Current Status of Group Medical Practice in the United States

GROUP MEDICAL PRACTICE has been advocated as a major organizational form for the delivery of health services in the United States since 1927 (*1*). In 1932, the Committee on the Costs of Medical Care recommended that medical services be provided by organized groups of physicians in conjunction with other health care providers (*2*). Over the past four decades, the number of these groups has grown at an average annual rate of about 8 percent, reaching a total of 8,483 in 1975. As group practice has grown and gained acceptance in the United States, so has the debate over whether it is a desirable form of organization. The debate centers around the issues of whether, with group practice, (*a*) there are economies of scale, (*b*) the substitution of allied health personnel time for physician time increases the productivity of physicians, (*c*) the quality of care is higher, and (*d*) physicians are used more effectively than in other forms of practice (*3*).

Several surveys (*4–7*) have been conducted in the past to determine the growth of group practice and the significant organizational characteristics of groups. In this paper we provide descriptive data on the number and characteristics of groups and group physicians in the United States as of 1975, the year of the latest nationwide survey of medical groups. These data may be useful in ascertaining the current status of group practice in respect to the four issues that are being debated. In particular, we compare characteristics of prepaid group practice, which is the model often cited in discussions of HMO (health maintenance organization) policy (*8*), with the characteristics of other forms of group practice.

Survey Method

The 1975 survey of medical groups in the United States was the third in a series of group practice surveys that have been conducted since 1965 by the American Medical Association's Center for Health Services Research and Development. In 1965, 4,289 group practices were identified, a figure that increased to 7,891 in 1969 and finally to 8,483 in the latest survey. These 8,483 groups represent the total number of group practices known to be in existence and to meet the AMA definition of group practice as of December 31, 1975.

The American Medical Association (AMA) compiles and maintains a listing of all known and potential medical groups in the United States through annual and periodic surveys of the professional activities and socioeconomic status of physicians. The list is updated as new groups come into existence and old groups are dissolved or reformed, or both. In December 1974, the 13,169 potential groups listed in AMA records were sent a questionnaire that solicited information in several areas of concern, including age of the group, specialty composition, form of organization, administration and management, income distribution, prepayment mechanisms, and use of allied health personnel. In the ensuing months, groups that had not responded were sent followup letters and questionnaires. A 52.5 percent response rate was achieved from the first mailing. Several followup mailings, personal letters, and telephone calls raised the response rate to 96 percent.

Of the 13,169 questionnaires mailed, 1,889 were not usable. The nonusable questionnaires were from groups no longer in existence and from groups listed in AMA records under more than

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one name. An additional 2,269 questionnaires were eliminated because the respondents did not meet the AMA definition of group practice; also, 528 potential groups did not respond after repeated followup attempts. Thus, the survey resulted in a usable response from 8,483 groups known to be in existence at the time of the survey. The survey revealed that AMA files had contained a large number of duplicate or dissolved groups and that the number of group practices had increased by one-third (33.2 percent) since 1969. As a result, the association is considering a new system to update and monitor new groups coming into existence, old groups being dissolved, and groups not meeting the AMA definition of group practice.

Definitions of Group Practice

Group practice may be defined on the basis of organizational arrangements, the number of physicians and fields of practice, or the methods the group has for distributing income and expenses among members. We used the definition adopted in 1969 by the AMA Council on Medical Service:

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

This definition was stated on the questionnaire. It is slightly different from the one used in 1965; the 1965 definition required three or more full-time physicians. The criteria were changed in 1969 to "three or more physicians" regardless of their full- or part-time status. Most of the questionnaires that were eliminated from usable responses came from respondents who failed to meet the AMA definition because they had fewer than three physicians. The 8,483 responding groups that met the definition were divided into three basic categories:

- Single specialty groups: Medical groups providing services predominantly in only one field of practice or major specialty except groups composed predominantly of general practitioners.
- General/family practice groups: Composed predominantly of general/family practitioners.
- Multispecialty groups: Providing services in at least two fields of practice or major specialties and not falling in either of the two preceding categories.

General/family practice groups are presented separately to allow flexibility in the interpretation and use of the survey data. There are instances when general/family practice groups can be considered single specialty or multispecialty groups. General/family practice groups most closely resemble single specialty groups in organiza-

Table 1. Number and percentage distribution of medical practice groups and of full-time and part-time group physicians, by type of group, 1975

Type of group	Total groups	Group physicians			
		Total	Full-time	Part-time	Unknown time
All types	8,483	66,842	53,556	6,975	6,311
		Number of groups			
Single specialty	4,601	23,572	21,555	1,351	966
General/family practice	906	3,959	3,478	184	297
Multispecialty	2,976	39,311	28,823	5,440	5,048
		Percent of groups			
Single specialty	54.2	35.3	39.7	19.4	15.3
General/family practice	10.7	5.9	6.5	2.6	4.7
Multispecialty	35.1	58.8	53.8	78.0	80.0

SOURCE: American Medical Association register of group practice, 1976.

tion and size. However, they are also similar to multispecialty groups in that they may provide a more comprehensive range of care without being limited to a particular type of service.

Distribution of Groups

The 8,483 medical practice groups identified in the 1975 survey as meeting the AMA definition of group practice encompassed 66,842 physicians (table 1). Of the three basic classifications of group practice, the one with by far the largest number of groups was the single specialty type with 4,601 groups (54.2 percent of the total). Multispecialty groups totaled 2,976 (35.1 percent), followed by general practice groups, 906 (10.7 percent).

The distribution of group physicians among the three categories varied substantially from the distribution of group practices. The majority of group physicians (39,311 or 58.8 percent) practiced in multispecialty groups. Physicians in single specialty groups accounted for 23,572 (35.3 percent), followed by physicians in general practice groups, who accounted for 3,959 (5.9 percent).

Almost eight times as many physicians practicing in groups had full-time status (53,556) as opposed to part-time (6,975). (About one-tenth, or 6,311, of the group practice physicians did not report whether their employment status with the group practice was full or part time. In calculations of full- and part-time status, therefore, we excluded physicians whose employment time was not reported.) Part-time physicians practiced in 2,815 groups (33.2 percent of all groups). Of these 2,815 groups, 121 (47 single specialty, 4 general practice, and 70 multispecialty) had no full-time physicians.

Physicians' participation in group practice, in contrast to other forms of practice, was shown by comparisons of group physicians with the total active non-Federal physicians and with the non-Federal physicians engaged in patient care. Interns, residents, and inactive physicians were excluded from both of these total physician populations. Group physicians repre-

Table 2. Number and percentage distribution of medical practice groups and group physicians, by type of group and size

Type of group	Size of group (number of physicians)									
	3	4	5	6	7	8–15	16–25	26–49	50–99	≥ 100
	Number of groups [1]									
All types	2,457	1,980	1,062	757	465	1,148	326	187	66	35
Single specialty	1,465	1,359	652	394	209	465	43	7	3	4
General/family practice	357	304	118	59	19	41	6	2	0	0
Multispecialty	635	317	292	304	237	642	277	178	63	31
	Percent of groups [2]									
All types	29.0	23.3	12.5	8.9	5.5	13.5	3.8	2.2	0.8	0.4
Single specialty	31.8	29.5	14.2	8.6	4.5	10.1	0.9	0.2	0.1	0.1
General/family practice	39.4	33.6	13.0	6.5	2.1	4.5	0.7	0.2	0.0	0.0
Multispecialty	21.3	10.7	9.8	10.2	8.0	21.6	9.3	6.0	2.1	1.0
	Number of physicians [1]									
All types	7,371	7,920	5,310	4,542	3,255	11,828	6,363	6,463	4,364	9,426
Single specialty	4,395	5,436	3,260	2,364	1,463	4,554	807	206	156	931
General/family practice	1,071	1,216	590	354	133	385	113	97	0	0
Multispecialty	1,905	1,268	1,460	1,824	1,659	6,889	5,443	6,160	4,208	8,495
	Percent of groups [2]									
All types	11.0	11.8	7.9	6.8	4.9	17.7	9.5	9.7	6.5	14.1
Single specialty	18.6	23.1	13.8	10.0	6.2	19.3	3.4	0.9	0.7	3.9
General/family practice	27.1	30.7	14.9	8.9	3.4	9.7	2.9	2.5	0.0	0.0
Multispecialty	4.8	3.2	3.7	4.6	4.2	17.5	13.8	15.7	10.7	21.6

[1] For total groups and total group physicians, by type of group, see table 1.

[2] Some horizontal lines of percentages may not add to 100.0 because of rounding.

SOURCE: American Medical Association register of group practice, 1976.

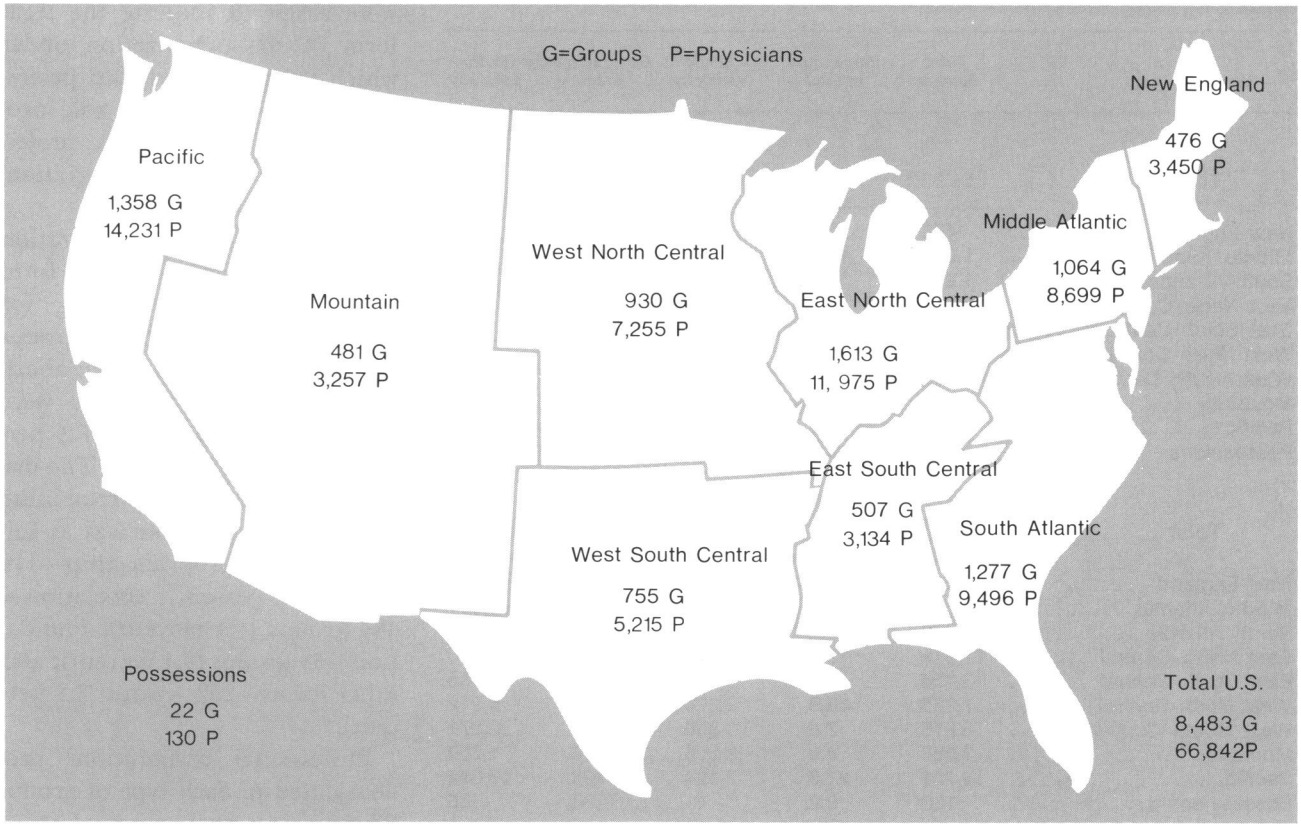
sented 23.5 percent of the total non-Federal physicians (single specialty 8.3 percent, general practice 1.4 percent, and multispecialty 13.8 percent). Similarly, group physicians represented 29.7 percent of the non-Federal physicians engaged in patient care.

The 8,483 groups in this survey ranged in size from the minimum 3 physicians to more than 1,986 and included a wide distribution of full-time and part-time physicians. Size of group is one criterion often used to differentiate the characteristics of a heterogeneous population. The criterion used to determine the size was the total number of physicians in a group, irrespective of their full- or part-time affiliation. The average (mean) size was 7.9 physicians. Multispecialty groups averaged 13.2 physicians and were considerably larger than either single specialty groups (average 5.1 physicians) or general practice groups (average 4.4 physicians).

The concentration both of groups and group physicians in the several size categories varied by the type of group. General practice and single specialty groups were highly concentrated within the 3-to-5-physician category; 86.0 percent of the general practice groups and 75.5 percent of the single specialty groups fell into this category, but only 41.8 percent of the multispecialty groups. In fact, among the multispecialty groups, 17.6 percent reported 16 or more physicians. However, only about 2 percent of the combined single specialty and general practice groups were comprised of 16 or more physicians (table 2). A somewhat similar, though less pronounced, trend was found in the distribution of group physicians. The 3-to-5-physician category accounted for 72.7 percent of the physicians in general practice groups, but only 11.7 percent of the physicians in multispecialty groups.

The 35 groups with 100 or more physicians accounted for only 1.0 percent of the multispecialty groups (0.4 percent of all groups), but 21.6 percent of the physicians in these groups (14.1 percent of all group physicians). The average size of the 35 groups was 269 physicians. Although the distribution of full-time physicians by group

Figure 1. Distribution of group practices and group practice physicians, by census division, 1975



*Includes Alaska and Hawaii

size generally mirrored the distribution of the total physicians, part-time physicians were concentrated in multispecialty groups of eight or more physicians.

Location of Groups

Three census divisions (the South Atlantic, East North Central, and Pacific) had 50 percent of the medical practice groups in the United States in 1975 and 53 percent of the group physicians. The East North Central Division had the highest percentage of groups (19.0 percent), while the Pacific Division had the highest percentage of group physicians (21.3 percent). New England had the fewest groups (5.6 percent); the East South Central Division had the fewest group physicians (4.7 percent) relative to the total, a result indicating that the average size of groups in the East South Central Division (fig. 1) was smaller.

Considerable variation among census divisions existed among the three types of groups (table 3). In all but two divisions (the West North Central and the Pacific), more than half of the groups were of the single specialty type. The Pacific Division showed the greatest concentration of multispecialty groups (41.7 percent), while the West North Central showed the highest percentage of general practice groups relative to the total medical practice groups (19.1 percent).

Every State had at least 10 groups, and only 3 States had fewer than 20. California, New York, Texas, Illinois, and Ohio accounted for one-third of all the groups. Thirty-one States each had 100 or more groups, and 21 States each had 1,000 or more group physicians. Only Alaska and Wyoming had fewer than 100 group physicians each.

Of the total group physicians, 86.0 percent were located in metropolitan areas, as were 83.0 percent of all the groups. The large majority of single-specialty groups (92.4 percent) and multispecialty groups (76.4 percent) were located in metropolitan areas. General practice groups, however, were more evenly distributed between nonmetropolitan (42.8 percent) and metropolitan (57.2 percent) areas.

Table 3. Distribution of medical practice groups and group physicians, by census division and type of group, 1975

Census division	Total number	Percentage of total	Single specialty	General/family practice	Multi-specialty
			Groups		
Total	8,483	100.0	4,601	906	2,976
New England	476	5.6	332	12	132
Middle Atlantic	1,064	12.5	668	49	347
South Atlantic	1,277	15.1	808	88	381
East North Central	1,613	19.0	831	166	616
East South Central	507	6.0	291	62	154
West North Central	930	11.0	412	178	340
West South Central	755	8.9	381	113	261
Mountain	481	5.7	243	70	168
Pacific	1,358	16.0	625	167	566
Possessions	22	0.2	10	1	11
			Physicians		
Total	66,842	100.0	23,572	3,959	39,311
New England	3,450	5.2	1,635	42	1,773
Middle Atlantic	8,699	13.0	3,828	264	4,607
South Atlantic	9,496	14.2	3,983	399	5,114
East North Central	11,975	17.9	4,196	721	7,058
East South Central	3,134	4.7	1,425	254	1,455
West North Central	7,255	10.9	2,274	769	4,212
West South Central	5,215	7.8	1,860	484	2,871
Mountain	3,257	4.9	1,206	298	1,753
Pacific	14,231	21.3	3,124	725	10,382
Possessions	130	0.2	41	3	86

SOURCE: American Medical Association register of group practice, 1976.

Organization and Management

Form of organization. In the question on the form of organization of the group, respondents were asked to indicate the legal form of the organization under which the group provided professional medical services: sole proprietorship, partnership, professional corporation, association, foundation, or other.

The professional corporation was by far the most popular form of organization, accounting for 61.0 percent of the 7,547 groups responding to the question; about one-quarter of the groups were partnerships (2,053, or 27.2 percent of the total groups). The distribution among the remaining forms of organization was as follows: sole proprietorship—119 groups (1.6 percent); association—484 groups (6.4 percent); foundation—33 groups (0.4 percent); and other forms—252 groups (3.3 percent).

Professional corporations predominated in each type of group. The greatest proportion of these was found among single specialty

Table 4. Total medical practice groups, by form of organization and type of group, 1975

Form of organization	Total number	General/family practice	Single specialty	Multi-specialty
All forms	[1] 7,547	828	4,041	2,678
		Number of groups		
Sole proprietorship	119	13	32	74
Partnership	2,053	364	889	800
Professional corporation	4,606	373	2,801	1,432
Association	484	58	235	191
Foundation	33	0	7	26
Other	252	20	77	155
		Percent of groups [2]		
Sole proprietorship	1.6	1.6	0.8	2.8
Partnership	27.2	44.0	22.0	29.9
Professional corporation	61.0	45.1	69.3	53.5
Association	6.4	7.0	5.8	7.1
Foundation	0.4	0.0	0.2	1.0
Other	3.3	2.4	1.9	5.8

[1] Total excludes 936 nonresponses to question.
[2] Some columns may not add to 100.0 because of rounding.
SOURCE: American Medical Association register of group practice, 1976.

groups (69.3 percent), while general practice groups were least commonly organized in this way (45.1 percent). At least one-fourth of the practices of each group type were organized as partnerships, the greatest concentration of partnerships (44.0 percent) being in the general practice groups (table 4). The professional corporation predominated in groups with 25 or fewer physicians. In groups with 26 or more, a partnership was the preferred organizational form. In the 31 groups with 100 or more physicians, however, 32.3 percent of the groups were classified in the "other" category, partly because the respondents had selected more than one form of organization on the questionnaire.

Policy determination. The question on policy determination was: "Who principally determines the medical/business policies of the group: board of directors, executive committee, partners, or other?" "Board of directors" was indicated by 45.1 percent of the 7,428 groups that responded to the question. Partners determined policy for 43.2 percent of the groups, followed by "executive committee" (6.5 percent) and "other" (5.2 percent).

Boards of directors were more likely to determine policy in single specialty groups (49.4 percent) and multispecialty groups (43.1 percent) than in general practice groups (30.5 percent). General practice groups tended to be smaller and therefore less likely to have a board of directors. As shown in table 5, partners determined policy most frequently in general practice groups (60.2 percent), followed by single specialty groups (43.1 percent) and multispecialty groups (38.1 percent).

The method of determining policy showed considerable variation by group size. In groups with four or fewer physicians, partners tended to determine policy. Boards of directors were more prevalent in groups with 5 to 99 physicians. In the 29 responding groups with 100 or more physicians, an executive committee most commonly determined policy (48.3 percent).

Group management. Of the 7,607 respondents to the survey question as to whether the group had a manager or administrator, more than half (55.7 percent) replied affirmatively. Group managers were employed in 70.7 percent of the multispecialty groups, 56.1 percent of the general practice groups, and 45.7 percent of the single specialty groups. The proportion of groups with a group manager increased as the size of the group increased.

The majority of groups with a manager, regardless of the group type, employed that manager full time. More than four-fifths (81.1 percent) of the multispecialty groups, 69.3 percent of the general practice groups, and 61.3 percent of the single specialty groups employed their managers full time. About one-seventh (14.7 percent) of those groups with managers reported that the manager was a physician. The proportion having a physician as group manager ranged from 11.4 percent in multispecialty groups to 18.7 percent in single specialty groups. In those groups with physician managers, the manager tended to be employed part time (62.6 percent). Three of four groups (77.2 percent) having nonphysician managers employed them full time.

Of the groups responding to the survey question "Does the group elect or designate a physician as medical director?", 64.2 percent said "No." Physician medical directors were designated or elected in 31 percent of the single specialty groups, 32 percent of the

Table 5. Total medical practice groups, by method of policy determination and type of group, 1975

Method of policy determination	Total number	General/family practice	Single specialty	Multi-specialty
All methods	[1] 7,428	817	3,992	2,619
		Number of groups		
Board of directors	3,351	249	1,972	1,130
Executive committee	482	31	143	308
Partners	3,209	492	1,719	998
Others	386	45	158	183
		Percent of groups [2]		
Board of directors	45.1	30.5	49.4	43.1
Executive committee	6.5	3.8	3.6	11.8
Partners	43.2	60.2	43.1	38.1
Others	5.2	5.5	4.0	7.0

[1] Total excludes 1,055 nonresponses to question.
[2] Some columns may not add to 100.0 because of rounding.
SOURCE: American Medical Association register of group practice, 1976.

Table 6. Distribution of medical practice groups, by method of income distribution and type of group, 1975

Method of income distribution	Total groups	Percentage of total [1]	Single specialty	General/family practice	Multi-specialty
All methods	[2] 7,407	100.0	3,963	815	2,629
Equal distribution	2,236	30.2	1,426	251	559
Formula	2,464	33.3	1,044	317	1,103
Productivity only	663	9.0	297	105	261
Straight salary	1,490	20.1	914	104	472
Other	554	7.5	282	38	234

[1] Percentages do not add to 100.0 because of rounding.
[2] Total excludes 1,076 nonresponses to question.
SOURCE: American Medical Association register of group practice, 1976.

general practice, and 43 percent of the multispecialty. As with groups employing a manager, the probability that a group would elect a physician medical director increased with the size of the group.

Groups with a physician medical director usually elected him on a part-time basis (66.8 percent). In general, as the size of the group increased, so did the probability that the physician medical director would perform his duties full time. One-half of the groups with 100 or more physicians elected a full-time medical director.

Income Determination

Groups were asked to indicate how income was distributed to the majority of physicians in the group. Income distribution according to a formula that included a percentage based on productivity and other factors was the method most preferred by general practice groups (38.9 percent) and multispecialty groups (42.0 percent). The groups that distributed income to members using a formula based on productivity defined productivity in one of three ways: (*a*) revenue generated, (*b*) hours worked, or (*c*) patients seen in the office and at the hospital. In contrast to the general practice and multispecialty groups, the highest percentage of single specialty groups (36.0 percent) indicated that equal distribution of income was the method of choice. Three other methods of income determination were indicated on the questionnaire (productivity only, straight salary only, and other), but they were apparently not as favored as was income distribution by a formula or equally (table 6).

A separate analysis was undertaken of the 532 groups that distributed income according to a

method other than the types listed on the questionnaire. These groups tended, for the most part, to distribute income according to various combinations of methods. The methods that respondents most often wrote in on the questionnaires were: (*a*) straight salary and bonus based on productivity; (*b*) first year straight salary, thereafter graduated according to specialty; (*c*) formula based on earnings and time served; (*d*) straight salary, bonus, and profit sharing; and (*d*) salary based on percentage ownership of the group.

Specialties of Physicians

Four specialties (general practice, general surgery, internal medicine, and radiology) accounted for 43.3 percent of the total physicians in group practice. Certain specialists seemed to be more attracted to group practice than others (table 7). More than one-half of the radiologists, pathologists, and pediatric cardiologists engaged in patient care in 1975 practiced in groups. Psychiatrists and dermatologists were less inclined than other specialists to practice in groups.

The group specialists employed by single specialty groups varied substantially from those employed by multispecialty groups. On the one hand, more than three-quarters of the cardiologists, dermatologists, gastroenterologists, general surgeons, and internists in groups were associated with the multispecialty type. On the other hand, at least three-quarters of the anesthesiologists and pathologists in groups were associated with single specialty groups. Group radiologists and obstetrician/gynecologists were almost evenly distributed between single specialty and multispecialty groups.

Table 7. Distribution of group physicians, by specialty and type of medical practice group, 1975

Specialty	Total physicians	Single specialty and general/family practice	Multi-specialty
All specialties	66,842	27,531	39,311
Allergy	337	61	276
Anesthesiology	4,086	3,572	514
Cardiovascular diseases	1,418	298	1,120
Child psychiatry	225	49	176
Colon and rectal surgery	92	25	67
Dermatology	688	109	579
Diagnostic radiology	1,240	292	948
Forensic pathology	15	8	7
Gastroenterology	595	94	501
General/family practice	8,531	3,579	4,952
General preventive medicine	62	0	62
General surgery	5,627	1,417	4,210
Internal medicine	9,707	2,171	7,536
Neurosurgery	589	287	302
Neurology	716	192	524
Obstetrics and gynecology	4,978	2,403	2,575
Occupational medicine	281	51	230
Ophthalmology	1,643	695	948
Orthopedic surgery	3,189	1,989	1,200
Otolaryngology	1,143	397	746
Pathology	2,145	1,642	503
Pediatrics	4,546	1,716	2,830
Pediatric allergy	104	27	77
Pediatric cardiology	128	16	112
Physical medicine and rehabilitation	146	53	93
Plastic surgery	329	152	177
Psychiatry	1,826	817	1,009
Pulmonary disease	347	47	300
Radiology	5,103	2,799	2,304
Therapeutic radiology	412	94	318
Thoracic surgery	513	133	380
Urology	1,547	698	849
Other specialties	654	71	583
Unspecified specialties	3,880	1,577	2,303

SOURCE: American Medical Association register of group practice, 1976.

Allied Health Personnel

Groups responding to the survey employed 140,527.4 FTE (full-time equivalent) allied health personnel (table 8). Secretarial and clerical employees made up the largest single category of total allied health personnel (AHP). Registered nurses, licensed practical nurses, and nurses aides accounted for 26.4 percent of the total. The mean number of allied health personnel per physician was 2.10 for all groups, 1.90 for single specialty groups, 2.57 for general practice, and 2.18 for multispecialty.

Age of Groups

Only 7,316 (86.2 percent) of the total groups indicated the age of the group on the questionnaire;

these data are shown according to type of group in table 9. The largest category of groups (36.9 percent) had been in existence 6 to 15 years, of which 59 percent were of the single specialty type. In 1970, 43.2 percent of the groups did not exist.

Overall, the average age of responding groups was 10.2 years: 7.9 years for single specialty groups, 10.0 for general practice, and 13.7 for multispecialty. Of the newer groups (3 years old or less), 58.0 percent were of the single specialty type, particularly the groups devoted to obstetrics/gynecology, anesthesiology, internal medicine, and pediatrics. These four specialties represented 40 percent of all the single specialty groups that had been established since 1972; another 13.3 percent of these newer groups were of the general/family practice type.

Table 8. Number of allied health personnel and average number per FTE physician, by type of medical practice group, 1975

Kind and number of personnel	Total groups	Single specialty	General/family practice	Multispecialty
All kinds of allied health personnel:				
Total	140,527.4	44,699.2	10,155.6	85,673.0
Per physician	2.10	1.90	2.57	2.18
Registered nurses:				
Total	18,367.7	5,217.5	1,575.6	11,574.6
Per physician	0.27	0.22	0.40	0.29
Licensed practical nurses and nurses aides:				
Total	18,709.1	3,811.6	2,098.9	12,798.9
Per physician	0.28	0.16	0.53	0.33
X-ray, laboratory, and medical technicians:				
Total	28,110.6	11,097.1	1,446.1	15,567.5
Per physician	0.42	0.47	0.37	0.40
Secretarial and clerical:				
Total	60,191.9	21,163.2	4,473.9	34,554.8
Per physician	0.90	0.90	1.13	0.88
Other, including pharmacists:				
Total	15,148.1	3,409.8	561.1	11,177.2
Per physician	0.23	0.14	0.14	0.28

NOTE: FTE = full-time equivalent.
SOURCE: American Medical Association register of group practice, 1976.

Table 9. Distribution of medical practice groups, by age and type, 1975

Age of group (years)	Total number	Percentage of total	Single specialty	General/family practice	Multispecialty
Total	[1] 7,316	100.0	3,919	798	2,599
1 or less	350	4.8	185	46	119
2–3	1,204	16.5	716	129	359
4–5	1,603	21.9	1,008	148	447
6–15	2,703	36.9	1,567	293	843
16–25	855	11.7	307	149	399
20 or more	601	8.2	136	33	432

[1] Total excludes 1,167 nonresponses to question.
SOURCE: American Medical Association register of group practice, 1976.

Groups With Prepayment Plans

The prepayment portion of the survey identified 713 groups with 13,534 physicians that provided at least some care on a prepaid basis. Prepaid group practice was defined on the questionnaire as follows:

> Does the group provide any care on a prepayment (capitation) basis? That is, does the group contract either directly or through a third party to provide care to a defined group of subscribers in return for a predetermined fee or premium on a periodic basis? (Blue Cross, Blue Shield, and commercial insurors issuing traditional coverage contracts based on fee-for-service claims should *not* be considered prepayment.)

More than three-fourths of the prepaid groups received less than 50 percent of their dollar volume from prepayment, and 266 (40.2 percent) indicated that less than 5 percent of their gross revenue was related to prepayment. Only 142 groups had 50 percent or more prepaid activity (table 10).

Of the 713 prepaid groups in the survey, 55.5 percent were multispecialty groups, 33.8 percent single specialty, and the remaining 10.7 percent general practice. Of the 13,534 physicians in prepaid groups, 62.4 percent were engaged as full-time physicians. Of the 13.1 percent engaged as part-time physicians, 95.3 percent practiced in multispecialty groups. (A relatively large percentage, 22.7 percent, of physicians in prepaid groups did not indicate whether they were employed on a full-time or part-time basis.) Multispecialty groups accounted for 11,649 (86.1

Table 10. Medical practice groups with prepayment plans, by percentage of activity prepaid and size of group, 1975

Percentage of activity prepaid [1]	Total groups with prepayment	Size of group (number of physicians)				
		3–5	6–15	16–25	26–49	≥ 50
Total	[2] 662	291	222	58	54	37
		Number of groups				
Less than 5	266	130	91	20	18	7
5–14	144	77	45	8	8	6
15–24	58	31	18	3	3	3
25–49	52	25	20	3	1	3
50–74	41	15	14	7	4	1
75–99	78	8	27	13	15	15
100	23	5	7	4	5	2
		Percent of groups [3]				
Less than 5	40.2	44.7	41.0	34.5	33.3	18.9
5–14	21.8	26.5	20.3	13.8	14.8	16.2
15–24	8.8	10.7	8.1	5.2	5.6	8.1
25–49	7.9	8.6	9.0	5.2	1.9	8.1
50–74	6.2	5.2	6.3	12.1	7.4	2.7
75–99	11.8	2.7	12.2	22.4	27.8	40.5
100	3.5	1.7	3.2	6.9	9.3	5.4

[1] Question was: Approximately what percentage of group activity (gross revenue) is related to the prepayment mechanism?
[2] Total excludes 51 nonresponses to question.
[3] Some columns of percentages may not add to 100.0 because of rounding.
SOURCE: American Medical Association register of group practice, 1976.

percent) of all prepaid group physicians, while single specialty groups accounted for 1,493 and general practice for 392. Three of 10 (30.9 percent) of the multispecialty groups had 50 percent or more prepaid activity. In comparison, only 7.9 percent of the single specialty groups and 12.5 percent of general practice groups had 50 percent or more prepayment. In all group types, the greatest proportion of groups had less than 5 percent prepaid activity (table 11).

The average size of prepaid groups was 19.0 physicians, but this figure was statistically biased upward by the larger prepaid groups. It is significant that the median size was 6.1 physicians and that 58.8 percent of the prepaid groups had 7 or fewer physicians. Sixteen of the 32 groups with 100 or more physicians were prepaid groups.

The distribution of prepaid groups by census division closely approximated the geographic distribution of all groups, regardless of prepaid activity. The East North Central, Middle Atlantic, and Pacific Divisions combined represented 73.7 percent of the physicians in prepaid groups, while the other divisions each had less than 10 percent. Five States (California, Illinois, Minnesota, New York, and Wisconsin) accounted for 43.9 percent of the prepaid groups and 62.6 percent of the physicians providing some prepaid care.

Prepayment groups exhibited organizational characteristics only slightly different from those of all groups. The percentages of prepaid groups operating as professional corporations (59.9 percent) and as partnerships (27.7 percent) were very similar to the percentages of all groups (61.0 percent professional corporations and 27.2 percent partnerships). The percentages of prepaid groups that distributed income according to a formula (37.9 percent) and that distributed it equally (21.1 percent) are very similar to the percentages of all groups that distributed income in these two ways (33.3 percent by formula and 30.2 percent equally).

Determination of policy was accomplished by a board of directors in 45.1 percent of all groups and 46.1 percent of prepaid groups; partners determined policy for 31.9 percent of the total groups, but that figure rose to 43.2 percent among groups with prepayment. In those prepaid groups that had a manager to implement policy, this manager was a physician only 11.1 percent of the time. The manager was employed full time 81 percent of the time. Total groups, in contrast, had a manager 55.7 percent of the time; that manager was a physician in 14.7 percent of the

Table 11. Medical practice groups with prepayment plans, by percentage of activity prepaid and type of group, 1975

Percentage of activity prepaid [1]	Total groups with prepayment	Type of group		
		General/family practice	Single specialty	Multi-Specialty
Total	[2] 662	72	215	375
		Number of groups		
Less than 5	266	33	103	130
5–14	144	21	59	64
15–24	58	4	24	30
25–49	52	5	12	35
50–74	41	6	11	24
75–99	78	3	4	71
100	23	0	2	22
		Percent of groups [3]		
Less than 5	40.2	45.8	47.9	34.7
5–14	21.8	29.2	27.4	17.1
15–24	8.8	5.6	11.2	8.0
25–49	7.9	6.9	5.6	9.3
50–74	6.2	8.3	5.1	6.4
75–99	11.8	4.2	1.9	18.9
100	3.5	0.0	0.9	5.6

[1] Question was: Approximately what percentage of group activity (gross revenue) is related to the prepayment mechanism?
[2] Total excludes 51 nonresponses to question.
[3] Some columns of percentages may not add to 100.0 because of rounding.
SOURCE: American Medical Association register of group practice, 1976.

total groups and served full time in 71.1 percent.

Most groups with prepayment plans (72.4 percent) provided both outpatient and inpatient care. Among groups with prepayment, both modes of care were provided by 73.7 percent of the multispecialty groups, 72.5 percent of the single specialty groups, and 65.4 percent of the general practice groups.

Groups with prepayment plans had an average of 2.2 allied health personnel per physician. The composition of the 29,125.1 FTE allied health personnel employed by the prepaid groups differed significantly from that of all AHP employed by groups (X^2 = 1,124, 3 *df*, $P<0.001$). However, when the average size of the prepaid groups relative to the nonprepaid was controlled, the difference in the employment of allied health personnel by prepaid and nonprepaid groups was of borderline significance (t = 1.64, 1,165 *df*, $P<0.10$).

For each category of allied health personnel, we examined the ratio of physicians in prepaid and nonprepaid groups, using a t-test with two-tailed probability. The ratios per physician of registered nurses, X-ray technicians, medical technicians, secretaries, and other AHP were not found to be significantly different at the 1 percent level in the prepaid and nonprepaid groups. However, the ratios per physician of licensed practical nurses (t = 1.72, 1,140 *df*, P = 0.086), and pharmacists (t = 2.60, 695 *df*, $P<0.01$) differed significantly at the 0.10 level or greater in the prepaid and nonprepaid groups. Thus, size of group appears to be an important determinant in the employment of certain categories of AHP regardless of the payment status of the group.

The largest single category of allied health personnel employed by groups with prepayment was comprised of secretaries, receptionists, and bookkeepers, as the following table, which compares the percentages of various categories of AHP in prepaid groups and all groups, shows.

Category	Prepaid groups	Total groups
Secretaries, receptionists, and bookkeepers	34.3	42.8
Nurses (RNs, LPNs, and aides)	31.0	26.4
Technicians (X-ray, laboratory, and medical)	19.8	20.0
Other professionals (including pharmacists)	14.9	10.8

Secretaries were employed by 88.6 percent of the prepaid groups, and these groups tended to employ pharmacists to a larger extent (14.4 percent) than the total groups (4.8 percent). A broader representation of the allied health professions tended to be employed among prepaid groups than among all practices.

Trends in Group Practice

Comparison of data from the 1975 survey of medical groups with data from the surveys conducted by the AMA in 1965 and 1969 was rendered difficult by differences in definitions. One such basic difference was in the number of physicians required to meet the definition of a medical group. As already mentioned, the definition used in the 1965 survey required three or more full-time physicians, but this definition was revised in 1969 to reflect the composition of emerging group practices. In the new definition, the number of physicians required was changed to "at least three" with no differentiation between full- and part-time status. This

definition was adopted by the AMA Council on Medical Service, as well as by the American Group Practice Association and the Medical Group Management Association, all of whom desired a common definition that would insure comparability of data and consistency in enumerating group practices. To facilitate comparisons, we present the 1975 and 1969 data both in their original or actual form and in their adjusted form, the adjusted form including only those groups with three or more full-time physicians.

Another difficulty in comparing the data from the three surveys was that the specialty classifications used in the earlier surveys were less specific. By reclassifying the physicians in the 1975 and 1969 surveys from the 39 AMA specialties into the 17 specialty classifications used in 1965 and then redetermining the type of group on this basis, a greater degree of comparability was attained. For example, "child psychiatry" became "psychiatry" for comparing type of group.

Adjustment of the 1975 data to conform with the 1965 definition of a group effected an 8.8 percent reduction in the total number of medical groups (from 8,483 to 7,733) and a 10.1 percent decrease in the total number of group physicians (from 66,842 to 59,809). As shown in table 12, similar adjustment of the 1969 data effected a 3.3 percent decrease in the total number of groups (from 6,731 to 6,162) and a 3.1 percent decrease in the total number of group physicians (from 40,093 to 38,834).

When comparisons are made by type of group, two trends are seen. In 1965 single specialty groups represented 50.4 percent of the total groups and in 1975, 55.6 percent. The percentage of groups with a single specialty rose because twice as many new single specialty groups as multispecialty were formed during that period. Another trend was that although all types of groups showed an absolute increase in numbers, general practice groups decreased as a percentage of the total groups, from 15.2 percent in 1965 to 10.5 percent in 1975.

A comparison of the data from the surveys indicates an increase in the average size of groups. The average number of physicians was 6.6 in 1965, 6.3 in 1969, and 7.7 in 1975. The decline in size from 1965 to 1969 was due to the statistical weight of the small, newly formed groups, which had on the average only 4.6 physicians. The average group size increased between 1969 and 1975 because physicians were being attracted to existing groups, particularly those that in 1969 had fewer than eight physicians. The average size of general practice groups increased from 3.5 physicians in 1965 to 4.4 in 1975. Multispecialty groups, in particular, increased in average size, from 11.6 physicians in 1965 to 13.2 (13.0 adjusted) in 1975.

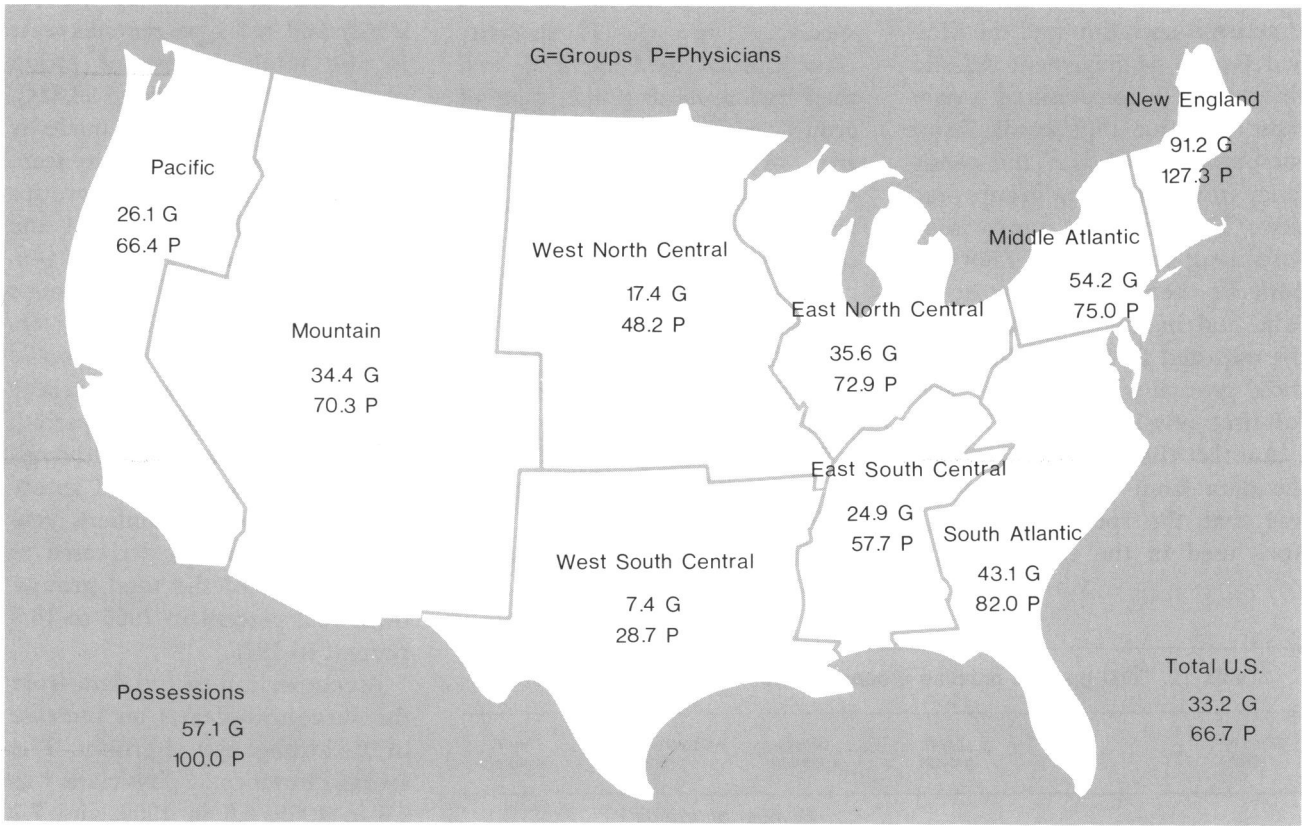
The total number of group physicians increased from 28,381 in 1965 to 66,842 (59,809 adjusted) in 1975. The annual average increase in group physicians from 1969 to 1975 was 8.9 percent. As was true with the total groups, the largest percentage increase in

Table 12. Total medical practice groups, by type, 1965, 1969, and 1975

Survey year	Total groups	Single specialty	General/family practice	Multi-specialty
	Number of groups			
1965	4,289	2,161	651	1,477
1969:				
Actual	6,371	3,169	784	2,418
Adjusted	6,162	3,252	758	2,152
1975:				
Actual	8,483	4,601	906	2,976
Adjusted	7,733	4,300	812	2,621
	Average annual percentage change			
1965–69:				
Actual	10.4	10.0	4.8	13.1
Adjusted	9.5	10.8	3.9	9.9
1969–75	3.9	4.8	1.2	3.3
	Percentage distribution			
1965	100.0	50.4	15.2	34.4
1969:				
Actual	100.0	49.7	12.3	38.0
Adjusted	100.0	52.8	12.3	34.9
1975:				
Actual	100.0	54.2	10.7	35.1
Adjusted	100.0	55.6	10.5	33.9

SOURCES: American Medical Association register of group practice, 1976, and references 4 and 7.

Figure 2. Percentage growth rates of group practices and group practice physicians, by census division, 1969 to 1975



group physicians between 1969 and 1975 was in the single specialty type. Full-time group physicians increased from 1969 to 1975 at an annual average rate of only 6.6 percent, while part-time group physicians increased at a rate of 11.6 percent. The relative increase in part-time group physicians was evident in each group type. Large increases were registered in multispecialty and general practice groups, which had shown decreases between 1965 and 1969.

While the numbers of groups increased in all census divisions between 1969 and 1975, four of the five divisions in the eastern half of the United States were experiencing greater growth rates than the western divisions (fig. 2). New England experienced the greatest average annual growth rate in the period 1969–75 (12.0 percent) and the West North Central Division, the least (1.5 percent).

The number of allied health personnel employed per physician increased from 2.3 in 1965 to 2.6 in 1969 and decreased to 2.3 in 1975. The "other" classification used in 1965 was extracted for comparison with the "office personnel" and "other professional" designations used in 1969. Some differences may also have risen in comparing "clerical" categories in 1965 to "secretaries, receptionists, and bookkeepers" in 1969 and 1975. While secretarial services increased between the survey years, the ratio of "medical" allied health personnel to physicians decreased slightly in the case of nurses and technicians. This decrease, however, may have been more a function of the number of nonrespondents to the question about allied health personnel than of actual decreases in the ratio of these personnel per group physician.

In 1975 the most prevalent form of organization for the provision of medical services among group practices was the professional corporation (59.9 percent of the total groups). Relaxation of legal restrictions on the corporate practice of medicine, possibly coupled with the adverse professional liability climate, may have led to the increasing use of the professional corporation. Partnerships, which in 1965 represented the most prev-

alent organizational form among groups (77.8 percent), were somewhat less prevalent in 1969 (68.7 percent) and decreased sharply to 27.7 percent of total groups in 1975. The distribution of all physicians by specialty was compiled by applying the 1965 specialty classifications to the 1969 and 1975 data. Major differences in the distribution over the survey years were the decrease in the relative number of general practitioners and the increase in the relative numbers of anesthesiologists, radiologists, and internists. The other differences in the distribution of specialists between survey years were not greater than 1 percent.

Although prepayment information was not asked for in the 1965 survey, 88 groups with 50 percent or more prepayment were identified with the aid of the American Group Practice Association and the Medical Group Management Association. In 1969, 85 groups with more than 50 percent prepayment were identified, and though these classifications were not exactly comparable, there were strong indications that the number of groups with more than 50 percent of their gross revenue derived from prepayment did not increase appreciably between 1965 and 1969. By 1975 the number had increased to 142 (116 adjusted), of which 116 (95 adjusted) were of the multispecialty type.

Future Research

Future lines of research will be concerned with comparing the characteristics of group physicians with those of physicians in other professional activities. Similarly, the structure of prepaid group practice, the types of physicians employed in it, and the services it provides require further analysis. In particular, the organization of groups with prepayment as compared to the organization of groups without it needs additional study, as do the various methods of distributing income among group practice physicians. Attempts also should be made to determine whether group practice improves the productivity and quality of medical services over solo practice. If group practice is indeed a viable partial solution to problems in health care delivery, research should be directed toward determining its specific benefits to patients and physicians.

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SYNOPSIS

GOODMAN, LOUIS J. (American Medical Association), BENNETT, EDWARD H., III, and ODEM, RICHARD J.: *Current status of group medical practice in the United States. Public Health Reports, Vol. 92, September–October 1977, pp. 430–443.*

Evidence of the effectiveness of group practice in solving health manpower and delivery problems is contradictory; yet the numbers of groups and of physicians practicing in groups have continued to increase. Since 1932 group practices in the United States have increased at an average annual rate of approximately 8 percent. Data from the latest survey of medical groups, conducted in 1975 by the American Medical Association, show areas in which significant changes have occurred.

Although the number of group medical practices continued to increase between 1969 and 1975, the rate of increase was lower. In contrast, the number of physicians in group practice increased at a faster rate. While the single specialty groups increased, general/family practice groups were becoming a smaller percentage of total groups.

Groups in which prepayment accounted for more than half of their dollar volume of income experienced only insignificant rates of increase, although substantial growth for prepaid groups had been anticipated. In 1969 more than two-thirds of the total groups were legally organized as partnerships, but in 1975 the professional corporation was increasingly used. Coastal regions of the United States had relatively more groups and physicians associated with groups, mainly because large prepaid groups practices were operating in these regions.