Health maintenance organizations: plan offerings and enrollments

While the availability of HMO*'s increased during the 1980's, workers in certain industries and geographic areas were more likely than others to be offered the opportunity to participate*

Michael Bucci

The rising cost of health care has created a dilemma for both employers and employees, encouraging them to search for ways to cut their health care costs. To do this, employers increasingly are sharing the costs of employer-sponsored health insurance with their employees, while employees are turning to health maintenance organization (HMO) plans, which generally require few out-of-pocket expenses beyond plan premiums. Employee participation in HMO plans increased during the 1980's, suggesting an effort on the part of workers and their families to keep their health care costs at a more manageable level.

The number of employees offered an HMO plan by their employer continued to increase in the 1980's, as did the number of employees who chose HMO's as a method of receiving health care. Many of these newly eligible employees were offered plans financed jointly by employers and employees; consequently, the proportion of workers offered wholly employer-financed HMO's declined noticeably.

The growth in HMO plan availability and enrollment is apparent throughout the country, although there are distinct regional and industry differences. For example, between 1984 and 1987, the percent of full-time office employees in finance, insurance, and real estate establishments who were offered an HMO increased by 15 percentage points, while the increase for office workers in manufacturing was 7 percentage points. Likewise, plan offerings to full-time production workers in the South increased between 1984 and 1987, but remained stable in the West. Other industry and regional variations exist in the degree of employee participation in HMO's and in the percentage of workers offered plans fully paid by employers.

These findings are based on data from the Bureau of Labor Statistics' Area Wage Surveys.[1] The surveys develop data on occupational wages and employee benefits in a representative cross-section of the Nation's metropolitan areas. Data are collected for workers in six broad industry divisions: manufacturing; transportation, communication, and other public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and selected services.[2] (Governments and the construction and mining industries are excluded.)

Two types of data from the Area Wage Surveys are used for this article—the percent of full-time workers offered an HMO plan and the percent of workers participating in such a plan. (The percent of workers participating in HMO's is less than the percent offered such plans for several reasons. In some instances, workers who are offered HMO's are also offered a fee-for-service plan as an alternative form of health care coverage. Some of these workers choose the more traditional form of coverage. Also, employees may decline all forms of coverage that are offered for cost- or provision-related reasons.) From these two Area Wage Survey series, a participation rate has been derived for this study. The participation rate is obtained by dividing the percent of workers participating in HMO plans by the percent offered HMO plans.[3] The participation rate series serves as a measure of HMO popularity among those work-

Michael Bucci is an economist in the Division of Occupational Pay and Employee Benefit Levels, Bureau of Labor Statistics.

ers able to avail themselves of such plans.

This article presents HMO plan developments in all metropolitan areas for the years 1984 through 1987.[4] HMO plan offerings, plan financing, and employee participation levels are compared and contrasted across industry and occupational divisions.[5] Specific differences in plan availability and enrollment that exist among 28 selected metropolitan areas within the United States,[6] as well as within four broad geographic regions—the Northeast, South, Midwest, and West—are also studied.

Table 1. **Percent of full-time employees offered an HMO plan, percent participating, and percent offered a wholly employer-financed plan, by industry, 1984–87[1]**

Industry	Production workers				Office workers			
	1984	1985	1986	1987	1984	1985	1986	1987
All industries								
HMO offered	33	35	38	39	48	51	56	58
HMO participants	6	7	9	12	8	10	12	16
Participation rate[2]	18	20	24	31	17	20	21	28
Wholly employer-financed HMO	20	21	21	21	21	22	23	23
Wholly employer-financed rate[3]	61	60	55	54	44	43	41	40
Manufacturing								
HMO offered	38	41	45	44	56	58	62	63
HMO participants	6	8	10	15	10	11	14	18
Participation rate[2]	16	20	22	34	18	19	23	29
Wholly employer-financed HMO	26	27	28	27	33	34	35	33
Wholly employer-financed rate[3]	68	66	62	61	59	59	56	52
Transportation and utilities								
HMO offered	42	44	45	48	51	55	58	58
HMO participants	6	7	8	11	6	7	9	13
Participation rate[2]	14	16	18	23	12	13	16	22
Wholly employer-financed HMO	26	28	26	26	30	32	32	30
Wholly employer-financed rate[3]	62	64	58	54	59	58	55	52
Wholesale trade								
HMO offered	25	25	29	29	29	32	38	38
HMO participants	5	6	8	11	5	5	8	9
Participation rate[2]	20	24	28	38	17	16	21	24
Wholly employer-financed HMO	17	18	18	19	18	19	20	21
Wholly employer-financed rate[3]	68	72	62	66	62	59	53	55
Retail trade								
HMO offered	35	29	30	31	37	40	44	50
HMO participants	4	5	6	8	8	9	10	13
Participation rate[2]	11	17	20	26	22	23	23	26
Wholly employer-financed HMO	9	10	9	8	6	6	7	14
Wholly employer-financed rate[3]	26	34	30	26	16	15	16	28
Finance, insurance, and real estate								
HMO offered	(4)	(4)	(4)	(4)	49	54	59	65
HMO participants	(4)	(4)	(4)	(4)	8	11	14	19
Participation rate[2]	(4)	(4)	(4)	(4)	16	20	24	30
Wholly employer-financed HMO	(4)	(4)	(4)	(4)	11	13	15	16
Wholly employer-financed rate[3]	(4)	(4)	(4)	(4)	22	24	25	25
Selected services[5]								
HMO offered	17	18	19	23	43	46	49	50
HMO participants	5	6	6	9	8	9	11	14
Participation rate[2]	29	33	32	39	19	20	22	28
Wholly employer-financed HMO	9	9	9	10	17	17	19	18
Wholly employer-financed rate[3]	53	50	47	43	40	37	39	36

[1] Data for 1984–86 are for 3-year periods ending in the year shown. Data for 1987 reflect surveys conducted between 1984 and 1987.

[2] The participation rate is obtained by dividing the percent of workers participating in an HMO by the percent offered such a plan. For example: in 1984, 6 percent of production workers in all industries participated in an HMO, while 33 percent of production workers in all industries were offered an HMO. Therefore, the participation rate is 6 percent divided by 33 percent, or 18 percent.

[3] The wholly employer-financed rate is derived as follows: in 1984, 20 percent of production workers in all industries were offered a wholly employer-financed HMO, while 33 percent of production workers in all industries were offered an HMO plan. Therefore, the wholly employer-financed rate is 20 percent divided by 33 percent, or 61 percent.

[4] Data not available.

[5] Area Wage Surveys coverage of selected services is limited to hotels and motels; laundries and other personal services; business services; automobile repair, rental, and parking; motion pictures; nonprofit membership organizations (excluding religious and charitable organizations); and engineering and architectural services.

Table 2. **Percent of full-time employees offered an HMO plan, percent participating, and percent offered a wholly employer-financed plan, by region, 1984–87**[1]

Region	Production workers				Office workers			
	1984	1985	1986	1987	1984	1985	1986	1987
Northeast								
HMO offered	30	34	35	40	52	56	57	62
HMO participants	2	4	5	7	5	7	9	11
Participation rate[2]	7	12	14	18	10	13	16	18
Wholly employer-financed HMO	19	20	20	21	21	20	22	22
Wholly employer-financed rate[3]	63	59	57	53	40	36	39	35
South								
HMO offered	17	19	22	26	29	32	39	47
HMO participants	2	3	4	7	3	4	7	12
Participation rate[2]	12	16	18	27	10	13	18	26
Wholly employer-financed HMO	7	8	8	11	10	12	12	15
Wholly employer-financed rate[3]	41	42	36	42	34	38	31	32
Midwest								
HMO offered	38	42	46	43	46	52	56	57
HMO participants	5	7	9	12	8	10	13	17
Participation rate[2]	13	17	20	28	17	19	23	30
Wholly employer-financed HMO	26	28	27	25	22	24	24	26
Wholly employer-financed rate[3]	68	67	59	58	48	46	43	46
West								
HMO offered	54	54	58	54	69	69	74	72
HMO participants	17	17	21	24	20	20	24	26
Participation rate[2]	31	31	36	44	29	29	32	36
Wholly employer-financed HMO	35	35	35	34	31	33	36	35
Wholly employer-financed rate[3]	65	65	60	63	45	48	49	49

[1] Data for 1984–86 are for 3-year periods ending in the year shown. Data for 1987 reflect surveys conducted between 1984 and 1987.

[2] The participation rate is obtained by dividing the percent of workers participating in an HMO by the percent offered such a plan. For example: in 1984, 2 percent of production workers in all industries participated in an HMO, while 30 percent were offered an HMO plan. Therefore, the participation rate is 2 percent divided by 30 percent, or 7 percent.

[3] The wholly employer-financed rate is derived as follows: in 1984, 19 percent of production workers in all industries were offered a wholly employer-financed HMO, while 30 percent were offered an HMO plan. Therefore, the wholly employer-financed rate is 19 percent divided by 30 percent, or 63 percent.

The scope of the Area Wage Surveys must be kept in mind when analyzing the data. Because the surveys cover only selected metropolitan areas, and exclude establishment practices in rural locales, the regional and all metropolitan area estimates may provide higher levels of HMO incidence than would be evident in an all-inclusive national survey. Also, the exclusion of small establishments from the survey may tend to raise the estimates, because HMO offerings may be more likely at larger establishments in more populated metropolitan areas.[7]

What are HMO's?

Health maintenance organizations function as both providers and insurers of health care.[8] They generally provide prepaid unlimited and comprehensive medical care for physical ailments of any type. HMO's differ from more traditional fee-for-service health plans in many ways. For instance, HMO's generally do not restrict the days of care and expenditures for medical services. Also, HMO's have contracted to provide medical coverage at a predetermined cost, and thus have an added incentive to control expenses.[9] The result is that HMO's emphasize preventive health care; for example, their members are usually provided periodic physical examinations, which are less commonly covered under fee-for-service arrangements.

During the 1980's, HMO's experienced rapid growth in two important areas: the number of plans offered and the number of participants enrolled. In 1980, there were 235 HMO's in the United States, with a combined total enrollment of just over 9 million individuals. By 1989, there were 604 HMO's,with a total enrollment of nearly 32 million people.[10] One major force behind this explosive growth has been the increased desire of employers, employees, and health care insurers to combat the rising costs of health care.[11]

Despite this proliferation of both individual plans and enrollees, it should be recognized that HMO's are not the primary vehicle for providing health care coverage to employees. Area Wage Survey data for 1987 show that 94 percent of full-time production workers and 99 percent of

office workers were offered traditional fee-for-service insurance by their employers for hospitalization, surgical, and medical coverage.[12] This compares with 39 percent of production workers and 58 percent of office workers who were offered an HMO plan. These data suggest that, when given a choice between an HMO plan and a fee-for service plan, a substantial number of workers choose the more traditional option.[13]

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HMO availability

Office workers were more likely than their production counterparts to be offered HMO plans by their employer during the years 1984 to 1987. (See table 1.) In fact, the margin of coverage between these two groups actually increased during this period. In 1984, 33 percent of production employees in all industries surveyed under the Area Wage Survey programs were offered an HMO plan, while 48 percent of office employees had this option—a 15-percentage-point margin. By 1987, this margin had grown to 19 percentage points (39 percent versus 58 percent).

According to the data, in both 1984 and 1987, this difference in coverage between office and production workers was most evident among employees in the selected services industries. In 1984, 43 percent of office workers in these industries were offered an HMO plan, compared with 17 percent of production workers. In 1987, the situation was largely unchanged: 50 percent of office workers were offered an HMO option, while 23 percent of production employees had the same alternative.

The proportion of both office workers and production workers offered an HMO plan rose about 20 percent from 1984 to 1987. (See table 1.) In 1987, 58 percent of office workers were offered an HMO, up from 48 percent in 1984. Over the same period, offerings to production employees rose from 33 percent to 39 percent. The gains experienced by production employees were quite similar throughout the five industry divisions for which data are available.[14] Small increases were observed in all industry divisions, except the retail trade division where the percentage of workers offered an HMO declined slightly. Production employees in the manufacturing and transportation and utilities divisions were considerably more likely than other production workers to be offered an HMO plan in 1987. This may stem from the fact that these workers were also more likely to be covered by labor-management agreements.

There also appears to be a slight correlation between the number of employees per establishment and the frequency of HMO plan offerings. In 1984, the manufacturing and transportation and utilities divisions had the greatest number of employees per establishment, and also ranked first or second in HMO plan offerings to both production and office workers. The wholesale trade division had the smallest number of employees per establishment in both 1984 and 1987, and its office employees were least likely to be offered an HMO plan (the division's production employees were also near the bottom in terms of plan offerings). The following tabulation shows the average employment in establishments with 50 or more employees:[15]

	1984	*1987*
All industries	190	185
Manufacturing	251	244
Transportation and utilities	232	227
Wholesale trade	120	122
Retail trade	143	143
Finance, insurance, and real estate	194	200
Selected services	194	192

By 1987, it was more difficult to note any relationship between the number of employees per establishment and HMO offerings. Production employees continued to show a link between these two factors. Among office workers, though, this was not the case. An industry division (finance, insurance, and real estate) that ranked third in average establishment size ranked first in HMO plan offerings.

Plan financing

Throughout the 1984–87 period, production employees were more likely than their office counterparts to be offered an HMO plan paid for entirely by their employer. (See table 1.) However, the percentage of workers who were offered these wholly employer-financed plans decreased for both groups of workers—from 61 percent to 54 percent for production workers, and from 44 percent to 40 percent for office workers. The reason for this decrease is clear: as HMO plan offerings increased in frequency, the growth in HMO plans paid for entirely by employers failed to keep pace.[16]

This is consistent with the data from the Bureau of Labor Statistics' Employee Benefits Survey. Those data show that the percentage of full-time employees in medium and large private establishments who participated in wholly employer-financed health care plans fell from 72 percent in 1980 to 52 percent in 1989.[17]

The majority of industries studied over the 1984–87 period experienced declines in the relative availability of HMO plans paid in full by employers, especially among eligible production workers. No single industry sector experienced an increase in the rate of offerings of wholly em-

ployer-paid plans. Production employees in retail trade were the only production workers who maintained their 1984 rate of wholly employer-financed HMO's; the rate fell for production employees in the manufacturing, transportation and utilities, and selected services industries. Production workers in wholesale trade had the highest incidence of fully employer-financed plans in 1987. The experiences of office workers were similar to those of production workers.

Plan participation

As mentioned previously, the participation rate data in table 1 reflect two distinct factors—the availability of employer-provided HMO plans and the employee's decision to select an HMO as a vehicle for health care coverage. Because the Area Wage Survey program collects data on both of these occurrences, it is possible to make inferences about employees' actual selections in regard to health care providers.

Data in table 1 show increases in both HMO plan offerings and actual participation over the 1984–87 period. The increase in plan participation (about 100 percent over the period for both production workers and office workers) is greater than the rate of growth in plan offerings (about 20 percent for both groups), indicating workers are increasingly selecting an HMO plan. This is true both nationally and in each industry and occupational group. Among eligible employees, production workers are slightly more likely to participate in an HMO plan than are their office counterparts. In fact, since 1984 (when the margin was just 1 percentage point), the gap in the rate of participation between eligible production and office workers widened slightly to 3 percentage points.

Among production workers who were offered at least one HMO option by their employer, there was a 13-percentage-point increase nationwide in the rate of participation from 1984 to 1987. Among office workers, the increase was nearly as large, 11 percentage points.

Growth rates differ for office and production employees within the specific industry divisions. For example, in 1984, 11 percent of eligible production employees in retail trade (includes those involved in such duties as shipping, handling, packing, and warehouse storage) participated in an HMO plan, compared with 22 percent of their office counterparts. By 1987, both groups of workers were participating at a rate of 26 percent. Similarly, 18 percent of manufacturing office employees who had a choice participated in an HMO plan in 1984, compared with 16 percent of their production counterparts. However, by 1987, 34 percent of the eligible production workers in manufacturing were enrolled in HMO's, compared with 29 percent of office employees.

It might be expected that an industry that shows a high percentage of wholly employer-financed HMO plans would exhibit a high rate of employee participation. However, the results from this study do not give a firm indication that this is true. For instance, in 1984, the rate of wholly employer-paid HMO offerings was 53 percent for production employees in the selected services industries (includes, for example, maintenance and repair persons), while their rate of participation in HMO plans was 29 percent, the highest among production employees in any industry that year. At the same time, 68 percent of the HMO-eligible production workers in manufacturing were offered a fully employer-paid plan; 16 percent chose to participate.

Another example gives different results. In 1987, 66 percent of production workers in wholesale trade were offered HMO plans that did not require employee contributions. This was the highest rate of wholly employer-financed plans for production or office workers in any industry division studied. Perhaps because of this, 38 percent of eligible production workers in wholesale trade chose to participate in HMO's, the second highest participation rate among any category of workers.

These results seem to imply that the preponderance of completely employer-financed HMO plans within a certain industry has no particular effect on the percentage of employees within that industry who choose to participate in an HMO plan. This may indicate that the employee's choice depends not just on cost of coverage, but on other less measurable conditions, such as perceived quality and convenience of care, as well as already existing doctor-patient relationships.

Regional disparities

Regional comparisons of the HMO data provide interesting findings. First, when one looks at total HMO offerings on a regional basis, it is readily apparent that the increase in the offerings has not occurred equally among regions. In 1984, production workers in the West—where HMO's were offered to 54 percent of workers—were more than three times as likely as production workers in the South—at 17 percent—to be offered an HMO. (See table 2.) In fact, both production and office workers in the West had a greater frequency of plan offerings than did workers in the Northeast, South, or Midwest. However, by 1987, regional disparities had narrowed. Production workers in the Northeast and the South were being offered HMO plans by their employers in increasing numbers. During this

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same period, the percentage of production workers in the West who were offered an HMO plan was unchanged. Similar regional patterns were observed among office workers.

A different story is revealed by the regional data on HMO plan financing. (See table 2.) In 1984, production and office workers in the Midwest had the highest rates of wholly employer-paid plan offerings, and employees in the South had the lowest rates. By 1987, the situation had changed: Among eligible production employees, wholly employer-financed offerings to employees in the South remained constant, while offerings to workers declined in the remaining three regions.

A similar pattern appears in the data on rates of participation in HMO's. The West had the highest rates of participation in 1984, but had the smallest rates of increase in HMO offerings over the 4-year period, 1984–87. Meanwhile, participation rates grew rapidly in the remaining three regions. For example, production employees in the Northeast experienced an 11-point increase over the period, and office workers in the South experienced a 16-point increase.

When individual cities within the four regions are examined in greater detail, even stronger area disparities are apparent. (See table 3.) In the Northeast, HMO offerings increased for both production and office employees in all metropolitan areas studied. However, the rates of growth vary. For instance, in New York and Trenton, HMO plan offerings to production workers doubled between survey periods—from 21 percent to 40 percent in New York and from 34 percent to 76 percent in Trenton. In contrast, less than 0.5 per-

Table 3. **Percent of full-time employees offered an HMO plan and percent participating, 28 selected metropolitan areas, 1984–86 and 1987–89**

Area	Production workers						Office workers					
	1984–86			1987–89			1984–86			1987–89		
	Offered	Participating	Participation rate	Offered	Participating	Participation rate	Offered	Participating	Participation rate	Offered	Participating	Participation rate
Northeast												
Boston	49	7	14	52	11	21	70	13	19	81	21	26
Trenton	34	5	15	76	19	25	65	10	15	89	26	29
Buffalo	61	6	10	67	22	33	80	17	21	91	30	33
Philadelphia	56	14	25	59	17	29	82	20	24	89	23	26
Pittsburgh	41	2	5	44	7	16	61	6	10	74	11	15
Portland, ME	(1)	(1)	(1)	16	3	19	(1)	(1)	(1)	19	4	21
New York	21	1	5	40	7	18	50	6	12	85	15	18
South												
Atlanta	20	3	15	32	10	31	37	6	16	54	14	26
Baltimore	33	3	9	50	10	20	49	4	8	83	15	18
Miami-Hialeah	38	9	24	50	16	32	49	9	16	83	20	29
New Orleans	3	(1)	(1)	29	6	21	4	(1)	(1)	46	18	39
Washington, DC	36	3	8	39	5	13	72	10	14	75	14	19
Richmond-Petersburg	49	12	24	48	18	38	59	12	20	75	16	21
Midwest												
Gary-Hammond	70	8	11	68	14	21	57	7	12	48	8	17
Milwaukee	46	15	33	58	28	48	57	14	25	58	24	41
Minneapolis-St. Paul	47	19	40	68	40	59	73	34	47	87	50	57
Indianapolis	44	3	7	55	12	22	57	4	7	71	15	21
Kansas City	45	10	22	46	14	30	51	13	25	66	21	32
Toledo	6	1	17	43	16	37	8	1	13	32	15	47
Cincinnati	47	6	13	48	12	25	56	7	13	64	18	28
St. Louis	39	6	15	58	15	26	57	7	12	69	18	26
Davenport-Rock Island-Moline	38	11	29	42	18	43	40	13	33	39	16	41
West												
Oakland[2]	74	24	32	81	39	48	82	32	39	81	31	38
San Francisco[2]	74	24	32	86	41	48	82	32	39	87	37	43
Salt Lake City-Ogden	59	9	15	61	24	39	74	11	15	80	33	41
Seattle-Everett	52	8	15	68	21	31	79	14	18	84	24	29
San Jose	78	30	38	76	27	36	82	32	39	89	33	37
Anaheim-Santa Ana	63	24	38	77	36	47	80	22	28	78	31	40

[1] Less than 0.5 percent.

[2] Prior to 1987, San Francisco and Oakland were considered to be one metropolitan area; therefore, data for these two areas are the same for the 1984–86 period.

cent of workers in Portland, ME, were offered an HMO in the 1984–86 survey period but, by the 1987–89 period, 16 percent of production and 19 percent of office workers were offered plans. Office employees in all northeastern areas studied were also far more likely than their production counterparts to be offered an HMO.

In the South, 1984–86 data on HMO offerings to production employees ranged from 3 percent in New Orleans to 49 percent in the Richmond-Petersburg, VA, area. Since that time, HMO offerings in New Orleans increased to 29 percent, while offerings in Richmond-Petersburg were virtually unchanged. Although the South ranks last among the four regions in offerings of HMO plans to office workers, Baltimore had one of the highest rates among the 28 metropolitan areas studied in detail during the 1987–89 period. (In the Area Wage Survey program, Baltimore is included among southern metropolitan areas.) Rates of participation also doubled in Baltimore between the 1984–86 and 1987–89 survey periods. The participation rate of 39 percent among eligible office workers in New Orleans surpasses the survey average, and represents a turnaround from the city's 1984–86 survey period, when participation was less than 0.5 percent.

In the Midwest region's metropolitan areas of Gary-Hammond, Toledo, and Davenport-Rock Island-Moline, production employees were more likely than office workers to be offered an HMO plan. In Gary-Hammond, this margin was especially large (68 percent to 48 percent). The majority (91 percent) of the workers offered an HMO plan in the Gary-Hammond area were offered a plan paid in full by their employer; this greatly exceeds the national average. The metropolitan area of Minneapolis-St. Paul enjoyed the highest participation rates of all the metropolitan areas included in this study (59 percent for eligible production workers and 57 percent for eligible office workers).[18] Finally, while growth in plan offerings within the region as a whole has slowed, 43 percent of production employees in Toledo were offered an HMO during the 1987–89 survey period, compared with 6 percent during the 1984–86 period. During the same survey periods, office employees in Toledo also experienced a significant increase in plan offerings.

In the West, the six metropolitan areas studied experienced little growth in HMO plan offerings for both production and office workers. (This may stem from the fact that HMO offerings in all areas were above 50 percent, and frequently surpassed 70 percent, during the first survey period.) The most striking fact about the West is the similarity in plan offerings throughout the region. By the 1987–89 period, only production workers in the Salt Lake City-Ogden area had fewer than two-thirds of workers offered an HMO. In addition, actual participation rates within the region became remarkably similar since the earlier survey period. Participation rates were frequently between 40 percent and 50 percent for all workers. Interestingly, San Jose was the only area in this study to show decreases in participation rates for both office and production workers. □

Footnotes

[1] Area Wage Survey data are obtained from a sample of metropolitan areas designed to represent all such locales in the contiguous United States. In all instances, the data reported here for a given year are based on the most recent information available for each of the areas in the study. For most of the period covered in this analysis, sampled areas were surveyed annually. Prior to 1987, wage information was collected each year, while benefit practices were studied every third year on a rotating cycle. Because of this, data presented in this study for the year 1984 relate to information collected in surveys conducted between January 1982 and December 1984.

In 1987, the Area Wage Survey program began the phase-in of both a new sample of areas and a new survey timetable. The previous sample of 70 metropolitan areas, surveyed annually, was replaced by a 90-area sample. These areas were placed into two groups— 32 large areas and 58 smaller areas. Each year, surveys are conducted in 61 of these areas—included are all 32 large areas and half of the smaller locales. In the large areas, benefit data are collected every 4 years; wage data alone are collected every year. The two groups of smaller areas are surveyed in alternating years. Each group of small metropolitan areas is surveyed once for both wage data and benefit information; the wage data only are updated 2 years later.

Area Wage Surveys: Selected Metropolitan Areas is published annually. The most recent issue, *Area Wage Surveys: Selected Metropolitan Areas, 1988*, Bulletin 3045–62 (Bureau of Labor Statistics, 1989) is available from the U.S. Government Printing Office, Washington, DC 20402. It provides information on occupational earnings, establishment practices, and employee benefits for selected metropolitan areas within the continental United States. More detailed information is published in bulletins for individual areas.

[2] Area Wage Survey coverage of selected services is limited to hotels and motels; laundries and other personal services; business services; automobile repair, rental, and parking; motion pictures; nonprofit membership organizations (excluding religious and charitable organizations); and engineering and architectural services.

[3] For example, in 1987, 12 percent of all production workers participated in an HMO; in the same year, 39 percent of all production workers were offered an HMO. Therefore, the "participation rate" is 12 divided by 39, or 31 percent.

[4] The all metropolitan areas data in this section were obtained from the Bureau of Labor Statistics' *Metropolitan Areas, United States and Regional Summaries* bulletins for 1984, 1985, 1986, and 1987. These bulletins contain unpublished national and regional information on establishment

practices and employee benefit programs. Data in these bulletins are derived by weighting data from the metropolitan areas included in the Area Wage Surveys to represent all metropolitan areas in the United States, as well as all metropolitan areas within four broad geographic regions.

[5] This study compares two types of workers—production and office. *Production workers* include working supervisors and all nonsupervisory workers (including group leaders and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance, repair, janitorial and guard services, auxiliary production for plant's own use (for example, powerplant), and recordkeeping and other services closely associated with the above production operations. (Cafeteria and route workers are excluded in manufacturing industries, but included in nonmanufacturing industries.) In finance and insurance, no workers are considered to be production workers. *Office workers* include working supervisors and all nonsupervisory workers (including lead workers and trainees) performing clerical or related office functions in such departments as accounting, advertising, purchasing, collection, credit, finance, legal, payroll, personnel, sales, industrial relations, public relations, executive, drafting, or transportation. Administrative, executive, professional, and part-time employees, as well as construction workers utilized as a separate work force, are excluded from both the production and office worker categories.

[6] The metropolitan areas were each surveyed between 1984 and 1986 and again between 1987 and 1989. The metropolitan areas included in this study were: Boston, Trenton, Buffalo, Philadelphia, Pittsburgh, Portland (ME), New York, Atlanta, Baltimore, Miami-Hialeah, New Orleans, Washington, DC, Richmond-Petersburg, Gary-Hammond, Milwaukee, Minneapolis-St. Paul, Indianapolis, Kansas City, Toledo, Cincinnati, St. Louis, Davenport-Rock Island-Moline, Oakland, San Francisco, Salt Lake City-Ogden, Seattle-Everett, San Jose, Anaheim-Santa Ana. Note: Prior to 1987, San Francisco and Oakland were surveyed as one metropolitan area.

[7] Minimum establishment size was 50 workers in wholesale trade, finance, insurance, and real estate, and selected services. Minimum establishment size was 100 workers in the manufacturing, transportation and utilities, and retail trade divisions.

[8] Allan Blostin and William Marclay, "HMO's and other health plans: coverage and employee premiums," *Monthly Labor Review*, June 1983, pp. 28–33.

[9] *Fundamentals of Employee Benefit Programs*, 3rd ed. (Washington, Employee Benefits Research Institute, 1987), p. 193.

[10] National Center for Health Statistics, *Health, United States, 1989*, DHHS publication number (PHS) 90-1232 (Washington, U.S. Government Printing Office, March 1990), p. 252.

[11] The Federal Government provided an added incentive for HMO growth with the passage of the Health Maintenance Organization Act of 1973. This act (1) provided grants and loans to HMO's, (2) preempted State laws that hindered HMO operations, and (3) required certain employers to offer an HMO option to their employees. See "HMO's and other health plans," for a more detailed discussion of this act and its implications.

[12] There are three basic types of health coverage provided under most health care plans. *Hospitalization coverage* pays for in patient hospital costs; included are such basics as room and board, intensive care, medical supplies, nursing services, and miscellaneous hospital expenses. *Surgical coverage* includes surgical procedures that are performed by a licensed physician. *Medical coverage* pays for any nonsurgical care provided by a doctor; included are regular doctor's office visits, as well as services rendered in a hospital.

[13] Unlike HMO's, fee-for-service plans are postpaid. This means that the covered employee or care provider is reimbursed for the covered charges that are incurred. Medical expenses are often reimbursed through one or more of three separate methods: (1) usual, customary, and reasonable, where the charge for a covered service is compared with the usual, customary, and reasonable amount to determine payment; (2) fixed, where covered services are paid only to a predetermined amount; and (3) combination, which utilizes both of the above methods.

[14] Because of the relatively few workers involved, data for production workers in the finance, insurance, and real estate industries do not meet publication criteria.

[15] These employment figures are based on data from the Bureau of Labor Statistics publication, *Employment and Wages, Annual Averages*, which represents all workers covered by unemployment insurance programs.

[16] Data for "wholly employer-financed rates" are derived by dividing the percent of workers offered a fully employer-paid HMO plan by the percent of workers offered an HMO. For example, in 1987, 21 percent of all production workers were offered a wholly employer-financed HMO plan; 39 percent of all production workers were offered an HMO in the same year. Therefore, the "wholly employer-financed rate" is 21 divided by 39, or 54 percent.

[17] For more information, see these Bureau of Labor Statistics publications: *Employee Benefits in Medium and Large Firms, 1989*, Bulletin 2363; and *Employee Benefits in Industry, 1980*, Bulletin 2107. The Employee Benefits Survey collects data on the incidence and provisions of employer-sponsored benefits. Data on wholly employer-paid health plans are published in each of the above annual bulletins.

[18] These high participation rates may be the result of the Health Maintenance Act of 1973, passed by the Minnesota State Legislature in response to the rising costs and inaccessibility of health care in the State. Upon passage of the act, the State began to advocate the development of HMO's and formally exempted them from certain insurance and health service laws.