	4.79	47	10.24	25	5.45	32	6.97	51	11.11
Total.....	1	0.22	24	5.23	57	12.42	39	8.50	45	9.80	76	16.56
ARKANSAS												
Specialists.....	..	....	2	0.11	18	0.96	21	1.12	29	1.55	29	1.55
General practitioners and special attention	1	0.05	41	2.19	68	3.64	71	3.80	113	6.05	241	12.89
Total.....	1	0.05	43	2.30	86	4.60	92	4.92	142	7.60	270	14.44
CALIFORNIA												
Specialists.....	..	....	21	0.24	169	1.90	267	3.00	296	3.32	296	3.32
General practitioners and special attention	15	0.17	523	5.93	859	9.64	853	9.58	782	8.78	836	9.39
Total.....	15	0.17	549	6.17	1,028	11.54	1,120	12.58	1,078	12.10	1,132	12.71
COLORADO												
Specialists.....	..	....	3	0.17	26	1.43	39	2.21	56	3.18	53	3.01
General practitioners and special attention	3	0.17	89	5.05	130	7.38	141	8.01	120	6.82	133	7.55
Total.....	3	0.17	92	5.22	156	8.86	180	10.22	176	10.00	186	10.56
CONNECTICUT												
Specialists.....	..	....	1	0.05	29	1.44	80	3.98	65	3.23	86	4.28
General practitioners and special attention	6	0.30	197	9.79	260	12.92	188	9.34	151	7.50	163	8.10
Total.....	6	0.30	198	9.84	289	14.36	268	13.32	216	10.73	249	12.38
DELAWARE												
Specialists.....	..	....	..	.....	5	1.93	9	3.47	5	1.93	7	2.70
General practitioners and special attention	..	....	28	10.81	25	9.65	16	6.18	35	13.51	21	8.11
Total.....	..	....	28	10.81	30	11.58	25	9.65	40	15.44	28	10.81
DISTRICT OF COLUMBIA												
Specialists.....	1	0.06	2	0.12	37	2.21	64	3.82	53	3.16	54	3.22
General practitioners and special attention	4	0.24	197	11.76	200	11.94	145	8.06	174	10.39	128	7.64
Total.....	5	0.30	199	11.88	237	14.15	209	12.48	227	13.55	182	10.86
FLORIDA												
Specialists.....	..	....	1	0.07	36	2.39	45	2.98	50	3.32	53	3.52
General practitioners and special attention	1	0.07	52	3.45	123	8.16	130	8.63	185	12.27	180	11.94
Total.....	1	0.07	53	3.52	159	10.55	175	11.61	235	15.59	233	15.46

Columbia Arranged by Age Groups Showing the Number and Percentage in Each Practice and Special Attention Combined

50-54		55-59		60-64		65-69		70-74		75-79		80 and Up		Total	
No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians
44	2.30	23	1.21	18	0.94	8	0.42	1	0.05	1	0.05	..	....	269	14.08
263	13.77	228	11.93	168	8.38	88	4.60	59	3.09	21	1.10	14	0.73	1,042	85.92
307	16.07	251	13.14	178	9.32	96	5.02	60	3.14	22	1.15	14	0.73	1,911	100
7	1.52	9	1.06	5	1.09	1	0.22	2	0.43	1	0.22	..	....	89	19.39
67	14.60	56	12.20	43	9.37	14	3.05	9	1.96	3	0.65	..	....	370	80.61
74	16.12	65	14.16	48	10.46	15	3.27	11	2.39	4	0.87	..	....	459	100
33	1.77	10	0.54	16	0.86	4	0.21	3	0.16	2	0.11	..	....	167	8.94
315	16.85	291	15.57	243	13.00	146	7.81	100	5.35	45	2.41	27	1.45	1,792	91.06
348	18.62	301	16.11	259	13.86	150	8.02	103	5.51	47	2.52	27	1.45	1,869	100
281	3.15	240	2.70	145	1.63	55	0.62	28	0.32	2	0.02	4	0.04	1,804	20.20
892	10.02	854	9.59	644	7.23	385	4.32	247	2.77	150	1.69	56	0.63	7,101	79.74
1,173	13.17	1,094	12.29	789	8.86	440	4.94	275	3.09	152	1.71	60	0.67	8,905	100
47	2.67	55	3.12	34	1.93	13	0.74	10	0.57	5	0.28	..	....	341	19.36
174	9.83	202	11.47	185	10.51	127	7.21	71	4.03	34	1.93	11	0.63	1,420	80.64
221	12.55	257	14.59	219	12.44	140	7.95	81	4.60	39	2.21	11	0.63	1,761	100
42	2.09	53	2.63	29	1.44	17	0.84	8	0.40	1	0.05	1	0.05	412	20.48
159	7.90	148	7.36	117	5.82	91	4.53	62	3.08	39	1.94	10	0.94	1,600	79.52
201	9.99	201	9.99	146	7.26	108	5.37	70	3.48	40	1.99	20	0.99	2,012	100
4	1.54	3	1.16	1	0.39	1	0.39	..	....	..	....	1	0.39	26	13.90
19	7.34	20	7.72	22	8.49	15	5.79	14	5.41	5	1.93	3	1.16	223	86.10
23	8.88	23	8.88	23	8.88	16	6.18	14	5.41	5	1.93	4	1.55	259	100
50	2.99	32	1.91	28	1.67	13	0.78	9	0.54	2	0.12	..	....	345	20.60
142	8.47	139	8.30	86	5.13	58	3.46	33	1.97	13	0.78	11	0.66	1,320	79.40
192	11.46	171	10.21	114	6.80	71	4.24	42	2.51	15	0.90	11	0.66	1,675	100
45	2.99	24	1.59	13	0.86	8	0.53	..	....	..	....	..	....	275	18.25
172	11.41	167	11.08	92	6.11	70	4.65	32	2.12	19	1.26	9	0.60	1,222	81.75
217	14.40	191	12.67	105	6.97	78	5.18	32	2.12	19	1.26	9	0.60	1,507	100

TABLE 52.—Physicians in Active Practice in Sixteen States and the District of Age Group Classified as Specialists and General

Age groups	20-24		25-29		30-34		35-39		40-44		45-49	
	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians	No. of Physi- cians	Per Cent of Physi- cians
GEORGIA												
Specialists.....	..	....	10	0.38	45	1.69	68	2.56	82	3.09	58	2.18
General practitioners and special attention	8	0.30	159	5.99	154	5.80	143	5.39	288	10.85	353	13.30
Total.....	8	0.30	169	6.37	199	7.49	211	7.95	370	13.94	411	15.48
IDAHO												
Specialists.....	..	....	..	....	1	0.28	1	0.28	1	0.28	2	0.57
General practitioners and special attention	..	....	8	2.27	21	5.97	26	7.39	31	8.81	56	15.91
Total.....	..	....	8	2.27	22	6.25	27	7.67	32	9.09	58	16.48
ILLINOIS												
Specialists.....	..	....	19	0.18	168	1.57	290	2.71	267	2.50	249	2.33
General practitioners and special attention	8	0.07	645	6.03	1,006	9.41	998	9.33	1,059	9.90	1,110	10.38
Total.....	8	0.07	664	6.21	1,174	10.98	1,288	12.04	1,326	12.40	1,359	12.71
INDIANA												
Specialists.....	..	....	5	0.13	55	1.46	84	2.23	80	2.12	84	2.23
General practitioners and special attention	11	0.29	201	5.33	287	7.60	237	6.28	252	6.68	316	8.37
Total.....	11	0.29	206	5.46	342	9.06	321	8.51	332	8.80	400	10.60
NEW YORK												
Specialists.....	..	....	35	0.16	368	1.89	660	3.39	666	3.42	636	3.26
General practitioners and special attention	86	0.44	2,466	12.65	2,903	14.90	2,254	11.57	1,630	8.36	1,434	7.36
Total.....	86	0.44	2,501	12.83	3,271	16.79	2,914	14.96	2,296	11.78	2,070	10.62
NORTH CAROLINA												
Specialists.....	..	....	9	0.41	30	1.77	87	3.94	82	3.71	82	3.71
General practitioners and special attention	3	0.14	119	5.38	223	10.09	191	8.64	254	11.50	245	11.09
Total.....	3	0.14	128	5.79	262	11.86	278	12.58	336	15.21	327	14.80
NORTH DAKOTA												
Specialists.....	..	....	1	0.20	10	1.99	6	1.20	13	2.59	6	1.20
General practitioners and special attention	..	....	24	4.78	42	8.37	33	6.57	35	6.97	59	11.75
Total.....	..	....	25	4.98	52	10.36	39	7.77	48	9.56	65	12.95
OHIO												
Specialists.....	..	....	12	0.14	124	1.49	237	2.85	245	2.95	230	2.77
General practitioners and special attention	19	0.23	647	7.76	856	10.29	720	8.66	659	7.92	569	6.84
Total.....	19	0.23	659	7.92	980	11.78	957	11.51	904	10.87	799	9.61
TOTALS FOR 16 STATES AND DISTRICT OF COLUMBIA												
Specialists.....	1	....	135	0.20	1,170	1.71	2,001	2.93	2,058	3.02	1,998	2.92
General practitioners and special attention	172	0.25	5,518	8.07	7,344	10.75	6,289	9.20	5,983	8.75	6,162	9.02
Grand total.....	173	0.25	5,653	8.27	8,514	12.46	8,290	12.13	8,041	11.77	8,160	11.94

Columbia Arranged by Age Groups Showing the Number and Percentage in Each Practice and Special Attention Combined—Continued

50-54		55-59		60-64		65-69		70-74		75-79		80 and Up		Total	
No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians	No. of Physicians	Per Cent of Physicians
49	1.85	41	1.54	21	0.79	11	0.41	5	0.19	2	0.08	..	....	392	14.76
318	11.97	276	10.40	247	9.30	153	5.76	108	4.07	42	1.58	14	0.53	2,263	85.24
367	13.82	317	11.94	268	10.09	164	6.17	113	4.26	44	1.66	14	0.53	2,655	100
3	0.85	6	1.71	2	0.57	1	0.28	1	0.29	1	0.28	1	0.29	20	5.68
59	16.76	55	15.62	30	8.52	19	5.40	13	3.69	9	2.56	5	1.42	332	94.32
62	17.61	61	17.33	32	9.09	20	5.68	14	3.98	10	2.84	6	1.71	332	100
223	2.09	218	2.03	141	1.32	80	0.75	34	0.32	13	0.12	2	0.01	1,704	15.93
1,020	9.54	1,071	10.02	861	8.05	585	5.47	373	3.49	153	1.43	101	0.95	8,990	84.07
1,243	11.63	1,289	12.05	1,002	9.37	665	6.22	407	3.81	166	1.55	103	0.96	10,694	100
99	2.62	67	1.78	48	1.27	16	0.42	12	0.32	8	0.21	3	0.08	561	14.87
436	11.56	452	11.98	412	10.92	257	6.82	181	4.80	108	2.86	62	1.64	3,212	85.13
535	14.18	519	13.76	460	12.19	273	7.24	193	5.12	116	3.07	65	1.72	3,773	100
566	2.90	470	2.41	256	1.31	145	0.74	83	0.43	23	0.12	7	0.04	3,915	20.09
1,175	6.03	1,201	6.16	923	4.74	679	3.49	438	2.25	260	1.33	123	0.63	15,572	79.91
1,741	8.93	1,671	8.57	1,179	6.05	824	4.23	521	2.68	283	1.45	130	0.67	19,457	100
57	2.58	35	1.58	25	1.13	9	0.41	1	0.05	1	0.04	1	0.05	428	19.38
238	10.77	166	7.52	162	7.34	78	3.53	61	2.76	28	1.27	13	0.59	1,781	80.62
295	13.35	201	9.10	187	8.47	87	3.94	62	2.81	29	1.31	14	0.64	2,209	100
11	2.19	10	1.99	7	1.39	1	0.20	1	0.20	1	0.20	..	....	67	13.35
85	16.93	70	13.95	40	7.97	31	6.17	10	1.99	5	1.00	1	0.20	435	86.65
96	19.12	80	15.94	47	9.36	32	6.37	11	2.19	6	1.20	1	0.20	562	100
217	2.61	180	2.16	102	1.23	60	0.72	23	0.28	8	0.09	5	0.06	1,443	17.35
638	7.67	843	10.14	750	9.01	516	6.21	369	4.43	191	2.30	97	1.17	6,874	82.65
855	10.28	1,023	12.30	852	10.24	576	6.93	392	4.71	199	2.39	102	1.23	8,317	100
1,778	2.60	1,476	2.16	891	1.30	443	0.65	221	0.32	71	0.10	25	0.04	12,248	17.95
6,172	9.03	6,239	9.13	5,017	7.34	3,312	4.84	2,180	3.19	1,125	1.65	569	0.83	56,079	82.05
7,950	11.63	7,715	11.29	5,908	8.64	3,755	5.49	2,401	3.51	1,196	1.75	591	0.87	68,347	100

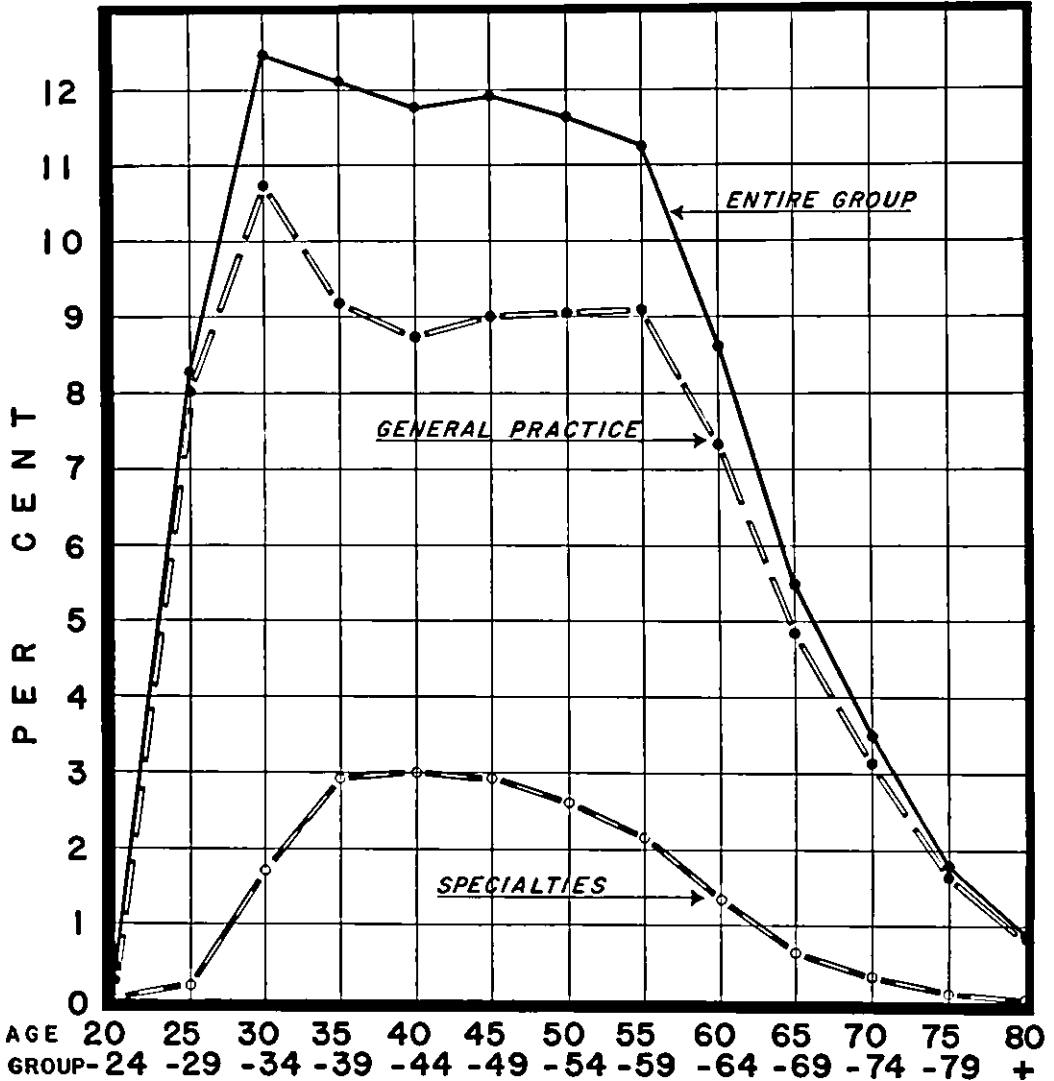


Chart 15 (based on table 52).—Percentage of physicians in active practice who at any stated age are classified as general practitioners or specialists.

(Note: The sum of the percentages for general practice and specialties equals the percentage for the entire group at a specified age.) (American Medical Directory, 1931.)

graphically the percentage of physicians who at any stated age are general practitioners or specialists.

The average age of specialists, general practitioners and those giving "special attention" combined, and all practicing physicians in each of the sixteen states is given in table 53. The average is obtained by multiplying the number of physicians in each age group by the mid-value of that age group and dividing the sum of these products by the total number of physicians. The same process was used to obtain the average for all the states included.

While the average age of specialists varies from 45 in several states to 56 in Idaho, and of the general practitioners and "special attention"

TABLE 53.—Average Age of Specialists and General Practitioners in Active Practice in 1931 Arranged According to the States Named

States	Specialists		General Practitioners and Special Attention		Summary	
	Number	Average Age	Number	Average Age	Number	Average Age
Alabama.....	269	46	1,642	49	1,911	49
Arizona.....	89	46	370	49	459	48
Arkansas.....	167	47	1,702	54	1,869	54
California.....	1,604	47	7,101	48	8,005	48
Colorado.....	341	49	1,420	51	1,761	51
Connecticut.....	412	47	1,600	46	2,012	46
Delaware.....	36	45	223	48	250	48
District of Columbia.....	345	47	1,330	45	1,675	45
Florida.....	275	45	1,232	48	1,507	48
Georgia.....	392	45	2,203	50	2,655	49
Idaho.....	20	56	332	52	352	62
Illinois.....	1,704	49	8,990	49	10,694	48
Indiana.....	561	48	3,212	52	3,773	51
New York.....	3,915	47	15,572	43	19,487	44
North Carolina.....	428	45	1,781	47	2,209	47
North Dakota.....	67	48	435	50	502	49
Ohio.....	1,443	48	6,874	49	8,317	49
Totals.....	12,268	47	56,079	47	68,347	47

from 43 in New York to 54 in Arkansas, it is rather remarkable that the average for the total in each class and of all physicians in practice is 47 years. The median age of all physicians in practice is also 47 years.

PHYSICIANS IN RELATION TO POPULATION INCOME

There seems to be a common acceptance of the idea that an adequate distribution of medical services for a community is measured by the ratio of the number of residents to the number of physicians. There are, however, many other important factors which affect the distribution of medical services.

The number of persons per physician in the United States in 1931 was 794. Table 54 gives corresponding data for twenty-eight foreign countries. While this table shows that some nations have four times as many persons per physician as others, the complaint of a surplus of physicians is common to nearly every country. The best available information does not indicate any definite correlation between the number of persons per physician and public health, mortality, physicians' income, or any other important feature of medical relations in these countries.

It is impossible to measure the relative quantities of medical service available to the various subdivisions of a country, such as states or counties, by computing the ratio of population to physician. Medical service bears no relation to state or political subdivision lines, but flows from centers of settlement into the surrounding countryside in every direction regardless of such subdivisions. There has been a fairly steady increase in the population per physician during the last twenty-nine years (see table 3), yet it has been during this same period that the greatest complaint regarding a surplus of physicians has been raised, and the demand has continuously increased for a limitation of the num-

TABLE 54.—*Population per Physician in Twenty-Eight Countries**

Austria.....	837	Belgium.....	1,400
Spain.....	1,000	Latvia.....	1,461
Canada.....	1,066	Norway.....	1,555
Great Britain.....	1,069	France.....	1,598
Hungary.....	1,100	Czecho-Slovakia.....	1,666
Switzerland.....	1,140	Luxemburg.....	1,666
Greece.....	1,166	Uruguay.....	1,666
Cuba.....	1,170	Portugal.....	2,333
Germany.....	1,307	Sweden.....	2,660
Palestine.....	1,333	Brazil.....	2,666
Denmark.....	1,346	Roumania.....	2,879
Estonia.....	1,411	Bulgaria.....	2,900
Holland.....	1,417	Poland.....	3,100
Danzig.....	1,425	Jugo-Slavia.....	3,450

* Rev. Internat. de méd. profess. et sociale 5: 109 (May) 1932.

ber of medical students and graduates.⁸ During the same period there has also been much discussion of the uneven distribution of physicians because of the relative disparity between the population per physician in cities and the population per physician in rural areas.

The relative uneven distribution of physicians—the concentration in urban centers and the shortage in many rural areas—is caused by many factors among which are the greater economic returns of practice in the city, better facilities and conveniences for practice, and more attractive professional, social, and educational advantages. It can be noted that the number of physicians in a locality does not necessarily measure the amount of medical service rendered. The disparity of physicians between town and country may indicate greater professional overcrowding in urban centers. The availability of medical service is dependent primarily on physical accessibility to physicians—distance, topography, road conditions and connections, methods of transportation, and means of communication. The actual utilization of service is dependent on the willingness of persons to use physicians, the willingness of physicians to serve, and the cost of the services. It is unwise to base con-

8. For a discussion of the indication that neither the rise in costs of education nor the ratio of population to number of physicians has any direct or measurable effect on the incomes of physicians, see Introduction to Medical Economics, Bureau of Medical Economics, American Medical Association, 1935, pp. 40-48.

clusions regarding the unequal or improper distribution of physicians solely on the simple comparison of population per physician.

The most important single factor affecting the distribution of physicians appears to be the spendable incomes of the population. For

TABLE 55.—*Medical Data Compared with Percentage of Population Filing Income Tax Returns*

	Percent- age of Popula- tion Filing Income Tax Returns	Popula- tion per Physician in Active Practice	Average Popula- tion per Physician in Active Practice	Popula- tion per Hospital Bed	Average Popula- tion per Hospital Bed	Percentage of Hospital Beds Occupied	Average Percentage of Hospital Beds Occupied
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
New York.....	4.97	614		273		73.67	
Massachusetts.....	4.52	671		234		72.25	
New Jersey.....	4.35	966		342		70.61	
California.....	4.25	621		211		68.26	
Connecticut.....	4.02	793		275		66.56	
Nevada.....	3.73	717		200	257	68.20	
Maryland.....	3.70	685	697	286		70.92	68.58
Illinois.....	3.51	693		236		62.36	
Delaware.....	3.45	903		331		57.55	
Washington.....	3.28	854		220		60.91	
Rhode Island.....	3.22	832		225		73.28	
Wisconsin.....	2.86	970		269		60.50	
Pennsylvania.....	2.76	824		312		67.91	
New Hampshire.....	2.67	881		248		64.18	
Wyoming.....	2.58	1,012		247		42.49	
Ohio.....	2.45	793		394		67.24	
Michigan.....	2.43	893		288		63.61	
Colorado.....	2.42	583		167		62.77	
Missouri.....	2.20	666	800	354	307	66.69	65.75
Vermont.....	2.17	767		324		57.61	
Oregon.....	2.09	797		274		65.09	
Minnesota.....	2.05	856		247		66.29	
Maine.....	2.03	851		290		64.16	
Utah.....	1.91	1,054		343		57.42	
Arizona.....	1.81	949		177		59.51	
Montana.....	1.81	1,137		183		51.99	
Nebraska.....	1.73	798		323		56.03	
Florida.....	1.68	944		372		51.87	
Indiana.....	1.67	829		436		53.15	
Texas.....	1.51	920		481		53.24	
Kansas.....	1.46	907	934	348	580	54.40	56.65
Virginia.....	1.43	968		366		62.02	
Louisiana.....	1.36	1,040		375		74.34	
Idaho.....	1.31	1,233		278		53.21	
West Virginia.....	1.27	992		425		52.14	
New Mexico.....	1.26	1,182		345		49.14	
Iowa.....	1.21	819		360		57.93	
Oklahoma.....	1.17	966		496		54.70	
Tennessee.....	1.07	923		451		69.04	
South Dakota.....	1.06	1,228		253		60.02	
North Dakota.....	1.03	1,540		321		54.36	
Kentucky.....	1.03	941		532		52.87	
Georgia.....	0.88	1,042	1,075	591	540	56.24	56.02
Alabama.....	0.73	1,234		588		53.00	
North Carolina.....	0.70	1,372		524		56.67	
South Carolina.....	0.60	1,400		681		53.48	
Arkansas.....	0.53	974		644		48.88	
Mississippi.....	0.49	1,343		675		43.11	

example, the difference in the distribution of physicians in the several states, as measured by the population per physician, seems to depend somewhat on the percentage of the population which has a sufficiently large income to be within the scope of the federal income tax. This is shown in table 55, column (1), in which the states are arranged in the

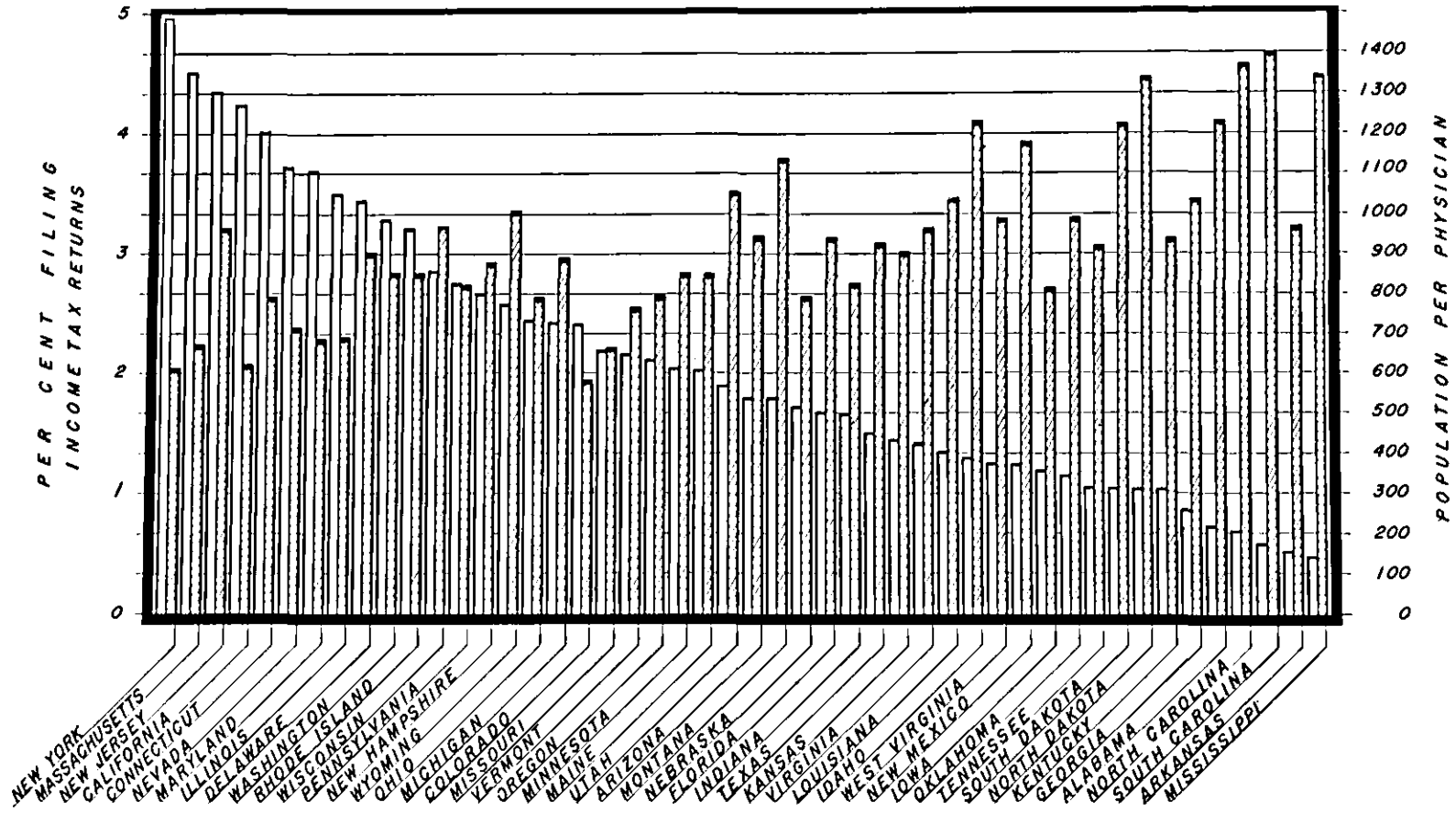


Chart 16 (based on table 55, columns 1 and 2).—Population per physician compared with the percentage of population filing income tax returns. Shown according to states. [Note: As the percentage of the population filing income tax returns decreases (white bars), the population per physician increases (cross-hatched bars with black tips).]

order of the percentage of the population filing income tax returns. The parallel column (2) shows that the number of persons per physician increases, with some exceptions, as the percentage of the population filing income tax returns decreases. Chart 16 shows this trend graphically. The white bars decreasing from left to right and the cross-hatched bars with black tips increasing from left to right indicate the correlation.

The correlation with the percentage of the population filing income tax returns is by no means perfect. The increase in population per physician is not uniform. (Chart 17 shows the relation of income to

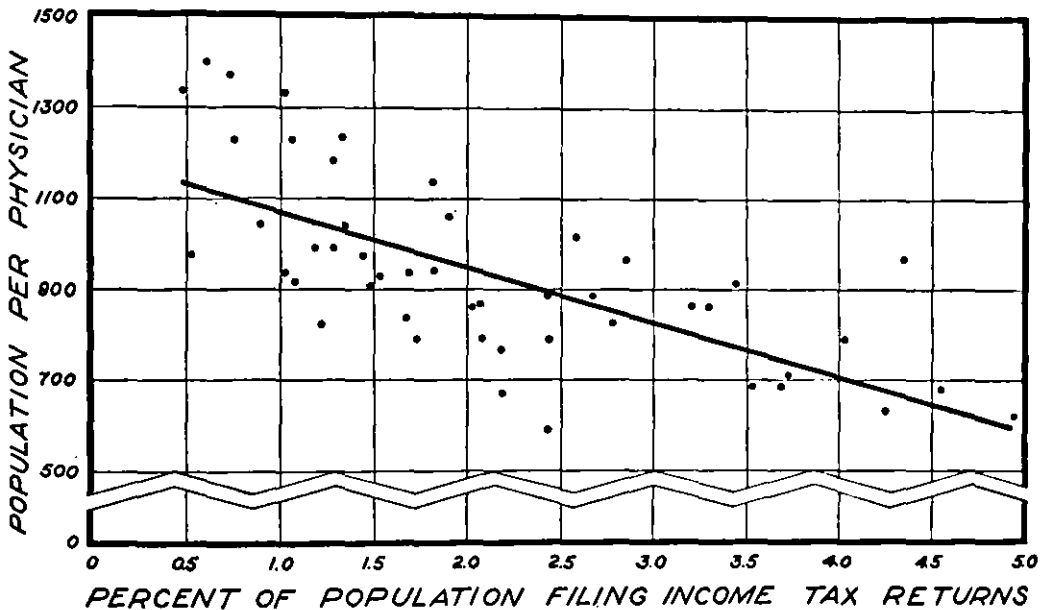


Chart 17.—Each dot represents the relation between the percentage of population filing income tax returns and the population per physician for a given state (table 55, columns 1 and 2). From the scatter diagram of dots, the average relationship is shown by a straight line which is fitted by the method of least squares and indicates that the population per physician decreases at a fairly uniform rate as the percentage of the population filing income tax returns increases. In general, the states in which a large percentage of the population files income tax returns are also those which have a low ratio of population to physician.

population per physician.) When the column giving this population is averaged by quarters, however, the general tendency is clear and continuous. The average population per physician in the first twelve states was 697, in the second 800, in the third 934, and in the twelve states with the smallest percentage filing returns it was 1,075.

That the distribution and utilization of medical facilities as well as of physicians is somewhat dependent on the income in any locality is also shown in table 55. In the 12 states having the highest percentage

of the population filing income tax returns there were only 257 persons per hospital bed (columns 4 and 5) and 68.58 per cent of these beds were filled (columns 6 and 7). In the 12 states with the lowest percentage, the number of persons per hospital bed increased to 540 while only 56.02 per cent of the available beds were occupied. (Chart 18 shows the relation of income to hospital beds and bed occupancy.)

The correlation between population per physician and taxable income is much closer than that between per capita income in the state (table 56 and chart 19). This would seem to indicate that it is the *percentage of the population* which has an annual income above the taxable limits (in 1931—\$3,500 for married and \$1,500 for single per-

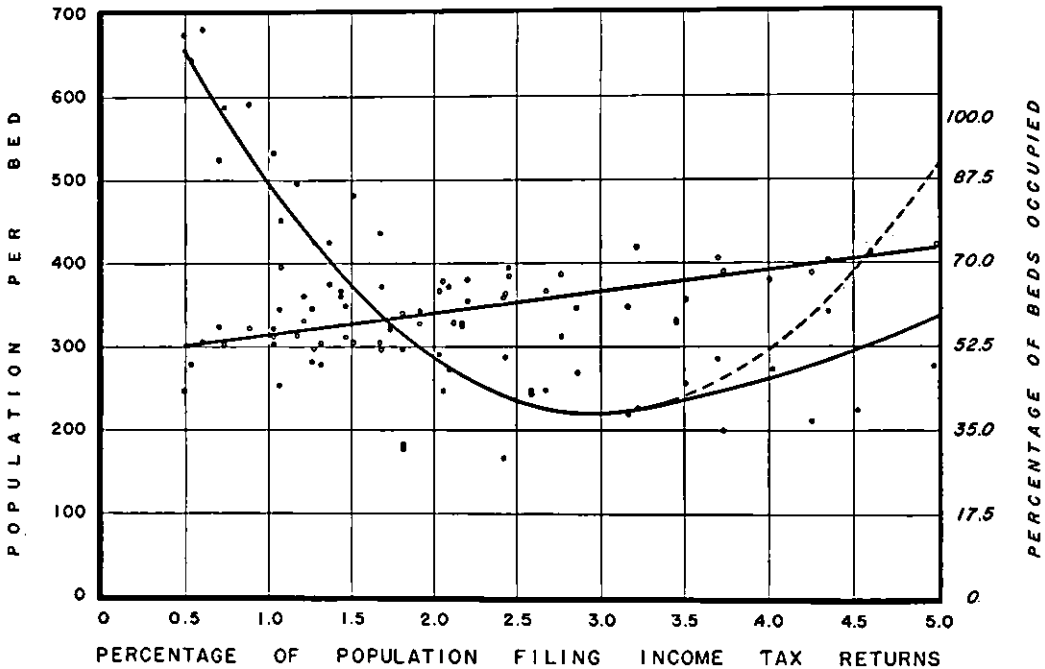


Chart 18.—Each black dot represents the relation between the percentage of population filing income tax returns and population per general hospital bed for a given state (table 55, columns 1 and 4). From the scattered diagram of black dots, the average relationship is shown by a curve which indicates that the population per bed decreases at an accelerated rate to a certain point (approximately 200), and then increases at a slightly slower rate, as the percentage of population filing income tax returns steadily increases. The broken line shows the position the curve would have taken if the rate of increase in population per bed had been uniform with the rate of decrease.

Each circle represents the relation between the percentage of population filing income tax returns and the percentage of general hospital beds occupied for a given state (table 55, columns 1 and 6). From the scatter diagram of circles the average relationship is shown by a straight line which indicates that the percentage of beds occupied increases at a fairly uniform rate as the percentage of population filing income tax returns increases.

A comparison of the two trends, the curve and the straight line, seems to show, in general, that those states having the largest population per bed also experienced for the period (1931) the lowest percentage of bed occupancy. A further comparison seems to indicate that those states having the most hospital beds in relation to population do not have the highest percentage of bed occupancy. An apparently obvious conclusion is that the utilization of hospital beds does not depend so much on the number of beds available as on the percentage of population possessing incomes above the taxable limits.

As shown by the curve, when a ratio of about 200 persons to a hospital bed is reached there is no increase in the number of hospital beds in relation to population despite an increase in the percentage of incomes above the taxable limits or an increase in bed occupancy. A number of other factors such as education, philanthropy, morbidity, physical accessibility of hospital facilities, and the income of the entire population also affect the distribution and utilization of hospitals.

sons) rather than the *size of the average income* that determines the ability of a community to attract and hold physicians.

That the amount of cash entering commercial channels is one of the most important factors in determining the effective demand for adequate service in any locality is still further confirmed by table 57. This table is based on a special survey made by the United States Bureau of the Census in 1929 of retail sales by geographic sections. The ranking of the geographic sections by per capita retail sales is so nearly negatively identical with the ranking of these same sections by population per physician as to justify the conclusion that there is a definite causal relation between effective demand for medical service and the per capita spendable income.

TABLE 56.—Average Annual Income per Person in 1930* Compared with the Population per Physician in Active Practice in 1931 According to States

States	Average Income per Person	Population per Physician	States	Average Income per Person	Population per Physician
Connecticut.....	787	793	Idaho.....	555	1,233
Illinois.....	750	693	Minnesota.....	549	856
New York.....	741	614	Oregon.....	542	797
Iowa.....	726	819	New Hampshire.....	521	881
Nevada.....	725	717	Maryland.....	506	688
Wisconsin.....	708	970	Maine.....	501	851
New Jersey.....	691	966	Missouri.....	500	666
Nebraska.....	690	798	Utah.....	444	1,054
Ohio.....	687	793	North Dakota.....	434	1,340
California.....	675	621	West Virginia.....	415	962
Vermont.....	672	767	Oklahoma.....	373	996
Pennsylvania.....	661	824	Texas.....	355	930
Montana.....	656	1,137	New Mexico.....	338	1,182
Michigan.....	654	893	Florida.....	335	944
Massachusetts.....	644	671	Virginia.....	311	968
Delaware.....	623	903	North Carolina.....	270	1,372
Kansas.....	619	907	Tennessee.....	263	923
Rhode Island.....	608	852	Louisiana.....	243	1,040
Wyoming.....	601	1,012	Kentucky.....	258	941
Arizona.....	598	949	Georgia.....	218	1,042
Indiana.....	594	829	Alabama.....	208	1,234
Washington.....	568	854	Arkansas.....	193	974
Colorado.....	561	583	South Carolina.....	193	1,400
South Dakota.....	561	1,228	Mississippi.....	174	1,343

* Income figures for 1931 were not obtainable. It is believed that the income figures for 1931 would not materially change the purpose of this table; viz., to show that in general the population per physician increases as the average individual income decreases.

† Data for 1930 from U. S. Department of Commerce.

‡ Population per physician 1931.

Not only are there fewer physicians, hospitals and other medical facilities, with less use of available services and facilities in the localities where there is less money to spend in the markets, but there are also fewer stores and less goods sold in the existing stores. Increasing the number of physicians or hospitals in such localities would no more relieve the medical situation that building more grocery, clothing or furniture stores would insure better food and other necessities of life for those unable to buy them.

Recently there has been much agitation for the development of some means of making medical services more available to rural and low-income areas. The schemes proposed—sickness insurance and state medicine—are primarily designed to organize medical *personnel*. It seems that the development and support of better *facilities* for medical practice, particularly in the smaller communities, would be more likely to alleviate the uneven distribution of physicians. Nothing can be gained by the regimentation of physicians. It has not yet been proved

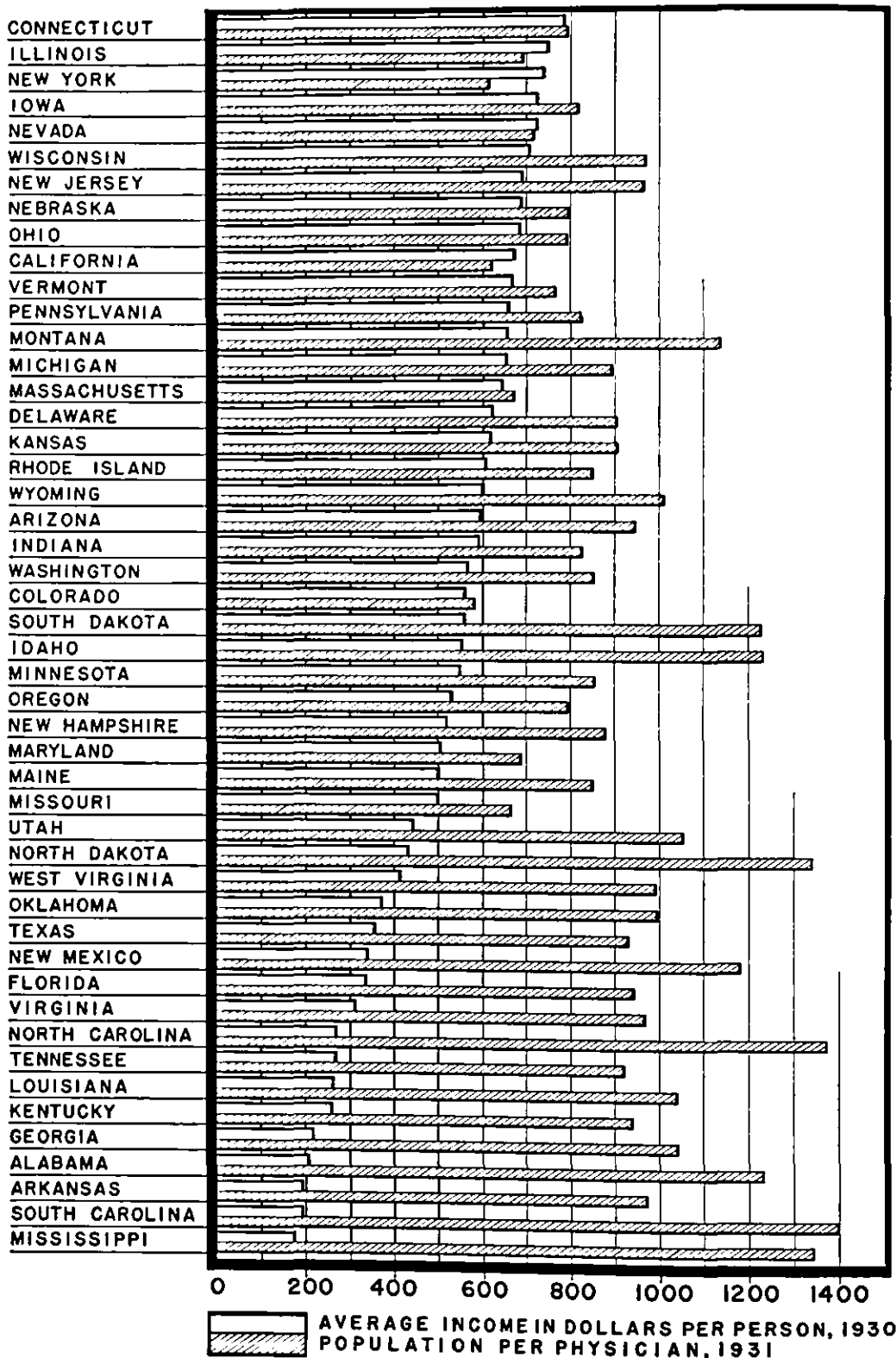


Chart 19 (based on table 56).—Population per physician compared with the average income in dollars per person. Shown according to states. (Note: As the average income in dollars per person decreases, the number of persons per physician increases.) American Medical Directory, 1931; U. S. Dept. of Commerce, 1930.

that the system of the private practice of medicine is unable to supply competent and adequate medical services wherever the demand for such services exists. The medical profession of the United States has always adhered to the personal patient-physician relationship which characterizes a medical service superior to any other in the world. It is, therefore, entirely consistent with the ideals of medicine that those same physicians should vigorously resist any system of state managed

TABLE 57.—*Classification of Sections by per Capita Retail Sales and Population per Physician*

Geographic Division	Per Capita Retail Sales (1929) in Dollars*	Rank of Division in per Capita Sales	Population per Physician†	Rank of Division in Population per Physician (1931)
Pacific.....	549.53	1	673	9
Middle Atlantic.....	500.01	2	722	8
New England.....	463.31	3	736	7
East North Central.....	452.28	4	797	6
Mountain.....	424.72	5	869	4
West North Central.....	408.46	6	814	5
West South Central.....	307.92	7	967	2
South Atlantic.....	268.60	8	957	3
East South Central.....	220.51	9	1,068	1
United States (average)....	407.52	..	817	..

* U. S. Dept. of Commerce, Statistical Abstract of U. S. 1934, p. 755.

† See table 15, p. 19.

medicine which will destroy that essential personal relationship and the quality of the service rendered.

It appears that the supply of physicians is and will continue to be adequate for the needs of the population of the United States. It should be self-evident that the supply and distribution of a service to satisfy a need depends on income. The important distinction between medical services and marketable commodities is that the medical profession has always made an effort to grade its fees, as far as possible, according to income and to give free services to those without income—something not yet attempted by the vendors of commercial goods and services.

APPENDIX A

An early recording of an attempt to determine the number of physicians in the several states of the United States appears as an appendix to the Transactions of the American Medical Association, Volume I, pages 359-366, 1848. Three states, Virginia, Delaware, and Massachusetts, submitted reports of the number of physicians which are reprinted here in their entirety partly for their historical value and partly to illustrate the distribution of physicians in 1848.

N

REPORT ON THE NUMBER OF PRACTITIONERS OF MEDICINE
IN VIRGINIA

The committee appointed to correspond with the clerks of the various town and county courts throughout the State, for the purpose of ascertaining, as far as practicable, the number of physicians practicing medicine in this State, the number who practice with the authority of a diploma, or of a license from some legally authorized society, and the number who practice without any authority whatever, in the performance of their duty addressed a circular letter, a copy of which accompanies this report (marked N.—a.), to each of the aforesaid clerks.

In reply to this circular, the committee have received communications from seventy-five towns and counties, which have, in the main, given them information as accurate and as full as could have been expected. The result of these communications the committee have embodied in a tabular statement, which they beg leave to submit as a part of their report (see statement marked N.—b.).

By examining this statement, it will be seen that the whole number of physicians in these seventy-five counties and towns is 972.—Now there are 119 counties in the whole State. We have received information from nearly two-thirds of these; and as the counties from which we have heard are taken indiscriminately from every portion of the State, it is fair to presume that the result gives us pretty accurately the proportion of physicians throughout the State.—The population of the State of Virginia by the last census was 1,239,797, two-thirds of which would be 826,531½. Dividing this number by 927 (two-thirds of the physicians in the State), and we arrive at the result that there is one physician for every 850½ inhabitants. This calculation has been made, it is true, from the recorded population of the state in 1840, while the number of physicians with which that population is compared, is estimated for the present year; but it is very doubtful whether the great drain upon the population of Virginia by emigration, and by the transportation of slaves, will not nearly counterbalance its natural increase.

Of the 972 physicians in the State, it appears that 678 have received diplomas from regularly constituted medical schools. Of these 678, six do not now practice at all, and *one* practices homeopathy. Two hundred and forty-nine (249), more than one-fourth of the whole number, practice without any authority whatever; of these, 1 has attended two courses of lectures, 10 have attended one course of lectures, as also an indefinite number (say 3) in the county of Tazewell, 4 are stated to have studied medicine without attending lectures, and 3 to have been licensed by a medical society (the authority of the societies to grant licenses not being given). Deducting these 21 who have made some pretension to the study of medicine, and we have 228 individuals practicing medicine in seventy-five counties, who do not pretend to have devoted one hour to the study of the profession before entering upon its responsible duties. By reference to the statement it will be seen that the trans-Alleghany counties furnish the greatest proportion of this latter class of practitioners, a fact that probably might be readily accounted for.

The committee content themselves with presenting the foregoing facts to the society without comment, satisfied that the glaring defects which they expose in the present system of medical organization, and of medical education, will call forth the most earnest efforts of the society to remedy these defects as far as lay in its power.

CARTER P. JOHNSON, M.D.,
JAMES H. CONWAY, M.D.,
H. D. TALLIAFERRO, M.D.

N. B.—Since writing the above report, the committee have had access to the report of the 1st Auditor of the State, which contains the number of physicians in each county, as handed in by the commissioners of the revenue, under the late law taxing physicians as a class. According to this document, the whole number of physicians in the State is 1,517.

The auditor's report does not give any information on the other points embraced in the resolutions of the National Convention and of the Medical Society.

CARTER P. JOHNSON, M.D.

N.—a.
(Circular.)

Richmond, September 13, 1847.

TO THE CLERK OF THE COUNTY OF

Sir:—At a meeting of the National Medical Convention, held in the City of Philadelphia in May last, the following resolution, offered by Dr. Pierce of Michigan, was adopted:—

Resolved, That the delegates to this Convention be requested to ascertain, as far as may be practicable, and report to the next annual meeting, the number of Practitioners of Medicine in their respective States—designating the number who may have received a diploma from a Medical College, the number who may have been licensed by a Medical Society, and the number who practice medicine without any authority whatever."

In order to carry out the very important objects embraced in the above resolution, in this State, the Medical Society of Virginia, at its last meeting, adopted the following resolution:—

Resolved, That a committee be appointed whose duty it shall be to address a letter to the Clerks of the several County Courts in this Commonwealth, and to the Clerks of the Hustings Courts in its towns and cities, asking for the information required by the resolution of Dr. Pierce."

In conformity with this resolution, we, the Committee of the Medical Society of Virginia, would most respectfully and earnestly ask your aid in obtaining the required information. We would thank you at your earliest convenience to inform us of the number of Medical Practitioners in your county; how many of them practice with the authority of a diploma, and how many without any authority whatever. We of course cannot expect that you will be able to give us the information we desire with great accuracy, and we shall receive your statement as the nearest approximation to the actual condition of the matter, at which you have been able to arrive.

This subject is one of very vital importance, not only to the Medical Profession of our country, but to the interest and welfare of the whole community, and you will materially aid in its investigation by affording us the desired information.

We are very respectfully, your obedient servants,

CARTER P. JOHNSON, M.D.
JAMES H. CONWAY, M.D.
HORACE D. TALLIAFERRO, M.D.
Committee.

N.—b.

*Tabular Statement of the Number of Medical Practitioners in Seventy-Five
Towns and Counties in Virginia.*

Names of Counties	Whole Number	Number Who Have Received Diplomas	Number Who Practice Without the Authority of a Diploma
1. Henrico.....	17	17	0
2. Patrick.....	5	1	4
3. Mason.....	6	3	3
4. Culpepper.....	12	10	2
5. Princess Anne.....	9	8	1 (besides several Thompsonians)
6. Tappahannock.....	20	20	0
7. Prince George.....	19	13	6 Thompsonians
8. Greensville.....	11	10	1
9. Appomatox.....	16	13	3
10. Botetourt.....	20	13	7
11. York.....	4	4	0
12. Brunswick.....	19	18	1 and 3 Thompsonians
13. Hanover.....	31	31	0
14. Pulasky.....	4	1 (4 do not practice)	3 (1 of whom attended one course of lectures)
15. Nansemond.....	9	6	3
16. Rockingham.....	22	Not known	A number of Thompsonians
17. Montgomery.....	8	3	5 (1 of whom is licensed by a medical society)
18. Campbell.....	20	13	7
19. Middlesex.....	8	7	1
20. Warwick.....	1	1	9
21. Pendleton.....	4	1	3
22. Marlon.....	8	0	8 (3 of whom have attended 1 session)
23. Lancaster.....	11	8 (2 do not practice)	3 (2 of whom are Thompsonians)
24. Gloucester.....	16	12	4 (2 of whom are Thompsonians)
25. Harrison.....	20	4	16
26. Morgan.....	5	2	3
27. Carroll.....	3	0	3 (1 of whom attended 1 session)
28. Accomack.....	19	19	0
29. Powhatan.....	13	13	0
30. King and Queen.....	17	16	1
31. Page.....	4	3	1
32. Wayne.....	3	0	3
33. Taylor.....	3	2	1
34. Doddridge.....	8	2	6
35. Monongalia.....	13	5	8 (4 of whom have studied medicine)
36. Kenhawa.....	15	11	4 Thompsonians
37. Ohio.....	17	12	5
38. Prince William.....	13	11	2
39. Hampshire.....	9	1	8 (3 of whom attended 1 session)
40. Alleghany.....	4	2	2
41. Jackson.....	14	3	11 (6 of whom are Thompsonians)
42. Ritchie.....	3	0	3 (1 of whom is a Thompsonian)
43. Amherst.....	14	Not known	Not known
44. Gilmer.....	5	0	5 (2 of whom are licensed by a Med. Soc.)
45. Russell.....	5	1	4

Tabular Statement of the Number of Medical Practitioners in Seventy-Five Towns and Counties in Virginia. —Continued

Names of Counties	Whole Number	Number Who Have Received Diplomas	Number Who Practice Without the Authority of a Diploma
46. Sussex.....	17	17	0
47. Bath.....	5	4	1
48. Green.....	7	3	4
49. Stafford.....	8	7	1
50. Tazewell.....	7	1	6 (some of whom attended 1 session)
51. Lee.....	11	1	10
52. Barbour.....	9	1	8
53. Nicholas.....	5	0	5
54. Braxton.....	5	1	4
55. Charlotte.....	22	14	8
56. King William.....	18	17	1
57. Pocahontas.....	4	1	3 (1 of whom attended 1 session)
58. Jefferson.....	26	25	1
59. Roanoke.....	10	6	4
60. Bedford.....	24	17	7
61. Alexandria.....	10	10	1 Thompsonian
62. James' City.....	3	Not known	Not known
63. Williamsburg.....	10	Not known	Not known
64. Louisa.....	21	21	0
65. Isle of Wight.....	10	6	4
66. Goochland.....	16	12	4
67. Richmond county.....	11	9	2 (1 of whom is Thompsonian, and 1 attended 2 courses of lectures)
68. Spotsylvania.....	9	8	1
69. Norfolk county.....	17	16 (1 of whom practices Homeopathy)	1 (who has attended lectures)
70. Lynchburg.....	13	12	1 Thompsonian
71. Halifax.....	30	21	9
72. Cumberland.....	23	19	4 (2 of whom are Thompsonian*)
73. Berkeley.....	11	11	0
74. Mecklenburg.....	28	27	1 Thompsonian
75. Richmond city.....	75	70	5
	972	678	249

N.—1.

REPORT OF THE NUMBER OF MEDICAL PRACTITIONERS
IN DELAWARE.

Dr. Couper, on behalf of the delegates from the State of Delaware to the National Medical Convention of 1847, begs leave to submit to the American Medical Association, the following report, viz.:—

The number of practitioners of medicine in the State of Delaware is one hundred. Of these, forty-eight reside in Newcastle County, twenty-seven in Kent County, and twenty-five in Sussex County. Of the whole number, seventy are graduates, and hold the license of the State; two are graduates, but practice without any legal authority; seven are not graduates, but practice under the State license, and twenty-one are neither graduates nor licentiates.

Under the general law regulating the practice of medicine and surgery in the State of Delaware, every practitioner is required to take out the license of the State. The graduates of any respectable medical school, and such other persons as shall sustain a satisfactory examination before the Medical Board of

Examiners, are entitled to this license on the payment of a fee of ten dollars. But under special acts of the legislature, passed since the date of the general law, Homeopaths and Thompsonians are permitted to practice without diplomas, and without examination by the board, or the payment of a fee.

All which is respectfully submitted.

JAMES COUPER.

N.—2.

REPORT OF NUMBER OF MEDICAL PRACTITIONERS IN MASSACHUSETTS, MOST OF WHOM BELONG TO THE MASSACHUSETTS MEDICAL SOCIETY

	No. of Pract.	Population in 1840
Suffolk Co.....	280	95,773
Barnstable Co.....	31	32,548
Berkshire Co.....	70	28,812
Bristol Co.....	72	60,165
Dukes Co.....	3	3,958
Essex Co.....	124	94,987
Franklin Co.....	54	28,812
Hampden Co.....	58	37,866
Hampshire Co.....	57	30,813
Middlesex Co.....	184	106,611
Norfolk Co.....	82	41,745
Plymouth Co.....	56	47,873
Worcester Co.....	155	95,813
Nantucket Co.....	11	9,012
Total.....	1,237	787,616

This is not the true relative proportion of physicians to population *now*, since the above is the number of physicians in 1847, while the population is according to the census of 1840.

Z. B. ADAMS.

Boston, April 29, 1848.

(STEPHEN W. WILLIAMS, M.D., of Deerfield, Mass., in a letter addressed to the Association, reports the names, as far as they could be ascertained, of the practitioners of medicine in the five western counties of Massachusetts. The number of practitioners in these several counties is as follows:

Worcester	191
Hampden	61
Hampshire	62
Franklin	55
Berkshire	76)

APPENDIX B

Distribution of Physicians According to States and Territories Showing Membership in Medical Associations and the Number of Fellows

	Number of Physicians in States, 1934 A. M. A. Directory	Number of Members of State Associations		Number of Fellows in State
		1935	1936	
Alabama.....	2,129	1,451	1,457	517
Arizona.....	468	249	277	200
Arkansas.....	1,890	1,062	1,069	375
California.....	10,490	5,291	5,382	3,539
Colorado.....	1,874	1,105	1,132	672
Connecticut.....	2,312	1,516	1,569	968
Delaware.....	301	194	200	116
District of Columbia.....	1,851	709	737	575
Florida.....	1,840	1,030	1,081	595
Georgia.....	2,811	1,647	1,689	642
Idaho.....	388	214	214	138
Illinois.....	11,504	6,767	7,085	4,418
Indiana.....	4,049	2,828	2,834	1,688
Iowa.....	3,141	2,219	2,295	1,316
Kansas.....	2,153	1,364	1,417	814
Kentucky.....	2,808	1,710	1,708	732
Louisiana.....	2,127	1,234	1,256	682
Maine.....	984	700	698	375
Maryland.....	2,617	1,328	1,368	819
Massachusetts.....	7,014	4,737	4,827	3,011
Michigan.....	5,678	3,468	3,661	2,190
Minnesota.....	3,174	2,239	2,292	1,429
Mississippi.....	1,525	1,220	1,200	310
Missouri.....	5,570	3,231	3,145	2,007
Montana.....	480	340	340	205
Nebraska.....	1,772	1,161	1,063	674
Nevada.....	139	100	104	64
New Hampshire.....	602	479	490	253
New Jersey.....	4,915	2,911	3,036	2,168
New Mexico.....	393	215	209	154
New York.....	22,812	13,368	14,375	9,347
North Carolina.....	2,460	1,596	1,557	728
North Dakota.....	511	375	385	265
Ohio.....	8,769	5,288	5,314	3,496
Oklahoma.....	2,409	1,512	1,494	724
Oregon.....	1,308	652	742	442
Pennsylvania.....	12,608	8,122	8,415	5,499
Rhode Island.....	907	494	501	361
South Carolina.....	1,329	921	599	340
South Dakota.....	583	292	332	197
Tennessee.....	2,970	1,593	1,688	713
Texas.....	6,679	3,980	4,024	1,905
Utah.....	521	381	398	223
Vermont.....	517	368	374	184
Virginia.....	2,659	1,740	1,732	891
Washington.....	2,000	1,383	1,267	780
West Virginia.....	1,779	1,122	1,223	616
Wisconsin.....	3,302	2,182	2,216	1,520
Wyoming.....	237	149	141	92
Alaska.....	55	13	20	14
Hawaii.....	352	235	262	113
Isthmian Canal Zone.....	164	108	109	18
Philippine Island (Provinces).....	2,147	717	446	38
Puerto Rico (Dist.).....	407	326	326	72
Foreign.....	...	...	...	192
Total.....	164,514	99,536	101,754	60,374
Commissioned medical officers.....				2,623
				62,997

*Growth of the Professions in the United States 1870-1930 **

Professions	In Thousands							Percentage Increase 1900-1930
	1870	1880	1890	1900	1910	1920	1930	
Physicians.....	60†	82†	100	120	135	145	154	28
Dentists.....	8	12	17	30	40	56	71	136
Trained nurses.....	..	..	..	12	82	149	294	2,350
Lawyers.....	39†	60†	83†	106†	115	123	161	51
Clerkymen.....	43†	63†	85†	105†	118	127	149	41
Teachers and professors...	127	225	347	446	615	795	1,125	152

* Statistics largely from Recent Social Trends as compiled from the Occupation Census of the United States, including some adjustments, corrections and estimates.
 † Estimated.

APPENDIX C

The following tables, showing the distribution of Negro physicians (according to figures for 1932 from the National Medical Association) and Negro population (United States Bureau of the Census, 1930) are presented for comparisons with the distribution of all physicians and population in the United States.

Distribution of Negro Physicians and Population and Population Per Physician According to States

States	Negro Population	Number of Negro Physicians	Population per Physician
Alabama.....	944,834	116	8,145
Arizona.....	10,749	7	1,536
Arkansas.....	478,463	107	4,472
California.....	81,048	75	1,081
Colorado.....	11,828	16	730
Connecticut.....	29,354	16	1,835
Delaware.....	32,602	10	3,260
District of Columbia.....	132,068	271	487
Florida.....	431,828	109	3,962
Georgia.....	1,071,125	195	5,493
Idaho.....	668	....	....
Illinois.....	328,972	332	991
Indiana.....	111,982	79	1,417
Iowa.....	17,380	12	1,448
Kansas.....	66,344	35	1,896
Kentucky.....	226,040	131	1,725
Louisiana.....	776,326	116	6,692
Maine.....	1,096	1	1,096
Maryland.....	276,379	111	2,490
Massachusetts.....	52,365	47	1,114
Michigan.....	169,453	117	1,448
Minnesota.....	9,445	3	3,148
Mississippi.....	1,009,718	71	14,221
Montana.....	1,256	1	1,256
Missouri.....	223,840	216	1,036
Nebraska.....	13,752	12	1,146
Nevada.....	516	....	....
New Hampshire.....	790	....	....
New Mexico.....	2,850	3	950
New Jersey.....	208,828	139	1,502
New York.....	412,814	181	2,281
North Carolina.....	918,647	117	7,852
North Dakota.....	377	....	....
Ohio.....	309,304	268	1,487
Oklahoma.....	172,198	87	1,979
Oregon.....	2,234	2	1,117
Pennsylvania.....	431,257	169	2,552
Rhode Island.....	9,913	5	1,983
South Carolina.....	793,681	83	9,562
South Dakota.....	646	....	....
Tennessee.....	477,646	308	1,551
Texas.....	854,904	215	3,977
Utah.....	1,108	....	....
Vermont.....	568	....	....
Virginia.....	650,165	185	3,514
Washington.....	6,840	4	1,710
West Virginia.....	114,893	63	1,824
Wisconsin.....	10,739	10	1,074
Wyoming.....	1,250	....	....
	11,891,143	3,985	2,984

*Distribution of Negro Physicians and Population and Population Per Physician
According to Geographic Divisions*

Division and State	Negro Population*	Number of Negro Physicians†	Population per Physician
United States.....	11,891,143	3,985	2,984
New England.....	94,086	69	1,363
Middle Atlantic.....	1,032,899	489	2,113
East North Central.....	930,450	746	1,247
West North Central.....	331,784	278	1,193
South Atlantic.....	4,421,388	1,144	3,865
East South Central.....	2,658,238	626	4,246
West South Central.....	2,281,951	525	4,347
Mountain.....	30,225	27	1,119
Pacific.....	90,122	81	1,113
New England:			
Maine.....	1,090	1	1,090
New Hampshire.....	790	...	...
Vermont.....	568	...	...
Massachusetts.....	52,365	47	1,114
Rhode Island.....	9,913	5	1,983
Connecticut.....	29,354	16	1,835
Middle Atlantic:			
New York.....	412,814	181	2,281
New Jersey.....	268,828	139	1,902
Pennsylvania.....	431,257	169	2,552
East North Central:			
Ohio.....	309,304	208	1,487
Indiana.....	111,982	79	1,417
Illinois.....	328,972	332	991
Michigan.....	169,453	117	1,448
Wisconsin.....	10,739	10	1,074
West North Central:			
Minnesota.....	9,445	3	3,148
Iowa.....	17,380	12	1,448
Missouri.....	223,840	216	1,036
North Dakota.....	377	...	...
South Dakota.....	646	...	...
Nebraska.....	13,752	12	1,146
Kansas.....	66,344	35	1,896
South Atlantic:			
Delaware.....	32,602	10	3,260
Maryland.....	276,379	111	2,490
District of Columbia.....	132,068	271	487
Virginia.....	650,165	185	3,514
West Virginia.....	114,893	63	1,824
North Carolina.....	918,647	117	7,852
South Carolina.....	793,681	83	9,562
Georgia.....	1,071,125	195	5,489
Florida.....	431,828	109	3,962
East South Central:			
Kentucky.....	226,040	131	1,725
Tennessee.....	477,646	398	1,199
Alabama.....	944,834	116	8,145
Mississippi.....	1,009,718	71	14,221
West South Central:			
Arkansas.....	478,463	107	4,472
Louisiana.....	776,326	116	6,692
Oklahoma.....	172,198	87	1,979
Texas.....	854,964	215	3,977
Mountain:			
Montana.....	1,256	1	1,256
Idaho.....	668	...	...
Wyoming.....	1,250	...	...
Colorado.....	11,828	16	739
New Mexico.....	2,850	3	950
Arizona.....	10,749	7	1,536
Utah.....	1,108	...	...
Nevada.....	516	...	...
Pacific:			
Washington.....	6,840	4	1,710
Oregon.....	2,234	2	1,117
California.....	81,048	75	1,081

* 1920 Census. U. S. Bureau of The Census Statistical Abstract of U. S. 1924, p. 17.
† 1932. According to figures from the National Medical Association.

Distribution of Negro Physicians and Population and Population Per Physician According to Sections

	Negro Population	Per Cent	Number of Negro Physicians	Per Cent	Population per Physician
Southern states.....	9,361,577	78.7	2,295	57.6	4,079
Northern states.....	2,529,566	21.3	1,690	42.4	1,497
United States.....	11,891,143	100.0	3,985	100.0	2,984

Distribution of Negro Physicians According to Place of Education and Place of Practice

	Number of Negro Physicians	Per Cent
Educated in the South and practicing in the South.....	2,064	51.8
Educated in the South and practicing in the North.....	1,133	28.4
Educated in the North and practicing in the North.....	442	11.1
Educated in the North and practicing in the South.....	111	2.8
Educated in schools unknown and practicing in the North	116	2.9
Educated in schools unknown and practicing in the South	120	3.0
	3,985	100.0

APPENDIX D

*Population, Physicians and Medical Students in the Several Nations Showing Percentage Increase from 1900 to 1930 **

Nation	Year	Population	Percentage Increase	Physicians	Percentage Increase	Medical Students	Percentage Increase
United States...	1900	75,994,575		119,749		25,171	
	1930	122,775,046	61	154,421	28	21,597	16†
Austria.....	1900	6,000,270		4,844		.....
	1930	6,534,481	8	8,287	71	8,984	..
Belgium.....	1900	6,693,548		3,544		.....
	1930	8,129,829	21	5,546	56	.....	..
Bulgaria.....	1900	3,734,283		431		.....
	1930	5,478,741	46	2,200	410	1,000	..
Canada.....	1900	5,371,315		5,182		.....
	1930	10,374,196	93	10,052	93	3,029	..
Cuba.....	1900	1,600,000		1,223		199	
	1930	3,700,000	131	2,876	135	1,444	625
Denmark.....	1900	2,449,540		1,375		1,375	
	1930	3,550,631	44	2,740	99	2,746	99
Estonia.....	1900	1,200,000		370		.....
	1930	1,200,000	..	893	141	300	..
France.....	1900	38,442,000		14,803		5,030	
	1930	41,834,000	8	23,308	57	11,375	126
Germany.....	1900	56,000,000		27,400		7,400	
	1930	64,000,000	14	50,000	82	20,087	171
Great Britain...	1900	36,999,946		26,485		1,288	
	1930	44,790,485	21	37,840	42	1,453	12
Holland.....	1900	5,104,137		2,287		1,341	
	1930	7,832,175	53	5,362	134	2,863	113
Latvia.....	1900	.....		.....		.....
	1930	1,900,000	..	1,341	..	526	..
Luxemburg.....	1900	235,954		83		27	
	1930	299,993	27	182	119	63	133
Norway.....	1900	2,246,000		1,109		280	
	1930	2,810,000	25	1,833	65	1,540	450
Poland.....	1900	.....		.....		.....
	1930	31,000,000	..	10,000	..	.....	..
Sweden.....	1900	5,136,441		1,131		585	
	1930	6,141,571	19	2,292	102	1,924	259
Switzerland.....	1900	3,315,443		1,978		1,286	
	1930	4,066,400	22	3,388	71	1,505	17
Uruguay.....	1900	.....		.....		133	
	1930	1,800,000	..	1,125	..	1,139	756

* Statistics for foreign nations as reported by national correspondents of the International Medical Association, Rev. Internat. de méd. et sociale 5: 10 (Aug.) 1932. (Errors in calculation in original tables corrected.)

† Decrease.

*Number of Physicians in Germany Since 1876**

Year	Total Number	Women Physicians	Population per Physician	Square Miles per Physician
1876.....	13,728	.....	3,112	13.1
1887.....	15,824	.....	2,961	13.2
1898.....	24,725	.....	2,192	8.4
1909.....	30,538	82	2,050	6.8
1927.....	43,583	1,739	1,451	4.1
1928†.....	45,948	2,202	1,389	3.9
1929†.....	47,534	2,421	1,349	3.8
1930†.....	47,206	2,611	1,365	3.8
1931†.....	47,963	2,753	1,351	3.7
1934‡.....	47,275	2,801	1,380	3.8

* J. A. M. A. 104: 1767 (May) 1935.

† December 31.

‡ January 1.

*Distribution of Persons in the German Reich Who Attend the Sick in a Professional Capacity, 1934**

Classification	Men	Women	Total Men and Women	Population per Practitioner in		
				Cities	Rural Districts	Com- bined
Physicians.....	44,474	2,801	47,275	877	2,326	1,289
Dentists.....	10,589	638	11,247	3,571	10,000	5,882
Licensed pharmacists.....	10,316	329	10,845	4,545	7,692	5,882
Assistant pharmacists and apprentices....	3,378	1,891	5,269	8,333	20,000	12,500
Midwives.....	.....	25,911	25,911	4,348	1,667	2,700
Dental technicians.....	17,726	2,272	19,998	2,439	4,348	3,226
Bath assistants, attendants, masseurs....	6,246	5,164	11,410	3,571	10,000	5,882
Attendants on the sick.....	20,618	99,598	120,216	407	709	543
Nurses of infants and preschool children. ....	.....	5,747	5,747	6,250	25,000	11,111
Nurses of puerperants.....	.....	1,197	1,197	33,333	125,000	50,000
Disinfecting crews.....	4,784	188	4,972	16,667	11,111	12,500
Lay practitioners, etc.....	10,888	3,378	14,266	2,857	7,692	4,545
Totals.....	129,019	149,334	278,353	174	310	234

* Official Census of the German Reich, J. A. M. A. 104: 1766 (May) 1935.

*Distribution of Free-Practicing Physicians in Germany According to Population Groups and by Number and Percentage in General Practice or Limited Specialty Within Each Population Group**

Population Groups	Population	Total Physi- cians	General Practice		Limited Specialty	
			Number	Per Cent	Number	Per Cent
Less than 10,000.....	35,000,000	14,323	9,823	68.6	4,500	31.4
10,000-20,000.....	3,700,000	2,423	1,692	69.8	731	30.2
20,000-50,000.....	4,960,000	3,557	1,915	53.8	1,642	46.2
50,000-100,000.....	3,200,000	2,221	1,095	49.3	1,126	50.7
100,000 and over.....	20,400,000	17,476	9,390	53.7	8,086	46.3
	67,260,000	40,000	23,915	59.8	16,085	40.2

* Statistics from Deutsches Aerzteblatt 66: 211 (Feb. 22) 1936.

† Approximately.

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