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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

HUMAN RESOURCES
DIVISION

B-205827

DECEMBER 29, 1981

The Honorable Richard S. Schweiker
The Secretary of Health and
Human Services

Dear Mr. Secretary:

Subject: How Health Maintenance Organizations Control Costs (HRD-82-31)

In evaluating how health maintenance organizations (HMOs) have attempted to reduce health care costs, we have obtained information from 12 HMOs which we believe would be useful to the Office of Health Maintenance Organizations (OHMO) in its role of providing technical advice and assistance to HMOs. In general, the HMOs used various techniques intended to

--control hospital admissions and lengths of stay,

--limit the use of hospital emergency rooms to cases requiring such care,

--provide incentives to physicians to contain costs, and

--foster efficient and effective management practices.

Enclosure I lists the individual techniques and the HMOs that used them.

We believe OHMO should disseminate information on effective cost control techniques to federally qualified HMOs, particularly beginning and financially troubled ones. This, in our view, would effectively complement OHMO's past efforts to identify and disseminate information on why HMOs have failed or defaulted on Federal loans.

The following sections describe the cost control techniques identified during our review. We would be happy to provide additional details on request.

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BACKGROUND AND SCOPE OF REVIEW

In April 1981, OHMO reported that 14 HMOs with Federal loans had failed, resulting in a loss to the Government of about $27 million. OHMO anticipated additional loan defaults of about $5.3 million during the remaining 5 months of fiscal year 1981 and $14 million in fiscal year 1982.

Before we began our review, OHMO had funded studies to find out why HMOs had failed or defaulted on loans. However, we were not aware of any OHMO efforts to find out why other HMOs had succeeded. Accordingly, we visited 12 operating HMOs to obtain data on the methods they employed to control health care costs. After we began our review, OHMO funded a study to determine how HMOs control health care costs. On November 30, 1981, an OHMO official told us that a report on the study is being drafted.

Our review was made in accordance with standards prescribed by the Comptroller General for audits of Federal organizations, programs, activities, functions, and funds received by contractors, nonprofit organizations, and other external organizations. For our review, we selected 12 HMOs which varied in size of membership, length of time in operation, type of operational structure, geographic location, and status of Federal recognition (i.e., federally qualified or not). Enclosure II lists the 12 HMOs and the selection characteristics for each.

With representatives of the HMOs, State regulatory agencies involved with HMOs, and local agencies involved in planning and coordinating health care systems, we discussed the techniques and practices the HMOs used to control costs, and the impact of such actions on health care costs. We reviewed directives and guidelines for implementing the cost controls and study reports from various sources on their impacts. Also, to the extent practicable, we observed the use of these techniques. We did not make a detailed analysis of the methodologies and data used in the studies of the impact of cost controls.

As a follow-on to this review, we are (1) analyzing the results of a questionnaire sent to members and former members of the 12 HMOs concerning their satisfaction with health services and (2) comparing, with assistance from an actuary, the HMOs' premiums with those that a health insurance company would charge for the same benefits. The results of these analyses will be reported later.

CONTROLS TO PREVENT UNNECESSARY HOSPITALIZATION

The 12 HMOs employed a variety of controls in attempting to avoid unnecessary hospitalization of their members and have experienced lower hospital utilization rates than Blue Cross members or the general population. We did not attempt to establish a direct cause-effect relationship between the control techniques and the HMOs' lower hospitalization rates. However, sufficient indirect evidence exists to conclude that the control techniques have been major factors.

HMOs experienced lower hospital utilization rates

The combined hospital utilization rate experienced by the 12 HMOs was about 59 percent lower than the rate for the general population and about 38 percent lower than the national average for Blue Cross members. The differences in the rates are shown in the following table.

	Hospital utilization rate (note a)
General population	1,099
Blue Cross	722
12 HMOs (combined)	451

a/Average number of in-hospital days for each 1,000 population or plan members during a year. The rates for the general population and Blue Cross were for the year ended June 30, 1979; the rate for the 12 HMOs was for the year ended June 30, 1980.

The lower hospital utilization rate achieved by the HMOs raises the question of whether the lower rate was attributable to their cost control efforts or to their enrolling people who, because of such factors as age, sex, and health status, would be expected to require less health care. To test for these factors, we compared the actual hospital utilization rates of the 12 HMOs with rates that normally would be expected for groups with the same age and sex compositions. The comparison showed that all 12 HMOs experienced lower rates than expected.

The National Hospital Discharge Survey, conducted by the National Center for Health Statistics, collects and reports regional data on hospital utilization rates by sex for four age groups--a total of eight groups. To compute the expected hospital utilization rates, we segregated the enrollees of each HMO into

the eight groups used in the national survey and applied the regional rates for each group. We then converted these rates to a rate per 1,000 enrollees at each HMO. The rate we computed for each HMO represents the expected hospital utilization rate for a group of people living in the same region with the same age and sex characteristics as the HMO's enrollees.

As shown in the following table, the actual rates experienced by the 12 HMOs were less than half of what would be expected. All 12 HMOs showed lower than expected rates, ranging from 13 to 70 percent less.

HMO	Expected rate	Actual rate	Less than expected	
			Days	Percent
1	1,144	341	803	70
2	1,379	528	851	62
3	936	379	557	60
4	846	353	493	58
5	1,054	448	606	57
6	957	441	516	54
7	997	473	524	53
8	787	410	377	48
9	831	464	367	44
10	887	535	352	40
11	679	491	188	28
12	631	547	84	13
Average rate	927	451	476	51

These data show that the 12 HMOs achieved reductions in hospital use that were not attributable to the age and sex composition of their memberships.

Concerning the question of whether the health status of HMO members contributed to the lower hospital utilization rates, a 1980 report by the American Medical Association's Council on Medical Service stated that:

> "All studies comparing health status of persons enrolling in HMOs with persons remaining in their conventional health insurance plan show very little difference among the two populations. The small differences that do exist indicate that HMOs may enroll persons slightly more inclined to require more services. There is no evidence that HMOs enroll a healthier population * * *."

The preceding information indicates that the 12 HMOs are achieving lower hospital utilization rates because of controls they employ over hospital admissions and length of hospital stays,

rather than solely because of characteristics inherent in their memberships.

HMO actions to control hospital admissions and lengths of stay

We identified seven practices followed by one or more of the 12 HMOs to control hospital use:

--Using more outpatient surgery.

--Advance screening of hospital admissions.

--Monitoring lengths of stay.

--Providing care at home or in an extended care unit.

--Using outpatient beds.

--Testing before admission.

--Providing incentive payments to physicians.

All 12 HMOs were attempting to use outpatient surgery whenever hospitalization was unnecessary. Although the HMOs did not have strict criteria for which types of surgery could be performed on an outpatient basis, such operations as dilatation and curettage of the uterus, vasectomies, cyst removal, tonsillectomies, adenoidectomies, and breast biopsies were done frequently without hospitalization.

Outpatient surgery is much less expensive than inpatient surgery. A report by the Kaiser Foundation Research Institute stated that, based on a study at Kaiser hospitals in the Oregon region during 1966-74, outpatient surgery saved an average of about $190 per case over inpatient surgery, without affecting the quality of care or patient satisfaction. More recently, 1 of the 12 HMOs in our review estimated that such savings average about $390 per case.

Many HMOs require that nonemergency hospital admissions be reviewed and approved in advance to avoid unnecessary admissions. Some HMOs informally monitored admissions for this purpose, while others had formal procedures. Seven of the 12 HMOs we visited were doing some form of preadmission screening. For example:

--One HMO approved all nonemergency admissions in advance. The medical director reviewed the patients' medical records and the justification for admission and discussed any questionable cases with the attending physician. If appropriate, outpatient treatment was recommended.

--One HMO required that the physician notify the HMO (by telephone) of the diagnosis, treatment plan, and expected length of stay for each proposed nonemergency admission. The information was recorded and compared to the HMO's screening criteria and approved or rejected, usually within 24 hours. If the patient was admitted, the hospital notified the HMO, which verified that the admitting diagnosis and treatment schedule were consistent with the prior approval. If not consistent, the HMO notified the hospital, the physician, and the patient that the HMO was not responsible for the costs.

Eleven of the HMOs monitored the length of time members stayed in hospitals. For example, one HMO made monthly comparisons of actual stays with established standards for a sample of paid claims and notified physicians whose patients consistently exceeded the standards. Another HMO required that a planned discharge date be established for each admission and that any stay beyond that date be justified by the hospital or the physician.

Officials at 5 of the 12 HMOs said that they reduced hospital stays by providing care at patients' homes or in an extended care unit, such as a nursing home. One HMO, for example, provided nursing services and physical therapy to enable stroke, cardiac, and other patients to recuperate at home if continued hospitalization was not essential. Another HMO estimated that it will save about $150,000 a year under an arrangement with a nursing home to provide services in lieu of continuing hospitalization. A third HMO saved about $35,000 by providing special equipment for use in a patient's home in lieu of the patient's spending 3 months in a hospital neonatal specialty unit.

Two of the HMOs reduced unnecessary hospital use by arranging for beds in a clinic or hospital emergency room to monitor patients for short periods before deciding on hospital admissions.

Seven of the HMOs reduced hospital use by performing preliminary testing--such as lab tests, X-rays, and electrocardiograms--in a clinic or a doctor's office before hospitalization.

Four HMOs had established financial incentives for participating physicians to avoid unnecessary hospital use. For instance, one HMO paid the participating physicians' group about half the daily hospital cost for each day its hospitalization rate was below a predetermined level for the year.

CONTROLS OVER OTHER COSTS

While the major opportunity for health care cost savings is in reducing hospital inpatient days, the 12 HMOs had adopted

various practices and procedures to control other health care costs which basically fall into three categories:

--Procedures to prevent unnecessary physician services.

--Negotiation of favorable purchase agreements.

--Use of less costly alternatives.

Procedures to prevent unnecessary physician services

All 12 HMOs had established methods to discourage physicians from providing unnecessary services. Because physicians are generally reimbursed on a fee-for-service basis, their income depends on the number and complexity of the services provided. This could give physicians financial incentives to encourage more frequent office visits, order more tests and treatments, and hospitalize patients.

The HMOs in our review used several methods to overcome these incentives for their physicians as well as for outside specialists to whom their members may be referred. The physicians were salaried employees of four HMOs; three HMOs paid physicians a fixed amount per HMO member (capitation payments); and one paid the physicians a percentage of premium income. Thus, for these eight HMOs, payments to physicians did not vary with the volume of services provided. In the other four HMOs, the physicians were reimbursed on a fee basis, but a portion of the fees was withheld for later redistribution if income exceeded expenses, thereby providing an incentive for the physicians to control costs.

Three of the four HMOs that paid physicians on a fee-for-service basis had established procedures for reviewing claims to insure that services were necessary and consistent with diagnoses. Questionable claims could be denied or at least discussed with the physician.

Ten of the 12 HMOs established procedures for controlling services provided by specialists outside the HMO plans. For example, one HMO required that each referral be in writing, state why it was necessary, and specify how long the patient would be under the specialist's care. The HMO reviewed each referral to insure that it was appropriate and could not be handled by a specialist on the HMO staff. Also, the HMO made certain that any laboratory test results and X-rays were sent to the specialist. The specialist was notified that the referring physician should be contacted if the patient required care beyond that specified in the written referral.

Negotiation of favorable purchase agreements

Eleven HMOs in our review used one or more techniques to obtain goods and services at favorable prices. These included negotiating discounts and capitation agreements.

Eight of the 12 HMOs had negotiated agreements with hospitals, outside medical specialists, drug suppliers, and others for providing services or supplies at discounts. Six HMOs had such agreements with hospitals. For example, one had arranged for discounts of from 5 to 26 percent of total charges with the six area hospitals. Another had arranged for discounts of 10 and 19 percent on the per diem rate charged by the two hospitals which provided about 95 percent of its enrollees' hospital care. These two HMOs estimated that these arrangements saved them about $1.9 million and $400,000 a year, respectively.

As stated, three HMOs made capitation payments to physicians as compensation for the medical care provided to the HMO members. Such payments were based on a fixed amount for each member and did not vary with the level of services provided. Similar contracts, which give the provider an incentive to control costs, were used by seven HMOs to provide prescription drugs, laboratory services, radiology, physiotherapy, and other services.

Use of less costly alternative

Health services can be delivered in various settings by personnel with varying degrees of expertise. More intensive care settings and personnel with greater expertise cost more and should be used only when warranted. As discussed, HMOs are reducing hospital care through such alternatives as providing care at home or in an extended care unit and using outpatient beds. In addition to hospital care, the HMOs used less costly alternatives for such items as physician services and emergency rooms.

Physician extenders--such as nurse practitioners, nurse midwives, and physician assistants--were used by 10 of the 12 HMOs to perform such duties as taking medical histories, ordering diagnostic tests, giving immunizations, performing physical examinations, and treating routine illnesses and injuries. Officials at five HMOs told us that the extenders were used to reduce costs because their salaries were lower than those of physicians. Officials at two HMOs said extenders were used to increase accessibility to routine care.

Six of the 12 HMOs had acted to minimize the use of hospital emergency rooms for minor ailments that could be treated at a clinic or doctor's office. One HMO, for example, reviewed all emergency room claims before paying them to insure that they

resulted from an emergency or a referral by an HMO-associated physician. Two HMOs had arranged for after-hours services in clinics or other facilities to reduce emergency room use.

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Other cost-saving procedures and practices followed by the HMOs included operating their own laboratories or diagnostic equipment (four HMOs); operating their own pharmacies (three HMOs); self-insuring for liability and malpractice claims (three HMOs); settling grievances and malpractice claims through arbitration (two HMOs); managing purchases and inventories, including taking advantage of quantity discounts, competitive bids, wholesale purchases, generic drug purchases, and optimum stock levels (three HMOs); monitoring the use of prescription drugs (one HMO); and educating HMO members on health care and the proper use of HMO services (nine HMOs).

CONCLUSIONS AND RECOMMENDATIONS

Information on the procedures and practices these 12 HMOs used to control health care costs should be useful to OHMO in providing technical advice and assistance to HMOs. Obviously, not all of the identified procedures and practices could or should be adopted by every HMO.

However, we believe that each procedure or practice identified has some potential for reducing costs. Such procedures and practices may be particularly beneficial to HMOs that are in financial trouble or are just beginning operations.

Therefore, we recommend that you direct OHMO to communicate to all federally qualified HMOs the utilization and cost control techniques identified in this letter. They should be presented as a means to assist financially troubled and beginning HMOs in identifying techniques to help control hospital utilization and reduce health care costs. Older, financially sound HMOs should find them helpful in identifying methods to further reduce health care costs.

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As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Chairmen of the four above-mentioned committees, the Senate Committee on Labor and Human Resources, the House Committee on Interstate and Foreign Commerce, and other interested committees and subcommittees. Copies are also being sent to the Director, Office of Management and Budget; your Inspector General; and the Director, Office of Health Maintenance Organizations.

Sincerely yours,

Edward a Densmore

for Gregory J. Ahart
Director

Enclosures - 2

COST CONTROLS IDENTIFIED BY GAO

Name and location of HMO	Controls to limit hospital admissions and lengths of stay							Other cost controls			
	Increase outpatient surgery	Screen hospital admissions	Monitor lengths of stay	Provide care at alternate location (note a)	Use out-patient beds (note b)	Test before admission	Provide incentives to physicians	Prevent unnecessary services	Use favorable purchase agreements	Use physician extenders	Minimize emergency room use
Comprecare, Inc., Denver, Colorado	X	X	X				X	X	X		X
American Health Plan, Miami, Florida	X	X	X			X		X	X		X
Florida Health Care Plan, Daytona Beach, Florida	X	X	X	X	X	X		X	X	X	
HMO Illinois, Inc., Chicago, Illinois	X	X	X			X	X	X	X	X	X
Harvard Community Health Plan, Boston, Massachusetts	X		X			X		X	X	X	
Fallon Community Health Plan, Worcester, Massachusetts	X		X	X		X	X	X	X	X	
Bay State Health Care, Boston, Massachusetts	X	X	X	X		X		X	X	X	X
Share Health Plan, Bloomington, Minnesota	X		X				X	X	X	X	
Group Health Plan, St. Paul, Minnesota	X		X	X				X	X	X	
Kaiser Foundation Health Plan - Oregon Region, Portland, Oregon	X	X	X		X	X		X	X	X	X
Portland Metro Health Plan, Portland, Oregon	X	X	X	X				X	X	X	X
Group Health Cooperative of Puget Sound, Seattle, Washington	X							X		X	

a/Care at patients' homes or in an extended care unit, such as a nursing home.

b/Care in a clinic or hospital emergency room to monitor patients before deciding on hospital admissions.

ENCLOSURE I

ENCLOSURE II

HMOs IN GAO'S REVIEW

Name and location of HMO	Type of plan	Membership as of June 30, 1980	Length of time operational as of June 30, 1981 (years)	Date federally qualified
Comprecare, Inc., Denver, Colorado	Individual practice associated	59,677	7.0	8/20/76
American Health Plan, Miami, Florida	Group	26,869	7.8	7/29/77
Florida Health Care Plan, Daytona Beach, Florida	Staff	11,628	6.9	8/20/76
HMO Illinois, Inc., Chicago, Illinois	Individual practice associated	37,837	4.1	6/15/77
Harvard Community Health Plan, Boston, Massachusetts	Staff	92,384	11.8	9/01/77
Fallon Community Health Plan, Worcester, Massachusetts	Group	24,327	4.4	11/21/78
Bay State Health Care, Boston, Massachusetts	Individual practice associated	7,622	2.2	(a)
Share Health Plan, Bloomington, Minnesota	Group	32,147	7.5	6/30/76
Group Health Plan, St. Paul, Minnesota	Staff	144,061	23.9	(a)
Kaiser Foundation Health Plan - Oregon Region, Portland, Oregon	Group	233,600	34.5	10/27/77
Portland Metro Health Plan, Portland, Oregon	Individual practice associated	19,779	5.5	1/01/76
Group Health Cooperative of Puget Sound, Seattle, Washington	Staff	283,625	34.5	(a)

a/Not federally qualified.