Early experience of health maintenance organizations under Medicare competition demonstrations

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Between 1982 and 1985, health maintenance organizations (HMO's) entered the Medicare market under the Medicare competition demonstrations. The status and experience of these HMO's in 1984 are described. The characteristics of the HMO's, their market areas, and the benefit packages they offered are presented. Information from case studies of 20 of these HMO's is used to discuss the planning process through which the organizations prepared to enter the Medicare market. Data from administrative reports, submitted by the HMO's, are used to describe the operational experience, including enrollments, utilization, and financial performance.

Introduction

Overview

Between 1982 and early 1985, 27 health maintenance organizations (HMO's) and competitive medical plans (CMP's) entered the Medicare market to provide comprehensive health services to voluntarily enrolled Medicare beneficiaries under the Medicare competiton demonstration program.[1] The key feature of this demonstration was the willingness of HMO's and CMP's to agree to accept financial risk for providing Medicare benefits to enrolled Medicare beneficiaries.[2] In return, participating HMO's and CMP's received for each enrollee a prospective monthly payment from the Health Care Financing Administration (HCFA) equal to 95 percent of the adjusted average per capita cost (AAPCC) for Medicare beneficiaries of the same age, sex, disability, institutional, and Medicaid status in the fee-for-service sector.

More than 50 HMO's and CMP's applied to participate in the Medicare competition demonstration program. Because regulations were already being prepared to implement a national program to permit HMO's and CMP's to enroll Medicare beneficiaries, only 27 of these plans were permitted to become operational. These plans operated under demonstration conditions for periods ranging from 9 months to 2½ years with termination of the demonstrations occurring between April 1, 1985, and June 30, 1985. At the end of the demonstration period, all 27 plans continued to participate in the Medicare program under the Tax Equity and Fiscal Responsibility Act (TEFRA) regulations[3] (*Federal Register*, January 10, 1985) that limit the retention of surplus earnings by participating HMO's and CMP's, but are otherwise quite similar to the demonstration rules.

In September 1983, Mathematica Policy Research, with its principal subcontractor Medical College of Virginia, was awarded a contract by the Health Care Financing Administration (HCFA) to evaluate the demonstrations. This article summarizes the characteristics and experiences of the demonstration plans during 1984, the first full evaluation year. The evaluation focuses on 26 HMO's and CMP's that were providing services to Medicare beneficiaries in 1984.[4] However, because of varying data availability across these plans, the analyses in this article do not always include all of the 26 plans.

Demonstration plans

The timing of entry of the 26 HMO's and CMP's into the Medicare market spanned a 27-month period. The first entrant became operational in August 1982, and the final entrant began enrolling Medicare beneficiaries in December 1984. The greatest number of plans (18) entered the Medicare market in 1984; 3 became operational in 1982; and 5 began enrolling Medicare beneficiaries in 1983. Thus, for a majority of the demonstration plans, there is less than a full year of experience through 1984 on which to report.

In this section, we discuss the initial entry decisions and early strategic planning activities of the demonstration plans, including:

- The characteristics of the 26 plans and their markets.
- The factors that influenced the decision to enter the Medicare market.
- Strategic planning for market entry, including product design and marketing strategies.

The distribution of strategies by plan and market area characteristics is also discussed.

[1]Competitive medical plans (CMP's) were not a defined entity during the demonstration. Health plans now designated as CMP's were HMO's that were not federally qualified or other organizations (e.g., preferred provider organizations).

[2]Seven of the demonstrations had agreements with the Health Care Financing Administration that "capped" their financial risk.

[3]By the end of 1985, 3 of these 27 plans had withdrawn from the Medicare market.

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[4]A 27th plan, Maxicare of California, became operational in 1985, though its late start date precluded its inclusion in the evaluation.

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Table 1

Selected characteristics of Medicare competition demonstration health plans

Health plan	Location	Contract start date	Years in operation	Federal qualification	Profit status	Chain affiliation	Type of HMO model	Total of non-Medicare enrollment[1]	Prior Medicare enrollments and type
AV-MED	Miami, Fla.	December 1982	6	Yes	For-profit	National Medical Enterprises[2]	Traditional IPA	63,207	None
Comprehensive American Care		November 1982	11	Yes	For-profit	None	Staff	38,882	None
HealthAmerica (Health Care of Broward)		February 1983	Yes	Nonprofit	Health	Staff America	14,775	Cost	
South Florida Group Health		March 1984	4	Yes	Nonprofit	BCBS of Florida	Traditional IPA	9,833	None
IMC		August 1982	8	Yes	For-profit	None	Mixed	39,835	Cost/risk
Healthway Medical Plan	Massachusetts	January 1984	4	Yes	Nonprofit	Blue Cross of Mass.	Group	30,890	Cost
Medical East Health Plan		October 1983	2	Yes	Nonprofit	Blue Cross of Mass.	Staff	13,111	Cost
Central Massachusetts Health Plan		January 1984	6	No	Nonprofit	None	Traditional IPA	42,269	None
Fallon Community Health Plan		September 1983	7	Yes	Nonprofit	Blue Cross of Mass.	Group	49,789	Risk demonstration
Medical West Health Plan		January 1984	6	Yes	Nonprofit	Blue Cross of Mass.	Staff	53,086	Cost
Family Health Program	Los Angeles County	December 1983	24	Yes	Nonprofit	None	Staff	75,708	Cost
United Health Plan		May 1984	17	Yes	Nonprofit	None	Mixed	51,399	Cost
Health Care Network[3]	Detroit, Mich.	May 1984	3	Yes	Nonprofit	Blue Cross of Michigan	Network IPA	45,841	None
Group Health Plan of Southeast Michigan		March 1984	7	Yes	Nonprofit	None	Staff	35,572	None

See footnotes at end of table.

Table 1—Continued

Selected characteristics of Medicare competition demonstration health plans

Health plan	Location	Contract start date	Years in operation	Federal qualification	Profit status	Chain affiliation	Type of HMO model	Total of non-Medicare enrollment[1]	Prior Medicare enrollments and type
Preferred Health Plan (Henry Ford Hospital Health Plan)		September 1984	1	No	For-profit	None	Hospital based	8,500	None
Metropolitan Health Plan	Indianapolis, Ind.	January 1984	10	Yes	Nonprofit[4]	None	Staff	67,379	Cost
Delmarva Health Care Plan	Easton, Md.	March 1984	3	No	Nonprofit	None	Traditional IPA	990	None
HealthPlus of MI (Genesee Health Plan)	Flint, Mich.	October 1983	5	Yes	Nonprofit	None	Traditional IPA	73,111	None
Genesee Valley Group Health Association	Rochester, N.Y.	December 1983	11	Yes	Nonprofit	BCBS of Rochester	Group	34,357	None
ChoiceCare, Inc.	Cincinnati, Ohio	April 1984	6	No	Nonprofit	None	Traditional IPA	36,712	Cost
Health Ohio (Marion)	Central Ohio	June 1984	8	Yes	Nonprofit	None	Traditional IPA	15,074	Cost
Crossroads	New Jersey	May 1984	6	Yes	Nonprofit	None	Traditional IPA	17,206	None
Maxicare	Chicago, Ill.	December 1984	19 months	Yes	For-profit	Maxicare	IPA	109,827	Cost
Group Health Service Plan (Senior Health Care)	Sacramento, Calif.	October 1984	10	Yes	Nonprofit	None	Group	15,749	None
Share	Chicago, Ill.	July 1984	6 months as Share 11 years Share Development Corporation	No	For-profit	Yes	Hospital focused IPA	3,299	None
French Hospital Health Plan	San Francisco, Calif.	September 1984	Established 1852: oldest HMO.	Yes	Nonprofit	None	Hospital based	10,000	None

[1] For health plans that did not send fourth-quarter reports—HealthPlus, Family Health Plan, Delmarva, and United Health Plan—the figure given is total non-Medicare enrollment as of September 31, 1984.
[2] AV-MED became part of National Medical Enterprises as of December 31, 1984.
[3] Health Care Network officially became operational in February 1984; however, its initial marketing enrollment activities did not begin until May 1984.
[4] MetroHealth converted to a for-profit corporation in February 1985.

NOTES: IPA is independent practice association. HMO is health maintenance organization. BCBS is Blue Cross and Blue Shield.

Entering the Medicare market

The characteristics of the 26 alternative health plans are shown in Table 1. Of the 26 plans, 11 are independent practice associations (IPA's); 4 are group-model HMO's; 7 are staff-model HMO's; and the rest are mixed models and hospital-based plans. The majority of the plans (81 percent) are federally qualified; only five do not have Federal qualification. This percentage is a much higher proportion than the 59 percent of all U.S. HMO's. Additionally, most plans are nonprofit organizations (77 percent). There is a more even distribution among the plans with respect to organizational affiliations. Of the 26 plans, 15 are independent although 11 have some form of affiliation. The majority of these affiliations (7) are with the local Blue Cross and Blue Shield organizations.

The demonstrations do not exhibit a distinctive pattern with respect to the relative maturity of the plans. Sixteen plans (62 percent) have been in operation for longer than 5 years; the remaining 10 plans (38 percent) have been in operation for 5 years or less. The majority of the plans (54 percent) had prior experience in providing services to Medicare beneficiaries. Among the 12 plans that had previously enrolled Medicare beneficiaries, most did so through cost contracts with HCFA.

Each of the four geographic census regions was represented by several alternative health plans. A total of 16 markets had Medicare demonstration projects, with several market areas having two or more demonstration plans competing for Medicare enrollees. The competition was most intense in the south Florida market where five HMO's actively marketed to and enrolled Medicare beneficiaries under the demonstration. Other markets with multiple competing demonstration plans were the Boston, Mass. standard metropolitan statistical area; Worcester, Mass.; Los Angeles, Calif.; and Detroit, Mich. Ten of the markets with Medicare competition demonstrations were single-plan markets.

Several key characteristics of these market areas are displayed in Table 2. HCFA paid risk-based plans a prospectively determined amount per beneficiary enrolled—95 percent of the AAPCC—that was established for each county in the country. The highest AAPCC for 1985 was in Miami, Fla. (Dade County) with a monthly AAPCC of $329; the lowest AAPCC level was in Marion, Ohio, with a monthly AAPCC of $178.[5]

The total market penetration of HMO's in demonstration markets varied considerably. Two areas with particularly high HMO total market penetration rates were Boston, Mass., and Los Angeles, Calif., at 18.7 and 27.7 percent, respectively. Other demonstration market areas had HMO total market shares ranging from less than 1 percent in Easton, Md., to 10.7 percent in Worcester, Mass. Thus, the demonstrations are located in areas with a wide range of HMO market penetration rates.

With respect to 1984 HMO demonstration penetration in the Medicare market, again there was considerable variation. Miami, Fla., with 5 participating plans, had the highest penetration rate (13.6 percent); Worcester, Mass., with 2 plans, was a very close second (13.5 percent). Other than Flint, Mich., which had a penetration rate of 8.7 percent with one participating plan, all the rest of the HMO demonstration markets had rates under 5 percent.

The percent of the population 65 years of age or over in each demonstration market area is shown in Table 2. The area with the relatively largest population of elderly was Miami, Fla. (18.1 percent), followed by Worcester, Mass. and Easton, Md. (12.9 percent), Chicopee and Brockton, Mass. (12.3 percent), and Essex County, N.J. (11.6 percent). These are all above 11.3 percent, the percent of the U.S. population 65 years of age or over in 1983. Other demonstration markets had an elderly population that comprised a smaller fraction of the local population than the national average. Medicare hospital service use rates were relatively high in Medicare competition demonstration areas. The average in the United States in 1982 was about 4,004 days per 1,000 aged individuals (Health Care Financing Administration, 1984).[6] All but three demonstration markets were above the average in days per 1,000 aged residents, with Essex County, N.J. topping the list.

In a separate study conducted as part of this evaluation, the factors associated with entry of existing HMO's into the Medicare market under risk contracts have been examined in a multivariate analysis (Adamache and Rossiter, 1985).[7] The results of this analysis are briefly summarized here. Interested readers may refer to the full report for more information on data sources and methods.

The major finding of this study was that existing HMO's are significantly more likely to seek to enter the Medicare market when they are located in counties where the AAPCC level is high. A high AAPCC level indicates relatively high utilization levels in the fee-for-service sector. Because HMO's typically have experienced lower hospital use than is observed in the fee-for-service sector, a high AAPCC offers the possibility of successfully entering the Medicare market by converting some of the potential surplus to additional benefits and reduced cost sharing for Medicare beneficiaries and, in turn, generating positive net revenues.

Federal qualification and prior experience with the Medicare population through a HCFA cost contract also increased the likelihood of Medicare market

[5]Although the analysis presented in this article reflects events in 1984, the 1985 AAPCC levels are the data that were available and are presented to illustrate the relative levels across counties. The *Federal Register* (January 10, 1985) reports the 1985 AAPCC rates for all counties in the country.

[6]The 1982 average is an overstatement of 1984 utilization rates because hospital days and admissions have been declining in recent years.

[7]Only HMO's were included in this study, because data on CMP's were not available.

Table 2

Market areas[1] and selected characteristics of Medicare competition demonstration health plans

Market areas (Principal county)	Number of Medicare HMO's 1983[2,4]	AAPCC 1985[3,5,6]	Percent of HMO total market share 1983[4]	Percent of HMO Medicare market share 1984	Hospital occupancy rate 1982[5]	Physicians per 100,000 population 1982[5]	Percent of population 65 years of age or over 1980[5]	Medicare inpatient days per 1,000 aged persons 1982[5,7]	Medicare hospital admissions per 1,000 aged persons 1982[5]
Miami, Fla. (Dade)	6(1)	$329.11	7.9	13.6	74	240	18.1	4,245	410
Boston, Mass.	3(1)	206.51	18.7	2.2	86	326	12.3	5,552	465
Worcester, Mass. (Worcester)	2(0)	232.20	10.7	13.5	76	193	12.9	4,825	404
Chicopee, Mass. (Chicopee)	1(0)	188.40	9.1	4.2	80	156	12.3	4,984	385
Los Angeles County (Los Angeles)	6(4)	301.41	27.7	2.1	67	223	9.6	4,050	425
Detroit, Mich. (Wayne)	5(2)	295.66	7.5	0.6	82	208	9.6	5,408	446
Indianapolis, Ind. (Hamilton)	1(0)	199.34	3.9	3.7	83	196	9.8	5,334	469
Easton, Md. (Cecil)	1(0)	197.44	0.6	0.4	83	123	12.9	4,125	360
Flint, Mich. (Genesee)	1(0)	277.79	9.0	8.7	75	161	7.9	5,621	560
Rochester, N.Y. (Monroe)	1(0)	180.50	9.6	4.0	89	213	11.0	4,276	355
Cincinnati, Ohio (Hamilton)	1(0)	200.41	3.4	4.2	82	192	10.6	5,180	459
Essex County, N.J. (Essex)	1(0)	238.61	2.3	0.2	79	257	11.6	6,448	505
Central Ohio (Marion)	1(0)	177.78	1.1	0.8	76	189	9.4	5,322	503
San Francisco, Calif. (San Francisco)	5(4)	270.87	NA	0.6	70	277	11.2	3,650	383
Chicago, Ill. (Cook)	3(2)	283.47	5.7	1.5	77	206	10.0	5,245	432
Sacramento, Calif. (Sacramento)	1(0)	195.51	7.0	0.6	71	195	9.6	3,226	451

[1]Calculated from National HMO Census Data, Interstudy, June 30, 1983, and Area Resource File data, February 1984.
[2]Total HMO's (number with cost-based contracts in parentheses).
[3]Aged only per month.
[4]National HMO Census, Interstudy, June 30, 1983.
[5]Area Resource File, February 1984.
[6]*Federal Register*, January 10, 1985.
[7]Variable constructed by dividing 1982 Medicare inpatient days by the 1980 population 65 years of age or over in thousands.

NOTES: HMO is health maintenance organization. AAPCC is adjusted average per capita cost. NA is nonapplicable.

entry. However, other plan characteristics, including for-profit status, years of operation, size of total membership, and financial condition, had no discernible effect on entry. A variety of market area characteristics also had no detectable influence on entry.

Planning for entering the market

Once an HMO or CMP had made a decision to enter the Medicare market, the approach to the market became a prime concern for most plans. Whether a new demonstration was competing only with traditional supplemental insurers for Medicare enrollees, or with one or more Medicare HMO's and CMP's, strategic planning was a vital component of this new business development.

Although strategic planning can encompass a wide variety of issues and activities, for this initial examination of the demonstration process we focused on two primary activities:

- Product design—benefits, copayments, and beneficiary premiums.
- Marketing strategies—mass marketing and individual marketing.

In this section, we discuss the approaches Medicare HMO's and CMP's have taken to strategic planning in product design and marketing.

Product design

The Medicare program, which was designed to protect beneficiaries from the risk of financial losses because of illness, does accomplish this to a degree. However, significant exposure to out-of-pocket expense remains. As a result of this residual risk of financial loss, many beneficiaries purchase at least some supplemental insurance from health insurers. Thus, many beneficiaries feel a need for health insurance coverage beyond that which is provided by the standard Medicare package. The benefit packages offered by the 26 demonstration plans to the Medicare population are considerably more attractive than the standard Medicare Part A and B benefits.

Table 3 describes the benefits and cost-sharing provisions offered by the demonstration plans. All the plans offer standard Part A and Part B benefits. Additional benefits and provisions for reduced cost sharing offered to Medicare beneficiaries are considerable. Four plans offer high- and low-benefit options.

All of the plans offer free hospital care for at least 90 days (in fact, only two plans limit this benefit to the 90 days per spell of illness, as does the Medicare program, in their high- and low-option plans). Skilled nursing facility care is free to beneficiaries in all but one of the plans, although most do have restrictions associated with this benefit (e.g., limit to 100 days per spell of illness). Nineteen plans require no copayments for physician office visits and preventive and diagnostic care.[8] Among the seven plans that require copayments for these services, the charges are nominal—between $3 and $5 per unit of service. It is noteworthy that all the plans treat preventive care in the same manner as other physician office visits. Thus, there is considerable incentive for patients to seek preventive care.

Four benefits that appear to be of particular interest to plans in designing their benefit packages are prescription drugs, vision care, hearing care, and dental care. A breakdown of these benefits by plan reveals:

- Prescription drug benefits are offered by all but two of the demonstration plans (however, one plan covers this benefit in its high-option plan but not in its low-option plan); six plans require no cost sharing for drugs in either their low- or high-option package.
- Refractions are offered by all but six plans—although the four plans that offer both high- and low-option benefit packages offer refraction examinations only in their high-option plans. Among the 21 plans that offer this benefit, 14 require no cost sharing in at least 1 of their benefit packages (although some limit the number of examinations within a particular time period—e.g., one per year).
- Eyeglasses are offered by 12 plans in either a low- or high-option package. Nine plans provide this benefit with no cost sharing, although there are usually restrictions concerning the number of glasses that can be purchased within a particular time period.
- Audiometric services are offered by all but five plans in at least one of their benefit packages, but hearing aids are available to Medicare enrollees in only five plans (in either their high- or low-option package).
- Some form of dental care is available to Medicare enrollees in 12 plans. However, the range of services varies extensively among these plans. For example, some plans offer comprehensive benefits at no charge, including X-rays, cleanings, extractions, fillings, denture tooth replacements, etc.; other plans offer only limited services, primarily cleaning and exams.

Most plans require some copayment for at least a subset of the services listed above. The range of these copayments is slightly wider than for physician office visits—usually between $2 and $15, although some plans have deductibles associated with these services or require patients to pay varying percentages of the cost.

In designing their benefit packages, most plans chose to add a wide range of additional services to augment their extended Part A and Part B services.

[8] Of these, two plans require no copayment in their high-option plans, but do require a copayment in the low-option plans. Also, two plans require no copayment in both their high- and low-option plans.

Table 3

Benefits, premiums, and copayments[1] of Medicare competition demonstration health plans

Health plan	Premium (per month)	Standard Medicare Parts A/B benefits	Physician office visits and copayment	Preventive care and copayment	Additional hospital benefit and copayment	Additional SNF benefit and copayment	Prescription drug benefit and copayment	Vision care		Hearing care		Dental care and copayment
								Exams and copayment	Glasses and copayment	Exam and copayment	Hearing aid and copayment	
AV-MED	None	Covered	$5.00	$5.00	Free	Free 100 days per year	$100 annual deductible $400 maximum benefit	$15.00	Free 1 per year	$5.00	Free 1 per year	Covered
Comprehensive American Care	None	Covered	Free	Free	Free	Free	Free	Free	Free 1 per year	Free	Not covered	Covered
HealthAmerica (Health Care of Broward)	$20.00	Covered	Free	Free	Free	Free 100 days per spell of illness	3.00	Free	Free 1 per year	Free	Free	Covered
South Florida Group Health	[2]14.00	Covered	3.00	3.00	Free	Free 100 days per spell of illness	50.00 deductible 80 percent covered	Not covered	Not covered	Not covered	Not covered	Not covered
IMC	None	Covered	Free	Free	Free	Free 100 days	Free	Free	Free	Free	Free	Covered
Healthway Medical Plan	24.75	Covered	Free	Free	Free	Free 100 days	3.00	Free	Not covered	Free	Not covered	Not covered
Medical East Health Plan	15.00	Covered	Free	Free	Free	Free 100 days	2.00	Free	Not covered	Free	Not covered	Not covered
Central Massachusetts Health Plan	28.00	Covered	3.00	3.00	Free	Free 100 days per spell of illness	3.00	3.00	Not covered	3.00	Not covered	Limited coverage
Fallon Community Health Plan	15.00	Covered	Free	Free	Free	Free 100 days per benefit period	Free	Free 1 per 2 year period	Free 1 per 2 year period	Free	Not covered	Not covered
Medical West Health Plan	25.00	Covered	Free	Free	Free	Free 100 days per benefit period	2.00	Free	Not covered	Free	Not covered	Not covered
Family Health Program Low	None	Covered	3.00	3.00	Free 90 days per benefit period	Free 100 days per benefit period	2.00	Not covered	Not covered	3.00	Not covered	Not covered
High	35.00	Covered	Free	Free	Free 90 days per benefit period	Free 100 days per benefit period	Free	Free	Free 1 pair every 2 years	Free	Not covered	Covered

See footnotes at end of table.

Table 3—Continued

Benefits, premiums, and copayments[1] of Medicare competition demonstration health plans

Health plan	Premium (per month)	Standard Medicare Parts A/B benefits	Physician office visits and copayment	Preventive care and copayment	Additional hospital benefit and copayment	Additional SNF benefit and copayment	Prescription drug benefit and copayment	Vision care		Hearing care		Dental care and copayment
								Exams and copayment	Glasses and copayment	Exam and copayment	Hearing aid and copayment	
United Health Plan:												
High	$29.75	Covered	Free	Free	Free	Free	$2.00	Free	$20.00 every 2 years	Free	Not covered	$10.00
Low	None	Covered	$4.00	$4.00	Free	Free	4.00	Not covered	Not covered	$4.00	Not covered	Not covered
Health Care Network	26.00	Covered	Free	Free	Free	Free for 730 days	Not covered	Not covered	Not covered	Not covered	Not covered	Not covered
Group Health Plan of Southeast Michigan	39.38	Covered	Free	Free	Free	Free Unlimited	3.00	Free	Free	Free	Not covered	Covered
Preferred Health Plan (Henry Ford Hospital Health Plan):												
High	25.00	Covered	Free	Free	Free	Free 100 days	3.00	Free 1 exam per year	Free 1 per year $35.00 maximum	Free	Free	Not covered
Low	None	Covered	Free	Free	Free	Free 100 days	Not covered	Not covered	Not covered	Not covered	Not covered	Not covered
Metropolitan Health Plan	28.60	Covered	Free	Free	Free	Free 130 days	5.00	Free 1 every 2 years	Free 1 pair every 2 years	Free	Not Covered	Cleaning and exams covered
Delmarva Health Care Plan	120.00 per year	Covered	Free	Free	Free	Free 100 days per spell of illness	2.00 copayment after $100.00 deductible	Not covered	Not covered	Not covered	Not covered	Not covered
HealthPlus of Michigan (Genesee Health Plan)	46.66	Covered	3.00	3.00	Free	Free for 730 days	Free	Not covered	Not covered	Free	Free	Not covered
Genesee Valley Group Health Association	15.00	Covered	3.00	3.00	Free	Free 100 days per benefit period	50 percent of cost	3.00	50 percent of charges	3.00	Not covered	Not covered
ChoiceCare, Inc.	39.50	Covered	3.00	3.00	Free	Free 100 days per spell of illness	3.50	15.00	Not covered	15.00	Not covered	Covered
Health Ohio (Marion)	30.00	Covered	Free	Free	Free	Not covered	3.00	Not covered	Not covered	Not Covered	Not covered	Free

See footnotes at end of table.

Table 3—Continued

Benefits, premiums, and copayments[1] of Medicare competition demonstration health plans

Health plan	Premium (per month)	Standard Medicare Parts A/B benefits	Physician office visits and copayment	Preventive care and copayment	Additional hospital benefit and copayment	Additional SNF benefit and copayment	Prescription drug benefit and copayment	Vision care		Hearing care		Dental care and copayment
								Exams and copayment	Glasses and copayment	Exam and copayment	Hearing aid and copayment	
Crossroads	$24.00	Covered	$5.00	$5.00 Exams 20 percent allergies	Free	Free	80 percent covered after $100.00 deductible	$5.00	Not covered	$5.00	Not covered	Not covered
Maxicare:												
Low	None	Covered	Free	Free	Free 90 days per benefit period	Free 100 days per spell of illness	Not covered	Not covered	Not covered	Free	Not covered	Not covered
High	30.00	Covered	Free	Free	Free 90 days per benefit period	Free 100 days per spell of illness	$2.00 per copayment per 30 supply	Free	Not covered	Free	Not covered	Not covered
Group Health Service Plan (Senior Health Care)	34.50	Covered	Free	Free	Free	No copayment first 100 days	$100.00 or actual charge first 12 days $5.00 after that	5.00 copayment	Not covered	Free	Not covered	Free annual dental appointment
Share	19.75	Covered	Free	Free	Free	Paid in full up to 365 days per benefit period (State approved)	Not covered	Free	Not covered	Free	Not covered	Not covered
French Hospital Health Plan	28.00	Free	Free	Free	Free	Free	3.00 per 34 day supply	Not covered	Pay cost beyond $75.00 for each pair every 2 years	Not covered	Not covered	Not covered

[1] No copayment requirement is indicated by "free." This terminology means beneficiaries have no additional out-of-pocket cost beyond their Part B premium and any premium charged by the HMO.
[2] South Florida Group Health dropped its premium requirement in 1985.

NOTE: SNF is skilled nursing facility.

Many plans provide extensive patient education, transportation services, nutrition counseling, etc., usually at no additional cost.

An important component of the plans' benefit packages is the premium charged. Three offered all benefits at no premium charge to the Medicare enrollee; in addition, one plan dropped its premium requirement in 1984. Four additional plans offer their low-option benefit package at no cost to the enrollee.

Marketing strategies

Under the demonstration, HCFA required that all marketing materials, including member handbooks, brochures, media materials, and any other materials distributed to the public, be reviewed and approved by the Government. Approval was based on assurance that there was full disclosure of the Medicare risk program so that beneficiaries were provided the opportunity to make an informed decision about joining. HCFA required that a comparision of standard Medicare benefits and the benefits offered by the HMO's be provided in the plans' brochures. Other items such as the "lock-in" provision and beneficiary financial obligations also had to be presented in a clear and easily understood manner. In addition, HCFA provisions did not allow for door-to-door sales or other potentially coercive marketing techniques.

As one aspect of the evaluation, we explored the promotional activities used by Medicare HMO's and CMP's. We expected that promotional activities selected to disseminate information on the plan to Medicare beneficiaries would, in most cases, be very different from the marketing strategies used to obtain employer contracts and employment-based enrollees. There were two primary forms of promotional activities used by HMO's and CMP's in the Medicare market:

- Mass marketing—television, radio, newspapers, billboards, and direct mailings.
- Individual marketing—telephone sales, presentations to small groups, open houses, and physician promotion of plans.

In Table 4, the types of promotional activities undertaken by the demonstration plans are described. Mass marketing was used by the majority of plans with 90 percent advertising in newspapers and sending out direct mail promotional materials. Although 50 percent report television advertising and 60 percent place radio ads, only 10 percent (2 plans) have used billboards to reach Medicare beneficiaries.

Because individual marketing is considerably more labor-intensive and, therefore, relatively expensive, it is not surprising that fewer plans report using multiple individual marketing techniques. Although 90 percent use presentations to small groups and 60 percent offer open houses, only a handful of plans conduct telephone sales campaigns. Use of physicians to promote the plan to Medicare beneficiaries is reported by 40 percent of plans; of these 8 plans, 6 are IPA-model or network-model plans, where physicians have both fee-for-service and prepaid patients.

When promotional activities are arrayed by characteristics of plans and by market area characteristics, several patterns are discernible:

- For-profit plans use multiple promotional activities are much more likely than nonprofits to report physician promotion of the plan. However, the fact that there are only four for-profit plans (for which we have data related to this analysis) limits the generalizability of these findings.
- Differences in promotional activities by model type are evident but seem to exhibit no clear pattern. IPA-model HMO's appear to be somewhat less likely to use radio advertising and more likely to use telephone sales and physicians to promote plans.
- Plans that have no prior Medicare experience are somewhat more likely to use most types of promotional strategies than are plans that have prior Medicare enrollments. HMO's and CMP's already in the Medicare market may be well known in their markets and need less marketing to attract beneficiaries.
- No other market or plan characteristics exhibit any pattern of differences in promotional activities.

Overall, the results suggest that HMO's and CMP's entering the Medicare market were concerned with their competitive positions and engaged in strategic planning to strengthen their positions relative to both traditional insurers and other HMO's and CMP's.

Operational experience[9]

The early operational experiences of these demonstration plans will provide valuable insight and guidance for HCFA in monitoring the entry and experience of HMO's and CMP's that seek to enter the Medicare market under the TEFRA regulations. Similarly, HMO's and CMP's contemplating entry into this market may benefit from considering the early experiences of the plans that first entered the Medicare market under the demonstration program.

It is important to keep in mind that, during the initial months of operation, the demonstration plans were gaining experience with the Medicare population. Based on this early experience, many made changes in their marketing strategies, benefit packages, and internal operational procedures. This process will continue in subsequent years of operation. In the 1986 and 1987 annual reports on the HMO's and CMP's that have agreed to continue cooperating with the evaluation, we will examine those continuing experiences and responses.

One reservation about the interpretation of the information presented here should be noted. Under the demonstration, plans were permitted to retain any surpluses generated by the program. Under the TEFRA regulations, these plans and new entrants are permitted to earn a reasonable profit or surplus, but

[9]A qualitative report on the experiences of these HMO's in entering the Medicare market is available from HCFA (Langwell, et al., 1986).

Table 4

Percent of Medicare competition health plans using various marketing strategies, by organizational and market area characteristics

Characteristic	Number	Mass marketing					Individual marketing			
		Television	Radio	Newspaper	Billboard	Direct mailing	Telephone sale	Presentation to small group	Open house	Physician promotion of plan
		Percent								
All health plans	20	50	60	90	10	90	25	90	55	40
Federally qualified										
Yes	16	50	63	88	13	94	25	88	56	31
No	4	50	50	100	0	75	25	100	50	75
Years in operation										
5 or less	8	38	75	100	0	88	13	100	63	63
More than 5	12	58	50	83	17	92	33	83	50	25
Profit status										
For-profit	4	100	75	100	25	100	50	100	100	75
Nonprofit	16	38	56	88	6	88	19	88	44	31
Model										
Staff	7	43	57	100	14	100	0	100	57	0
Group	3	33	67	67	0	67	33	33	67	0
Traditional and network IPA	7	57	57	100	0	86	29	100	43	86
Mixed and other	3	67	67	67	33	100	67	100	67	67
Prior Medicare enrollments										
Yes	10	40	50	80	20	90	30	90	60	10
No	10	60	70	100	0	90	20	90	50	70
Affiliation										
Chain	9	33	56	89	0	89	22	78	78	33
Independent	11	64	64	91	18	91	27	100	36	45
Market area										
Number of plans in area:										
One	6	67	50	100	0	83	17	83	50	33
Two or more	14	43	64	86	14	93	29	93	57	45
AAPCC:[1]										
High	11	64	73	91	18	100	27	100	55	22
Low	9	33	44	89	0	78	22	78	56	55
Resources:[2]										
High	13	54	69	92	15	100	23	92	69	38
Low	7	43	43	86	0	71	29	86	29	43

[1] A high adjusted average per capita cost (AAPCC) is defined as an AAPCC rate of greater than $233, the average for the plans included in this analysis.
[2] Areas are classified as "high resource" if the number of physicians per 100,000 area residents exceeds 198, the average for the plans included in this analysis.

NOTE: Each table entry is the percent of plans in that row that use the type of marketing strategy given by column headings. These data were obtained through on-site interviews, quarterly reports, and review of promotional materials.

any surplus that exceeds the allowed level must be returned to beneficiaries through more generous benefits or reduced cost sharing, or returned directly to HCFA. Thus, the experience reported here may differ from that which occurs under the TEFRA regulations—particularly with respect to the financial performance of demonstration plans.

Data

The data that are used to examine the early operational experiences of the Medicare competition demonstrations are from three sources:

- Site visits were conducted to 20 demonstration HMO's and CMP's 6 months or more after they began providing services to Medicare enrollees. The site visit team explored with the demonstration plan management a variety of issues including: historical background, non-Medicare enrollment and experience, organizational characteristics, market area characteristics, the decision process for entering the Medicare market, strategic planning, early operational experience, and competitive responses. The site visit data were summarized in detailed case study reports of each of the 20 plans.
- Data on plan characteristics and benefit packages were obtained through mail and telephone inquiries for those HMO's that did not receive site visits.
- Quarterly administrative reports were submitted by each demonstration plan for each quarter in 1984 that they were operational. These reports include data on enrollments by type, disenrollments, utilization by type of services, revenues by source, expenses by source, number and size of facilities, staff size, and number of grievances.

- Other data sources include the Area Resource File, which contains information on the health care market and socioeconomic and environmental characteristics of every U.S. county. Unpublished data from HCFA on hospital days and admissions also were used.

There are important limitations of these data. The site visit data represent self-reported and not readily verifiable accounts of the plans' implementation experiences and operational and organizational characteristics. With respect to the quarterly administrative reports, several limitations of the data should be noted:

- The financial data are taken from unaudited financial statements and are based on cost accounting assumptions that may vary by plan.
- In several instances, quarterly report data were missing for a single period. In these cases, available data for other periods, were used to project annual figures.
- The accounting practices varied across plans with respect to their ability to capture expenses when they accrue versus when they actually occur. Thus, comparisons across plans are problematic.
- The plans were at different stages of their experiences with the demonstration for the period covered by the financial data analyzed in this article. Thus, comparative analyses and interpretations are difficult.

For each plan, we attempted to confirm our findings by comparing data obtained through site visits and telephone followup discussions with the quarterly report data. These comparisons were helpful for the majority of analyses but were limited with respect to the financial and utilization analyses, because collecting these types of data was not a priority of the site visits.

Enrollments and disenrollments

Variation across plans existed in both the number of Medicare beneficiaries attracted and in the plans' success in keeping these clients once they had enrolled. Of the 22 plans for which quarterly report data were available, 3 began enrolling demonstration beneficiaries in late 1982, 6 began in late 1983, and the remaining 13 began enrollments in the first half of 1984. ("Enrollment date" is defined as the first month for which enrollees were eligible to receive services under the demonstration rules.) The earliest programs were all located in south Florida. In all but five plans, continuous open enrollment was in effect during 1984. Of the five plans with restricted enrollment periods, three plans allowed beneficiaries to enroll during either of two 30-day intervals specified each year. The other two plans limited enrollment to one 45-day period per year.

In their demonstration protocols, plans specified target levels of enrollment ranging from 500 in the first open enrollment period to 40,000 in total for the demonstration. As can be seen from Table 5, 10 plans actually attained their target levels of enrollments as of December 1984, and two other plans were making significant progress in reaching their targets. Ten plans enrolled substantially fewer Medicare beneficiaries than they had projected enrolling. Average enrollment per plan was about 5,300; however, the average for all plans other than the largest plan was approximately 3,500, which is much closer to the median enrollment level of 2,803.

The number of disenrollments in 1984 also varied widely across plans, ranging from 0 to over 8,000. To obtain some indication of the relative incidence of disenrollment, the ratio of disenrollments during 1984 (excluding those enrollees who died) to the total number of enrollees active at any time during 1984 (i.e., the number active at year end plus the number who disenroll during the year) is presented in Table 5. The percent of enrollees who disenroll provides a crude indicator of enrollees' dissatisfaction with the plan, but also reflects other reasons for disenrollment, such as movement out of the area (either permanent relocation or seasonal migration). The rates may understate the real rate of disenrollment because sample members enrolling in late 1984 may have had too little experience with the plan to consider disenrollment.

Overall, for the 19 demonstration plans with available disenrollment data, 13.2 percent of all persons enrolled at some time during 1984 disenrolled during that year. Rates in the south Florida area are particularly high. Whether this is because of dissatisfaction of enrollees, the wide range of plan choices available to Medicare beneficiaries, or the seasonal movement into and out of the south Florida area is not known, but will be explored further in future analyses that will be conducted using data from a survey of beneficiaries.

To determine whether certain types of plans or certain areas tend to differ from others in terms of enrollments and disenrollments, these statistics have been tabulated for various plan and market characteristics. The results are presented in Table 6. Examining these figures reveals the following patterns:

- The 17 federally qualified plans have many more enrollees, on average, than the 2 plans without Federal qualification and also a much higher disenrollment rate. Federal qualification by itself is not a good indicator of whether clients are likely to be more satisfied with the plan.
- The 8 plans in operation for 5 years or less have much smaller enrollments, on average, than the 11 plans in operation for longer periods (1,735 compared with about 8,720). The younger plans tended to have rates of disenrollment only about one-half as large as those of the older plans.
- The 4 profit-seeking plans had much larger enrollments, on average, than nonprofit plans (14,156 versus 3,545). However, they also had disenrollment rates that were nearly twice as high as nonprofit firms. The size of the enrollment difference is greatly increased by the fact that 1 of the 4 profit-seeking plans had more than 40,000

Table 5

Enrollments and disenrollments for Medicare competition demonstration health plans

Health plan	Date enrollment began	Actual length of open enrollment period	Target enrollments[1]	Total enrollment as of Dec. 1984	Total disenrollment[2]	
					Number	Percent
AV-MED	Dec. 1982	Continuous	10,000 each year 40,000 total	6,819	1,519	21.6
Comprehensive American Care	Nov. 1982	Continuous	25,000 total	4,894	759	13.4
HealthAmerican (Health Care of Broward)	Feb. 1983	Continuous	4,152 1st year	2,636	920	25.4
South Florida Group Health	Mar. 1984	Continuous	4,500 by Dec. 1984	485	36	6.8
IMC	Aug. 1982	Continuous	15,000 by Dec. 1982 5,000 each year after	43,788	8,114	14.2
Healthway Medical Plan	Jan. 1984	Continuous	2,215 by 1984 3,544 by 1985	1,702	68	3.9
Medical East Health Plan	Oct. 1983	30 days 2 times per year	1,415 by 1984 3,415 by 1985	2,536	176	6.5
Central Massachusetts Health Plan	Jan. 1984	Continuous	2,050 1st year	1,450	—	—
Fallon Community Health Plan	Sept. 1983	30 days 2 times per year	8,000 by 1984 8,500 by 1985	9,658	386	3.8
Medical West Health Plan	Jan. 1984	30 days 2 times per year	2,670 by 1984 4,820 by 1985	2,969	89	2.9
Family Health Program	Dec. 1983	45 days	16,000 within two years	13,882	1,765	15.8
United Health Plan	May 1984	Continuous	3,000 1st year	4,366	110	5.9
Health Care Network	May 1984	Continuous	3,820 1st year 5,471 2nd year	1,097	—	—
Group Health Plan of Southeast Michigan	Mar. 1984	Continuous	1,558 1st year 2,449 2nd year	227	118	34.1
Preferred Health Plan (Henry Ford Hospital Health Plan)	Sept. 1984	Continuous	3,200 1st year	1,123	20	1.8
Metropolitan Health Plan	Jan. 1984	Continuous	5,000 by 1984 11,500 total	4,211	109	2.5
Delmarva Health Care Plan	Mar. 1984	45 days per year	500 during 1st open enrollment 1,000 by 1984	130	—	—
HealthPlus of Michigan (Genesee Health Plan)	Oct. 1983	Continuous	4,000 total	4,172	79	2.8
Genesee Valley Group Health Association	Dec. 1983	Continuous	3,000 1st year	4,106	153	3.6
ChoiceCare, Inc.	April 1984	Continuous	3,300 by 1984 5,100 by 1985	6,144	—	—
Crossroads	April 1984	Continuous	18,000 total	194	—	—
Health Ohio (Marion)	April 1984	Continuous	2,654 total	999	10	.99

[1] Information obtained from the HMO's and CMP's protocols and from site visit reports.
[2] The disenrollment rate is the ratio of 1984 disenrollments to the sum of enrollments at year-end plus 1984 disenrollments.

enrollees, which greatly distorts the mean. The average for the other for-profit plans is about 4,300, much closer to the mean for the nonprofits (3,500).

- Because of the small number of observations on each type of organizational form, comparisons are not especially meaningful, except possibly for staff and IPA models. Staff models had twice as many enrollees as IPA's, which were near the sample median. The disenrollment rates were much larger for the staff than the IPA model.
- The 10 plans with no prior experience serving Medicare patients had much lower enrollments than the 9 plans with prior experience. This is not surprising, given the opportunity for conversions that the latter plans had and the greater knowledge of how to attract and serve elderly clients. The two groups of plans had very similar average rates of disenrollment.
- The nine plans affiliated with chains had average enrollments only one-half as large as the average for independent plans. However, this is the result of the fact that the largest plan is not a member of a chain. The average enrollment for the other nine independent plans is only slightly larger than that of plans belonging to chains. Disenrollment rates were comparable for these two types of plans.
- The 13 plans in areas with multiple plans had an average enrollment level more than twice as large as the average for plans in areas containing only a single HMO. The disenrollment rates were also substantially higher for plans in multiple-plan areas.
- Among the 11 HMO's in areas with Medicare reimbursement rates above the average for these 19 plans, the average enrollment was more than 7,500, compared with only about 3,300 among plans in areas with below average reimbursements (largely a result of the one large plan; however, other plans in

Table 6

Enrollments and disenrollments for Medicare competition demonstration health plans, by organizational and market area characteristics

Characteristic	Number	Percent with limited enrollment	Average enrollment as of December 31, 1984	Average total disenrollment	
				Number	Percent[1,2]
All health plans	19	26	5,779.0	759.5	8.7
Federally qualified					
Yes	17	24	6,385.1	847.7	9.7
No	2	50	626.5	10.0	0.9
Years in operation					
5 years or less	8	25	1,735.1	162.4	5.9
More than 5	11	27	8,719.9	1,193.8	10.8
Profit status					
For-profit	4	0	14,156.0	2,603.0	12.7
Nonprofit	15	33	3,545.1	267.9	7.7
Model					
Staff	7	43	4,479.3	562.3	14.4
Group	3	33	5,155.3	202.3	3.8
Traditional or network IPA	6	17	2,283.7	274.0	5.4
Mixed or other	3	0	16,425.7	2,748.0	7.3
Prior Medicare enrollments					
Yes	10	40	8,674.7	1,174.7	8.2
No	9	11	2,561.4	298.2	9.3
Affiliation					
Chain	9	33	3,556.4	371.9	8.3
Independent	10	20	7,779.2	1,108.4	9.2
Market area					
Number of plans in area:					
One	6	33	2,764.5	73.3	2.1
Two or more	13	23	7,170.2	1,076.2	11.8
AAPCC:[3]					
High	11	9	7,589.1	1,221.8	12.9
Low	8	50	3,288.9	123.8	3.0
Resources:[4]					
High	13	15	6,743.1	1,058.3	11.8
Low	6	50	3,689.8	112.2	2.2

[1]The average disenrollment rate is simply the average rate across plans in the category being examined. This will differ from the ratio of total disenrollments to total enrollments for plans in this category.
[2]The disenrollment ratio is the ratio of 1984 disenrollments to the sum of enrollments at year-end plus 1984 disenrollments.
[3]A high adjusted average per capita cost (AAPCC) is defined as an AAPCC higher than $233 per month, the average for the 12 sites in which demonstration plans are operating.
[4]Areas are classified as "high resource" if the number of physicians per 100,000 area residents exceeds 198, the average for the areas in which demonstration plans are operating.

NOTES: For three plans—Crossroads, Central Massachusetts, and ChoiceCare—data on disenrollments were unavailable; hence, these plans were excluded from all computations in this table. IPA is independent practice association; HMO is health maintenance organization; CMP is competitive medical plan.

Miami may have been larger had this plan not existed, leading to a similar overall result as that given in Table 6). Plans in high reimbursement areas also had an average disenrollment rate that was several times higher than the average for plans in low reimbursement areas.

- The 13 plans in areas with a high ratio of physicians to population had an average enrollment about 80 percent higher than that of the 7 plans in areas where physicians were relatively scarce (6,743 compared with 3,690). To the extent that this ratio represents the availability of alternatives to the demonstration plan that beneficiaries face, this finding is contrary to expectations. Disenrollment rates were also much higher for plans in areas with an above average stock of physicians. This is not surprising if a large supply of physicians means that enrollees have many alternatives to the HMO and thus are more likely to disenroll even if only somewhat dissatisfied.

To summarize, plans with the largest enrollments are those that are federally qualified, have been in operation for more than 5 years, are staff or group models rather than IPA's, have predemonstration experience with Medicare clients, and are located in areas with multiple plans, high AAPCC's, and a high ratio of physicians to population. For-profit status and chain affiliation seem to bear relatively little relationship to enrollment level once the largest plan is eliminated from the calculations.

The results reported here are not surprising, with a few exceptions. Medicare beneficiaries would be

expected to enroll more frequently in older, better established, and federally qualified HMO's. Areas with multiple plans and high AAPCC's may well be associated with extensive HMO marketing—which results in greater understanding of the HMO concept generally—and with more generous benefits, which attract more enrollees. It is somewhat unexpected that IPA's attract fewer enrollees than group- and staff-model HMO's because IPA's offer a more dispersed set of sites for services, and beneficiaries can "roll over" from fee-for-service to prepaid care without changing physicians. However, it may be that IPA management entered the program with more conservative estimates of first year enrollment than did managers of group- or staff-model HMO's. In addition, little should be made of these results at this point because plans were operational for differing lengths of time, and because other factors are not held constant when comparing the averages for plans that differ on a given characteristic. Determination of which of these factors is most important in explaining enrollments will require multivariate analysis, which requires more observations than are currently available.

Regarding disenrollment rates, the highest rates appear to occur in federally qualified plans, especially those with more than 5 years of operation, for-profit firms, staff models, and among plans located in areas with multiple plans (especially Florida), high AAPCC rates, and large stocks of physicians. Disenrollment rates do not seem to vary substantially with prior experience with Medicare patients or chain affiliation. It is difficult to interpret these findings without further study. They suggest that the HMO's that are most successful in enrolling Medicare members are the least successful in retaining those members. In multiple plan areas, this would seem plausible because heavy marketing and generous benefits could cause Medicare beneficiaries to switch among HMO's as the relative advantages of each HMO change. Federally qualified, older, and staff-model plans, on the other hand, seem unlikely candidates for turbulent enrollments. Again, understanding these relationships will require a more comprehensive investigation of the interaction of many factors associated with disenrollment patterns.

Utilization experience

Data from the quarterly administrative reports submitted by the demonstration plans in 1984 have been used to compute utilization rates for selected services. Although quarterly reports were submitted by 22 plans, three of those plans have been excluded from the analysis because utilization data were either missing or judged to be unreliable. Thus, our analysis of utilization rates is limited to the experiences of 19 of the 22 plans that submitted quarterly reports.[10]

Utilization rates were calculated using data obtained from the quarterly reports on the quantity of services used by demonstration enrollees and on the number of person-months of enrollment. Although 8 of the 19 plans included in the analysis submitted reports for fewer than 4 quarters in 1984, utilization rates for each plan are presented on an annual basis. For each plan, annual use rates were computed from the available quarterly reports by converting the total number of person-months of enrollment to person-years by dividing by 12, and dividing the quantity of services used by demonstration enrollees by the number of person-years of enrollment. Given the self-reported nature of the data, the findings presented should be interpreted with some caution.

The majority of the plans experienced significantly fewer hospital days per 1,000 member years than the national average for Medicare beneficiaries, which in 1984 was 3,197 days per 1,000 member years.[11] Hospital use rates varied across plans from 1,401 to 3,845 days per 1,000 member years, with most plans experiencing use rates near or below the demonstration plan mean of 2,223 days per 1,000. Of the 19 plans for which data on hospital days were available, 8 experienced use rates in the range of 1,800 to 2,200 days per 1,000 member years and 5 had rates of less than 1,800 days per 1,000 member years. Only 3 plans had hospital use rates exceeding 3,000 days per 1,000 member years.

The relatively low rates of hospital use among demonstration enrollees compared with the national average for Medicare beneficiaries in 1984 is partly because younger beneficiaries tend to be more likely than older beneficiaries to enroll.[12] However, the effects of these age differences are slight. Based on utilization rates by age group, obtained from HCFA, we estimate that the national average utilization for beneficiaries with the same age distribution as enrollees would have been 3,055, about 4.5 percent lower than the actual average for all beneficiaries. Utilization rates in HMO's were about 27 percent lower than this adjusted national rate.

The primary reason that utilization rates were lower for HMO members than for beneficiaries nationally was the lower rate of hospital admissions. The number of hospital admissions per 1,000 member years varied across plans from 108 to 509, with a mean of 294, but the national average for Medicare beneficiaries in 1984 was 375 admissions per 1,000.[13,14] Adjusting for the age distribution differences reduced the national average to 362; thus, admission rates for HMO's were 19 percent below the

[10]For 1 of the 19 plans included in the analysis, the utilization data provided in the quarterly reports were judged to be unreliable and we have, therefore, used data obtained during our site visit in November 1984.

[11]This estimate was obtained from HCFA and is based on aged Medicare beneficiaries only.

[12]Information on these data are available from the author.

[13]The demonstration HMO's actually reported the number of hospital discharges rather than admissions occurring each quarter and allocated the total use and cost of services associated with each hospital stay to the quarter in which discharge occurred.

[14]This average length of stay was calculated by dividing the age-adjusted national estimate of 3,055 days per 1,000 beneficiaries by the adjusted national estimate of 362 admissions per 1,000 beneficiaries.

adjusted national average for aged Medicare beneficiaries. Three-fourths of the plans included in the analysis had an admissions rate of less than 325 per 1,000 member years. The average length of stay varied across plans from 5.1 to 12.5 days, with a mean of 8.1 days, quite similar to the 1984 national average for aged Medicare beneficiaries of 8.4 days.

The HMO's experienced a broad range of use rates for most non-hospital services. Ambulatory encounters have been defined to include all those with medical, podiatric, and mental health professionals, including encounters with nurse practioners and physician assistants that are not incident to seeing a physician. However, dental, optometric, and audiologic encounters have been excluded. With ambulatory encounters defined in this manner, encounter rates varied across plans from 2.0 to 15.3 per member year, with a plan mean of 9.3 per member year. Over 70 percent of the plans experienced between 6 and 12 ambulatory encounters per member year. Use rates for skilled nursing facilities (SNF's) varied from 0 to 597 days per 1,000 member years with a plan mean of 287 days per 1,000. One-half of the plans experienced fewer than 200 SNF days per 1,000 member years, and 20 percent of the plans had use rates exceeding 500 days per 1,000.

The supplemental service offered by the largest number of plans was coverage for prescription drugs. Among the 16 plans that reported positive utilization, use rates ranged from 0.8 to 25.9 prescriptions per member year, with a plan mean of 13.6 per member year. Over one-half of the plans had use rates exceeding 12 prescriptions per member year, and one-quarter of the plans reported more than 20 per member year. Plans that offered vision care services also experienced relatively high utilization rates. Of the 9 plans that both offered vision care and reported utilization, 6 plans experienced use rates ranging from 0.45 to 0.75 vision exams per member year. Use rates for hearing services were much lower. The maximum number of audiology visits and hearing aids per member year were 0.20 and 0.12, respectively. The four plans that reported positive use of dental services reported a wide range of utilization rates, ranging from 0.17 to 2.77 dental visits per member year.

Mean utilization rates for groups of HMO's classified by plan and market area characteristics are presented in Table 7. Examination of these findings reveals the following patterns:

- The 16 federally qualified plans experienced lower use rates for hospital services than the 3 non-federally qualified plans (2,139 versus 2,670 days per 1,000 member years) and somewhat lower ambulatory visit rates (9.0 versus 10.5 visits per member year).
- Among the 13 plans in operation for more than 5 years, the use of hospital services occurred at a rate of 2,061 days per 1,000, compared with a rate of 2,573 per 1,000 among the 6 younger plans. However, the older plans experienced higher ambulatory visit rates than the younger plans (10.0 versus 7.8 visits per member).
- The 3 for-profit plans experienced lower hospital use rates than the 16 nonprofit plans (1,850 versus 2,293 days per 1,000) and similar ambulatory visit rates (9.5 versus 9.2 visits per member).
- Because of sample size considerations, the most meaningful comparisons among different organizational forms involve the seven staff-model and seven IPA-model HMO's. The staff-model HMO's experienced much lower hospital use rates than the IPA-model HMO's (1,915 versus 2,685 days per 1,000) and similar ambulatory visit rates (8.8 versus 9.7 visits per member).
- The 11 plans with prior experience serving Medicare beneficiaries had lower hospital use rates than the 8 plans without such experience (2,070 versus 2,432 days per 1,000) and similar ambulatory visit rates (8.9 versus 9.7 visits per member).
- Among the 8 plans affiliated with chains, hospital use occurred at a rate of 2,362 days per 1,000, compared with a rate of 2,121 days per 1,000 for the 11 independent plans. Ambulatory visit rates for chain-affiliated and independent plans were 8.8 and 9.7 visits per member, respectively.
- The 12 plans in areas with multiple plans participating in the demonstration experienced slightly higher use rates for hospital services than the 7 plans that were the only participating plans in their areas (2,267 versus 2,147 days per 1,000) but lower ambulatory visit rates (8.4 versus 10.5 visits per member).
- The magnitude of the county AAPCC was not associated with hospital use rates although, paradoxically, high AAPCC's were associated with low ambulatory visit rates. The 9 plans operating in areas where the AAPCC exceeded $223 per month experienced an average hospital use rate of 2,147 days per 1,000, while plans operating in areas with a lower AAPCC experienced a slightly higher rate of 2,291 days per 1,000. Plans operating in areas with a high AAPCC experienced lower ambulatory visit rates than plans in areas with a low AAPCC (8.6 versus 9.8 visits per member).
- The physician-to-population ratio of the market area was not strongly associated with use rates for either hospital services or ambulatory care. The 11 plans operating in markets with an above average physician-to-population ratio experienced an average of 2,122 hospital days per 1,000, compared with a rate of 2,361 days per 1,000 for the 8 plans operating in areas with a below average physician-to-population ratio. Plans with above average and below average physician-to-population ratios experienced 8.9 and 9.6 ambulatory visits per member respectively.

To summarize, plans with the highest rates of hospital use are IPA-model HMO's, are not federally qualified, have been in operation 5 years or less, are nonprofit organizations, have no prior experience with Medicare beneficiaries, and are located in areas with

Table 7

Utilization rates for Medicare competition demonstration health plans, by organizational and market area characteristics

Characteristic	Number	Hospital days per 1,000 member years	Hospital discharges per 1,000 member years	Average length of stay	Physician visits per member year	SNF discharges per member year	SNF days per member year	HHA visits per member year	Emergency room visits per member year	Hearing services per member year		Vision services per member years		Dentist visits per member year	Prescriptions per member year
										Exams	Aids	Exams	Glasses		
All health plans	[1]19	2,223	294	8.1	9.25	.024	.29	.40	.20	.05	.02	.56	.25	.37	13.56
Federally qualified															
Yes	16	2,139	282	7.9	8.99	.03	.32	.44	.20	.05	.02	.61	.29	.30	13.84
No	3	2,670	346	8.9	10.54	.01	.12	0	.16	.07	0	0	.01	.78	11.58
Years in operation															
Less than 5	6	2,573	300	9.0	7.81	.01	.20	.30	.19	.03	.03	.59	.19	.56	11.85
More than 5	13	2,061	290	7.6	9.97	.04	.34	.44	.21	.06	.01	.58	.28	.26	14.58
Profit status															
For profit	3	1,850	240	7.9	9.49	.02	.38	.44	.43	.08	.05	.48	.27	.31	9.51
Nonprofit	16	2,293	306	8.1	9.21	.02	.27	.39	.14	.04	.01	.59	.24	.38	14.50
Model															
Staff	7	1,915	261	7.5	8.78	.02	.27	.54	.25	.04	.01	.94	.46	.60	16.75
Group	3	2,108	260	8.6	10.02	.07	.35	.07	.10	.05	.00	.61	.20	.00	10.82
Traditional or network IPA	7	2,685	355	8.5	9.74	.01	.28	.19	.23	.03	.01	0	.00	.31	11.04
Mixed or other	2	1,853	231	8.7	6.87	.03	.30	.50	.10	.20	.12	.45	.37	—	12.03
Prior Medicare enrollments															
Yes	11	2,070	292	7.6	8.89	.02	.29	.67	.12	.07	.03	.72	.33	.56	15.09
No	8	2,432	296	8.6	9.69	.03	.29	.18	.28	.01	.01	.37	.13	.10	11.60
Affiliation															
Chain	8	2,362	294	8.4	8.75	.03	.28	.37	.17	.03	.01	.58	.19	.35	10.40
Independent	11	2,121	294	7.9	9.65	.02	.29	.42	.25	.06	.02	.54	.32	.39	16.72
Market area															
Number of plans in area:															
One	7	2,147	266	8.9	10.46	.031	.29	.17	.12	.04	.01	.44	.29	.29	15.60
Two or more	12	2,267	311	7.6	8.48	.017	.29	.59	.24	.06	.02	.64	.22	.43	12.33
AAPCC:[2]															
High	9	2,147	296	7.4	8.60	.02	.35	.53	.29	.04	.03	.62	.29	.68	14.20
Low	10	2,291	293	8.8	9.80	.03	.24	.18	.11	.05	.00	.51	.22	.19	12.92
Resources:[3]															
High	11	2,122	281	7.6	8.94	.03	.27	.52	.25	.05	.03	.63	.24	.43	11.83
Low	8	2,361	316	8.7	9.64	.01	.31	.19	.11	.05	.01	.42	.27	.29	16.44

[1]Preferred Health Plan, Health Care Network, and Crossroads are not included in this table because utilization data from these plans were either unavailable or judged to be unreliable.
[2]A high adjusted average per capita cost (AAPCC) is defined as an AAPCC greater than $233 per month, the average for the 12 sites in which demonstration plans are operating.
[3]Areas are classified as "high resource" if the number of physicians per 100,000 area residents exceeds 198, the average for the areas in which demonstration plans are operating.

NOTES: SNF is skilled nursing facility. HHA is home health agency. IPA is independent practice association.

multiple demonstration plans. These results are consistent with findings from numerous studies that have shown that IPA's have higher hospital use experience with the population under age 65. In addition, it seems plausible that HMO's with less overall experience and with less experience with Medicare beneficiaries would report higher hospital use. It is less obvious that plans that are not federally qualified, have been in operation for more than 5 years, and are located in areas with a single demonstration plan and with a lower than average AAPCC would have highest ambulatory visit rates. The extent to which these patterns are a result of differences among plans in the ability to constrain service use, differences in the health risks of enrollees, or to other factors, is not known, but will be explored in future analyses.

Financial experience

Data from the quarterly administrative reports provided through 1984 by the demonstration plans also were used to examine revenues and expenses in total and by source. In examining and comparing financial data, it is important to recognize that the data are taken from administrative reports filed quarterly by each demonstration plan. They are taken from unaudited financial statements and are based upon allocated expense assumptions that vary by plan. For federally qualified plans, the process of reporting financial data is somewhat standardized for meeting the information requirements of the Office of Prepaid Health Care, U. S. Department of Health and Human Services. However, the methods of allocating expenses to the Medicare demonstrations is necessarily arbitrary for any expenses other than those directly associated with health care services. Also, in several instances, quarterly report data were missing for a single period and available data for other periods were used to project the annual figures. Finally, each of the plans varies in the sophistication of its accounting system and its ability to capture expenses when they accrue versus when they actually occur. This could make comparisons across plans problematic and might produce different results than those that might be obtained if uniform accounting practices had been used to report the data for each plan. The fact that each plan is at a different stage of development and experience with the demonstration for the period covered by these financial data may also make comparative interpretations difficult.

Of the 20 plans reporting complete data, 11 had positive net revenues before taxes. Two plans had net revenues before taxes that exceeded 50 percent of total revenue. A total of 7 plans had negative net revenues before taxes—these losses ranged from 1 percent to 7 percent of total revenue. These results are based on first-year experience for many of the plans and may change in subsequent years as plans gain more experience with the Medicare program and as utilization rates stabilize over time.

In interpreting these data, it is important to remember that these HMO's may be directing a high proportion of surpluses toward marketing and toward enhancement of benefits offered to achieve initial penetration into the Medicare market. In addition, 13 of these 21 HMO's began enrolling Medicare beneficiaries for the first time in 1984. Thus, the "start-up" costs may have been relatively high and their inclusion among the expenditures incurred may result in an underestimate of the ultimate financial viability of the Medicare HMO program.

Responses of providers

Competition in the initial period concentrated on marketing to beneficiaries with Medicare supplemental insurance and drawing them away from the local insurance companies (usually Blue Cross and Blue Shield). However, because joining an HMO often means changing existing physician ties, there was a perception that initially the pool of receptive beneficiaries was small. Consequently, the demonstration plans were competing with one another for that segment of the market that was either dissatisfied with the fee-for-service sector, had no existing ties to providers, or viewed the benefit package and premium as an attractive alternative. All of the plans in multiple-plan markets reported significant competitive interaction and market awareness among competing plans. Supplemental insurers on the other hand were not reported to have made any competitive responses to HMO market entry in the initial period. This may change if the plans continue to increase enrollment.

The response from fee-for-service providers was of two types. In some markets, extreme negative reactions were reported, including hospitals refusing to accept Medicare HMO and CMP enrollees for treatment, and denial of staff privileges to HMO-affiliated physicians. In other cases[15] fee-for-service providers have sought to join the HMO and CMP provider network to maintain their patient loads in the face of beneficiary shifts to demonstration plans.

Summary and discussion

Using data collected during site visits to 20 of the 26 demonstration plans and administrative data submitted by the plans during 1984, we have presented and discussed issues of interest to HCFA as it implemented the TEFRA program nationally. In addition, HMO's and CMP's considering entry into the Medicare market may find this information valuable as a guide to the benefit packages, premium levels, and operational experiences of early entrants to the Medicare market.

The key findings reported include:

- Between August 1982 and December 1984, 26 HMO's and CMP's entered the Medicare market under the demonstration program. These plans were located in all four census regions and included group models, staff models, and traditional IPA's.

[15] In some markets, both responses were observed.

Nearly all the demonstration plans were nonprofit organizations and were federally qualified.

- Results of an analysis of factors influencing the decision to enter this market indicated that the level of the AAPCC was a strong determinant of market entry.
- Benefits offered by the demonstration plans were much more generous than standard Medicare benefits. Prescription drugs were covered by all but two plans; refraction and audiometric services were offered by most plans.
- Cost-sharing requirements (even with premiums) were much lower than under standard Medicare rules; there were no deductibles, and copayments tended to be very low or not required at all.
- Several plans offered the program with no beneficiary premium requirement. When a premium was required, it was, in almost all cases, lower than the premium charged by traditional insurers for Medicare supplemental policies.
- All the plans used multiple approaches to marketing. Ninety percent of plans used direct mailings, newspaper ads, and presentations to small groups to communicate information on their plans.
- Average enrollment per plan was 5,800 Medicare beneficiaries as of the end of 1984; ranging from a high of over 43,000 to a low of 130. For the 20 demonstration plans with available disenrollment data, 13.2 percent of all persons enrolled at some time during 1984 disenrolled during that year.
- Service utilization patterns indicate that most HMO's and CMP's experienced hospital use rates considerably below the national average for Medicare beneficiaries. Of the 19 plans for which data on hospital days were available, 8 experienced use rates in the range of 1,800 to 2,200 days per 1,000 members years and 5 had rates of less than 1,800 days per 1,000. Only three plans had hospital use rates exceeding 3,000 days.
- Most of the demonstration plans experienced positive net revenues in 1984, based on unaudited quarterly financial statements.

These brief highlights indicate that these Medicare HMO's and CMP's successfully entered the Medicare market. Beginning in early 1985, the demonstration ended and the demonstration HMO's and CMP's began to provide services to Medicare beneficiaries under the TEFRA regulations which allow HMO's and CMP's to retain only a reasonable surplus or profit.[16] The fact that demonstration plans continued to participate in the risk program suggests that they view this market as economically attractive, even under the more restrictive financial rules contained in the TEFRA regulations. Because of the change in the rules regarding disposition of net revenues and as experience increases, plans have made changes in 1985 and beyond in benefits, premiums, and cost-sharing.[17] In addition, the withdrawal of three of these initial HMO entrants from the Medicare market at the end of 1985 indicates that, for some HMO's in some markets, it may be difficult to compete over a longer time frame. Overall, however, the continued operations of 24 of the early demonstration plans and the entry of over 100 additional HMO's under the TEFRA regulations support a view that many HMO's were initially optimistic about their ability to be financially successful in this market.

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[16]This has been defined initially as profits at the same rate as those the plans obtain for their non-Medicare enrollment.

[17]A recent draft report documents these changes, (Brown et al., 1986).