Managed Care and Competitive Health Care Markets: The Twin Cities Experience

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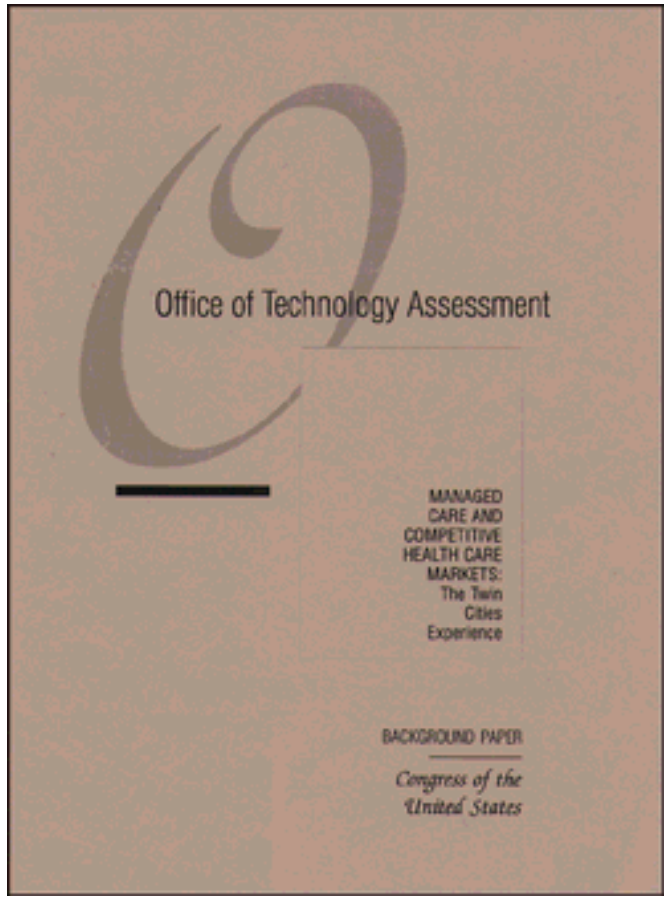

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Foreword

Reform of the health care system is at the top of the nation's domestic policy agenda. As policy makers consider the many directions the nation could take, they often look to the states as laboratories.

The Twin Cities (Minneapolis and St. Paul, Minnesota) are often cited as a model of a competitive market and a potential case study for managed competition proposals. This background paper describes some of the developments and current characteristics of the Twin Cities' health care system. The paper emphasizes recent changes in the market for health care and health insurance in the Twin Cities, including the growth of managed care organizations, the growth of integrated delivery systems, the development of health insurance purchasing coalitions, and recent state health care reforms. The report concludes with a discussion of potential lessons from the Twin Cities for the health reform debate.

This paper was prepared as background for the Office of Technology Assessment study *Understanding the Estimates Under Health Reform.* The assessment as a whole was requested by the members of the Technology Assessment Board (see inside front cover) and Senator Ted Stevens.

This background paper was prepared under contract to OTA by Jon Christianson, Ph.D, Bryan Dowd, Ph. D., John Kralewski, Ph.D, and Catherine Wisner, Ph.D. It was reviewed by a number of experts in health policy and health care delivery. OTA gratefully acknowledges the contribution of each of these individuals.

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Summary 1

The Twin Cities (Minneapolis and St. Paul, Minnesota) are frequently identified as a community where a competitive health care market has developed. Consequently, they have been the focus of a substantial number of empirical studies through the years and have sometimes served as a '*model" for various elements of cument "managed competition" approaches to health care reform. If, indeed, the Twin Cities are at the vanguard of managed competition in health care, it is important to understand how their health care delivery system has evolved over the past two decades, why it is now undergoing a relatively dramatic transformation, and the effects of these changes. [1]

MANAGED CARE AND INTEGRATED DELIVERY SYSTEMS IN THE TWIN CITIES

The health care delivery system in the Twin Cities is best known national] y for its reliance on health maintenance organizations (HMOs), and for the proportion of community residents enrolled in HMOs. A variety of hypotheses have been offered in explanation of why HMOs were formed and prospered in the Twin Cities, but no definitive answer to this question is possible. It is clear, however, that during the past two decades HMO enrollment grew rapidly. From .197.1. to.1978, HMO enrollment grew at an annual rate of 27 percent. Enrollment continued to grow during the 1980s, reaching 50 percent of the population by the end of the decade.

[1] This background paper focuses on the organization of health care delivery and on health care costs and although it discusses issues such as consumer satisfaction, health outcomes, and access, and recognizes that these are critical issues, it does not focus on these issues.

The HMOs in the Twin Cities encompass a variety of organizational forms and sponsorship arrangements, with most physicians affiliated with one or more HMO by the early 1980s. The 1980s saw important changes in Twin Cities HMOs and their relationships with providers. These changes included the development of new products, such as preferred provider organizations, and the institution of more aggressive management strategies, such as concentrating patients at lower cost hospitals.

A number of HMOs merged during the 1980s and as a result of the merger activity it appears likely that three or four large organizations will dominate health care delivery in the Twin Cities. Managers of Twin Cities' health plans point to the recent passage of state health reform legislation (Minnesota Care), with its emphasis on the formation of integrated delivery networks, as an important catalyst for consolidation. However, the trend toward consolidation began prior to MinnesotaCare, in part in response to the demands of employers as interpreted by health plans. Employers encouraged HMOs to develop a range of benefit options, and to broaden the geographic coverage of their networks. One way for an HMO to expand geographically was to merge with another HMO. Some employers also believed that larger HMOs had greater potential to efficiently integrate service delivery. The responsiveness of HMOs to employer concerns was heightened by the formation of a series of buyers' coalitions among private firms and the adoption of a new buying approach by state government for its employees.

In addition to HMO consolidation, the 1980s witnessed considerable consolidation among Twin Cities' hospitals. Four major, multihospital systems were formed in the late 1980s through a series of consolidations and mergers. Some hospitals reported pursuing the development of multihospital organizations as a means of negotiating more effectively with HMOs over prices and of positioning themselves to offer broad geographic coverage for HMO enrollees.

DEVELOPMENT AND ROLE OF PURCHASING COALITIONS

During the past decade, several private and public employers in the Twin Cities made significant changes in the way they purchase health care. One often-cited example is the formation of the Business Health Care Action Group (BHCAG), a consortium of major private sector employers in the Twin Cities. In 1991, these self-insured firms joined together to create a new health plan option for employees and dependents. Through an extensive negotiation process, one plan was selected by BHCAG. BHCAG has taken a very proactive approach to the delivery of health care to its employees. It is actively collaborating with the health plan in the development of practice guidelines, and the institution of programs to improve quality of care.

A second approach to buying is exemplified by the State of Minnesota's Group Insurance Program, which covers 144,000 individuals, including employees, dependents, and retirees. Until 1985, this program offered health benefits in much the same way as many other large employers. Its contribution to premiums was tied to the premium for the fee-for-service insurance option in the program. In 1985, the state consolidated its HMO offerings and instituted a new contribution formula under which employees were required to pay the premium difference out-of-pocket if they did not enroll in the low-cost plan. The 1985 reforms were followed by a substantial shift in enrollment from traditional indemnity plans to managed care plans. Over time, HMO premiums declined relative to premiums of other options, and recently the overall rate of increase in premiums has been quite low. Two other purchasing programs, directed at individuals and smaller employers, have been initiated recently. The state legislature created the Minnesota Employees insurance Program (MEIP) as part of the 1992 MinnesotaCare legislation. Private businesses with two or more employees are eligible to enroll their

employees in MEIP. Four health plan options are available, and employers must pay at least 50 percent of the premium for single coverage, but cannot pay more than 100 percent of the cost of the lowest priced plan. The Minnesota Employers' Association is a nonprofit association of approximately 1,300 businesses that offers a health insurance program to its members. Services are delivered through a preferred provider network currently managed by the Prudential Insurance Company and enrollment consists of approximate y 5,000 employees and dependents. Because these programs are so new, it is difficult to predict the ultimate impact of the MEIP and Buyers Coalition efforts.

MINNESOTA CARE

In concert with the rapid developments in the private sector, the Minnesota state legisture has been pursuing major reforms which are likely to have a significant effect on the Twin Cities market. In 1992, the Minnesota state legislature enacted Minnesota Care. The general objective of Minnesota Care is to enhance the availability of insurance for uninsured people in the state, while at the same time reducing health care cost increases. Although the legislation is still evolving, as it now stands it aims to encourage the development of integrated service networks (ISNs), to be formed by providers or purchasers of medical care, with the charge of providing a comprehensive set of health services to a designated population for a prospectively set budget. The State Health Commissioner has the power to approve ISN arrangements and can issue state exemptions from antitrust liability that might arise in forming such relationships. Each ISN will be subject to an overall limit on the rate of growth in its annual expenditures. A regulated all-payer option will apply to providers delivering health care outside an ISN. In addition, Minnesota Care will create limits on total state health care spending, and the Commissioner of Health is charged with enforcing annual limits on the rate of increase in health care costs.

HEALTH CARE EXPENDITURES IN THE TWIN CITIES

Given the dramatic transformations in the Twin Cities health care market, how do health care expenditures in the Twin Cities compare with other metropolitan areas? Two recent studies have found that the level of health care expenditures is lower in the Twin Cities than in other metropolitan areas, while a third study found the opposite. Unfortunately, all three of the studies have serious flaws. None controlled for differences in benefit coverage, nor the size and characteristics of groups in the metropolitan areas. Moreover, one study only looked at indemnity insurance and excluded HMO coverage. Another only compared costs across *selected* cities (e.g., omitting Boston, Massachusetts, and Washington, DC).

Some data indicate that health care costs and expenditures in the Twin Cities may be rising at a slower rate than in the nation as a whole. The medical price index in the Twin Cities was above the national average from 1981 until 1987. However, since 1987 it has been below the national average. One study found that between 1971 and 1990 the annualized rate of increase in hospital costs per capita in the Twin Cities was 10.0 percent, compared with 11.2 percent nationwide. Overall, the evidence on health care costs in the Twin Cities is limited and, in some cases, contradictory. Whether expenditures for health care in the Twin Cities are higher or lower than in other metropolitan areas is unclear.

Another important question is how HMOs have influenced the level of health care expenditures in the Twin Cities. Several studies done during the late 1970s and early 1980s examined how HMO enrollment in the Twin Cities affected health care costs. Because they used data from different sources and covering different time periods, the results of these studies are sometimes difficult to reconcile. In general, however, it appears that studies based on data from the late 1970s and early 1980s offer little support for the hypotheses that HMO growth and competition among HMOs

would control premium increases or induce community providers to contain their costs. For example, group and staff HMOs during this period appeared to benefit from a "favorable selection" of relatively healthy enrollees. As a result, one study concluded that employers who offered employees a choice of HMOs and fee-for-service insurance plans saw total health insurance costs increase. Other studies found that the hospital market for HMO enrollees was not price competitive in the late 1970s.

Studies conducted using data from the mid-to-late 1980s present a somewhat different picture. Group and staff model HMOs appeared to concentrate their patients at selected hospitals, with the price of hospital services playing an important role in the selection of hospitals. Lengths of hospital stays for enrollees in these plans were significantly shorter than for indemnity plans. Although these results suggest that health care expenditures may be reduced as plans deal more aggressively with providers, no recent studies have directly examined the effect of these changes on health care expenditures in the Twin Cities.

Some evidence, although imperfect, suggests that HMO enrollment may have contributed to the reduction in hospital beds in the Twin Cities. Although hospital capacity declined nationwide during the 1970s and 1980s, hospital capacity in the Twin Cities declined even more dramatically and has continued to decline in the 1990s.

RELEVANCE OF THE TWIN CITIES EXPERIENCE

The well-known limitations of the ● "case-study" methodology suggest that drawing general conclusions from the experience of the Twin Cities health care market is difficult. However, several tentative conclusions are suggested by the health care delivery system's evolution and performance in the Twin Cities. They are:

- Development of managed competition is likely to be associated with reconfiguration of community hospitals, such as the creation of multi-hospital systems.
  - Managed care organizations will respond competitively to even moderately sized purchasing coalitions, for example, by merging to provide greater geographic access.
- Organization of the demand side of the health care market under managed competition is likely to encourage the consolidation of providers and managed care plans, suggesting that specific public and private sector strategies may be needed to maintain a competitive market structure.

2 Introduction

The effectiveness of managed competition as a strategy to contain the growth in health care expenditures is now being debated at both the state and national level. A "managed competition" approach has been proposed by the Clinton Administration as the cornerstone of its plan for health care reform and serves as the basis for several legislative proposals for reform as well. In discussions of "managed competition," the Twin Cities market is sometimes offered as an example of an area where competition is "working," where competition has "failed," or where the elements of "managed competition" are now "in place." The purpose of this background paper is to clarify the features of managed competition as it has developed in the Twin Cities, to describe the relatively dramatic changes that are now transforming the Twin Cities' health care delivery system, and to discuss the implications of these developments for national health care reform.

The first section of this background paper provides an overview of health care delivery in the Twin Cities, as well as the components of Minnesota Care, the state of Minnesota's health care reform initiative. Understanding Minnesota Care is important for the subsequent discussion because it appears to be a significant stimulus for the restructuring of the market that is now occurring. The second section of the background paper describes the evolution of the health care market in the Twin Cities since the 1970s. The "conflicting evidence" about the results of competition in the Twin Cities appears to reflect, at least in part, the time period chosen for examination. This section also highlights the rapid changes that can occur in the configuration of health care delivery systems and the difficulty this poses for making predictions of

future performance based on past studies. The third section focuses on changes that have occurred in the demand side of the Twin Cities' market. An important element of the Twin Cities' *'story" is the recent evolution in the way private employers and state government have approached the purchase of health care. The concluding section summarizes the findings of the background paper and discusses their implications. Obviously, there are dangers involved in generalizing from the experience of a specific health care market. However, if that experience is interpreted cautiously, there may also be important lessons to be learned. It is hoped that this background paper will contribute to a better understanding of what can be learned from the Twin Cities' experience as the nation debates health care reform.

Health Care Delivery in the Twin Cities

3

The discussion in this section is presented in two parts. The first part contains descriptive data on the health care system in the Twin Cities. In some cases, data are only available on a statewide basis, and this is noted in the discussion. The second part summarizes the recent health care reform legislation passed by the state of Minnesota. It attempts to identify the components of the legislation that have influenced the recent reconfiguration of health care delivery in the Twin Cities, as described in subsequent sections.

THE TWIN CITIES' HEALTH CARE SYSTEM

I Health Services Use and Expenditures

Personal health expenditures per capita for 1992 were reported to be $3,166 for Minnesotans, compared with $3,286 nationally (19). Table 3-1 compares the public/private distribution of health care expenditures in 1991 for the state of Minnesota with the national average. This comparison is based on estimates of personal health care expenditures for 1991 by payer category for Minnesota residents, using data supplied by the Minnesota Department of Health (MDH) as of April 1993. A higher percentage of health care dollars was spent by the public sector in Minnesota than in other states, with state and local spending constituting a much higher percent of public spending, indicating higher expenditures for Medicaid and local assistance than the national average.

To assess Twin Cities' expenditures on health care, it would be desirable to compare health insurance premiums in the Twin Cities with those in other metropolitan areas, focusing on levels and changes over time. However, there are no published data

TABLE 3-1: Public/Private Expenditures in the State of Minnesota and the Nation (1991)

	National (%)	state of Minnesota (%)
Private	56	48
Public	44	52
Federal	30	30
State/local	14	22

SOURCE Health Care Financing Admmistration, Off Ice of Actuary Off Ice of National Health Statistics, "Standardized Per Capita Rates of Payment, " Baltimore, MD, 1994

series that permit such a comparison, while controlling for differences in standards of benefit coverage and size of groups by metropolitan areas. Two widely quoted studies that attempt to do so have important limitations.

In assessing the relative cost to consumers of health care in Minnesota, Milliman and Robertson, Inc. reported that Minneapolis/St. Paul was the second to the lowest metropolitan area in health care costs, at 18 percent below the national average in 1991 (45). The highest metropolitan area that year was Miami/Fort Lauderdale, with costs that were 38 percent above the national average, while the lowest area was Charlotte, NC, with costs that were 22 percent below the national average. The Milliman and Robertson, Inc. estimates include costs related to hospital inpatient services, hospital outpatient services, surgery, office visits and other medical encounters, radiology, pathology, and prescription drugs (45). Not included in calculating costs were wellness benefits, such as periodic examinations and immunizations. The Milliman and Robertson, Inc. report data are based on indemnity insurers, not including Medicare and Medicaid coverage or HMO coverage (45). They also report that their data are compiled from publications such as the American Hospital Association and the claims experience of several major insurers. Therefore, it is difficult to determine the actual sources of the Milliman and Robertson data, or whether they pertain to expenditures by insurers for care, or the costs of delivering care.

Foster Higgins compared indemnity plan premiums and managed care premiums using data from 2,448 employers in selected U.S. cities for 1992. Their data are collected nonrandomly from clients and large emplyed groups. As with Milliman and Robertson, sample sizes generally are not adequate to make statistically valid comparisons across metropolitan areas. Moreover, the data are not adjusted for systematic differences in benefits and demographics across employers in different cities. Foster Higgins reports that average premiums per employee for HMO plans are consistently lower in all the cities examined (table 3-2). Preferred provider organization premiums are higher for some cities compared with indemnity plan premiums. Minneapolis/St. Paul has both the lowest average indemnity plan premiums and the lowest HMO average premium cost per employee compared with other reported cities, subject to the caveats noted above (29).

Data from the Cost of Living Index for Selected Metropolitan Areas, compiled by the Association for U.S. Chambers of Commerce (ACCRA), shows the Minneapolis/St. Paul, MN-WI Metropolitan Statistical Area (MSA) in 1992 to have a composite cost of living index equal to the average for the nation, but a health care cost of living index 8 percent above the national average ('65). This contrasts sharply with the results reported by Milliman and Robertson, where the Twin Cities ranked [18] percent below the national average in medical costs. Given these contradictory data, along with questions about the validity of the data used in making comparisons, it is difficult to accurately assess whether expenditures for health care in the Twin Cities are higher or lower than in other metropolitan areas.

Data supplied by the Health Care Financing Administration indicate that expenditures for fee-for-service Medicare beneficiaries are relatively low in the Twin Cities, in comparison with other metropolitan areas. Table 3-3 compares fee-for-service Medicare expenditures in the 20 U.S. counties with the largest enrollment in Medicare HMO risk contracts. These data show that only Volusia County, Florida, has lower AAPCC payments than Hennepin and Ramsey counties in the Twin Cities MSA. The percentage change figures show

TABLE 3-2: Indemnity Plan Premiums vs. Managed Care Plan Premiums (Selected U.S. Cities, 1992)

		Health Maintenance Organizations		Preferred provider Organizations	
city	Indemnity plan premiums per employee	Average premiums pew employee	HMO premiums vs. indermnity	Average premiums per employee	PPO premiums vs. indemnity Cost
Atlanta	$3,729	$3,311	-11 .2%	**$3,363**	**-9** .8%
Chicago	4,245	3,088	-27.3	**3,684**	-132
Cleveland	4,027	3,727	-7.4	**3,459**	-141
Dallas/Ft. Worth	3,917	3,330	-15.0	**3,837**	-20
Houston	3,627	3,575	-1,4	4,091	+12 8
Los Angeles	4,350	3,189	-26.7	4,457	+25
Minneapolis/St Paul	3,347	2,969	-11,3	3,121	-68
New York Metro	4,852	3,448	-28.9	3,871	-202
Orange County	4,276	3,124	-26.9	4,315	+0.9
Philadelphia	4,696	3,319	-29.3	3,708	-21,0
Richmond	3,578	3,074	-14.1	3,183	-11 0
San Francisco	4,531	3,092	-31.8	4,459	-16
Seattle	3,554	3,092	-13.0	3,114	-124

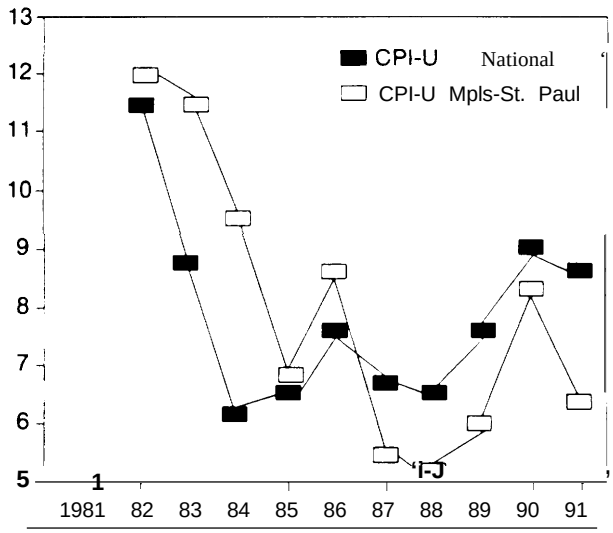
SOURCE Foster Higgins, "1992 Health Care Benefits Survey Medical Plans, " Medical Benefits, Mar 30, 1993

that Hennepin and Ramsey Counties had the lowest rates of increase from 1989 to 1994.

An indication of trends in health care prices is provided by the medical consumer price index. Figure 3-1 compares this index for Minneapolis/ St. Paul with the United States' city average. Since 1987, the Twin Cities has consistently tracked below other cities, declining almost two percentage points from 1990 to 1991, compared with a 0.3 percent decline for the U.S. city average. It is also important to compare Minneapolis/ St. Paul's overall CPI to the United States' city average to determine if the area's relatively favorable performance with respect to the medical index might be related to a favorable trend in the overall cost of living. Table 3-4 presents these comparisons for 1970 to 1992. The rate of increase in the overall CPI for the Twin Cities is approximately the same as the U.S. city average rate of change.

With respect to inpatient utilization, Minnesotans experienced 127.4 hospital admissions per 1,000 in 1989, 8.5 admissions per 1,000 less than the national average, and had 98.2 per 1,000 fewer visits to the emergency room. Minnesotans also had fewer outpatient hospital visits (309 per 1,000 less than the national average in 1989). Length of inpatient hospital stays in the Twin Cities as compared with national rates for 1989 to 1991 are shown in table 3-5. The Twin Cities had lengths of stays approximately one half day shorter than the national average for each year reported (49).

FIGURE: 3-1: Consumer Price Index-Urban: Medical Care



SOURCE U S Department of Labor, Bureau of Labor Statistics. *CPI Detailed Report Data for January 1994,* J Mathery and TJ Mosimann (eds) (Washington, DC March 1994)

TABLE 3-3: Comparison of Estimated Fee-for-Service Medicare Expenditures in Counties with the Largest Enrollment in Medicare HMO Risk Contracts in 1994

County	State	Part A 1994 Part A 1989	Part B 1994 Part B 1989	Total 19S9 Total 1994	Percent Change 1989-94
		317.53	213.48	531.01	
Los Angeles	California	190.18	183.72	373.90	42,02
		256.52	177.83	434.35	
San Diego	California	155.57	157.84	31341	38.59
		277.49	238.76	516.25	
Broward	Florida	19940	179.71	379.11	36.17
		292.01	282.64	574.65	
Dade	Florida	218.87	202.04	420.91	36.53
		289.83	208.23	498.06	
Orange	California	180.96	181,22	362.18	37.52
		260.98	181.22	444.46	
Riverside	California	152.80	151.05	303.85	46,28
		276.98	167.08	444.06	
San Bernadino	California	154.41	138.13	292.54	5179
		248.56	169.06	417.62	
Maricopa	Arizona	160.57	121.33	281.90	4814
		315.33	145.67	461.00	
Cook	Illinois	209.91	114.80	324.71	41.97
		231.51	220.04	451.55	
Palm Beach	Florida	153.68	151.45	305.13	47.99
		237.00	119,19	356.19	
Multnoma	Oregon	187.22	95.50	286.72	24.33
		225.24	138.25	363.49	
King	Washington	179.63	99.35	278.98	30.29
		233.02	118.36	351.38	
Hennepin	Minnesota	191.98	96.79	288.77	21.68
		219.64	164.02	383.66	
Pinellas	Florida	151.77	111.95	263.72	4548
		196.32	147.40	343.72	
Volusia	Florida	140,65	102.69	243.72	41.25
		234.99	146.69	381.68	
Bexar	Texas	139.91	119.62	259.53	47,07
		268.68	107,36	376.04	
Monroe	New York	140.81	87.46	228.27	64.73
		227.24	158,32	385.56	
Pima	Arizona	150.20	110.43	260.63	47.93
		228.80	164.13	392.93	
Hillsborough	Florida	159.68	125.38	285.06	37.84
		243.44	114,35	357.79	
Ramsey	Minnesota	192.61	95.61	288.22	24.14

SOURCE Health Care Financing Administration, Off Ice of the Actuary, Data from the Office of National Health Statistics, Baltimore MD

Anderson and colleagues compared the Twin Cities, assumed to be a MSA with a competitive strategy toward health care, to Baltimore, assumed to be a MSA with a regulatory strategy toward health care, using measures of hospital productivity, cost per discharge, and hospital utilization (3). For this comparison, data on community hospital characteristics were obtained from the 1972 to 1991 editions of *Hospital Statistics* and the *Guide to Zhe Health Care Field*, both published by the American Hospital Association (1,2). Anderson and colleagues found that the annualized rate of increase in hospital costs per capita in the Twin Cities was 10.0 percent, com-

TABLE 3-4: Consumer Price Index Overall Comparisons—Twin Cities versus U.S. City Average

	CPI Averages 1970 to 1992									% Increase
	1970	1980	1985	1987	1988	1989	1990	1991	1992	1970-1992
Overall										
U S city average	388	824	107,6	113,6	118.3	124.0	130.7	136.2	1403	262
Twin Cities	374	789	107.0	111,6	117,2	122,0	127,0	1304	135,0	261

SOURCE U S Department of Labor Statistics. Bureau of Labor Statistics, *CPI Detailed Report*, (Washington, DC January, *1994)* U S Department of Labor, Bureau of Labor Statistics, CPI Division, *Summary Data,* (Washington, DC 1994)

pared with 11.2 percent nationwide. Anderson and colleagues concluded that both strategies had only a minor effect on controlling hospital expenditures percapita from 1971 to 1990(3). They found regulation to have a greater impact on hospital production processes, primarily by controlling expenditures per discharge and per day. Competition was found to have a greater impact on utilization, mainly by lowering the number of admissions per capita.

Insurance Coverage and Uninsured People

In 1990, fewer people were uninsured in Minnesota than the national average, ranking seventh lowest among states, in part reflecting a relatively generous Medicaid program. According to one source, approximate] y 6.5 percent of Minnesotans were uninsured for health care services at any given time in 1990. Approximately 4.5 percent were uninsured for the entire year and 8.6 percent were uninsured for at least one month in 1990 (42). This compares with approximately 14 percent (34.7 million) uninsured nationally in 1990.1

More recent data from the March 1992 Current Population Survey indicates that approximately 10.1 percent were uninsured in 1993 in the Minneapolis/St. Paul metropolitan area, in comparison with 15.4 percent nationwide and 17.6 percent in metropolitan areas with over one million persons (18).

TABLE 3-5: Length of Inpatient Hospital Stay, Twin Cities

	989	990	99
National	6.6	6.6	6 5
Twin Cities	6.2	61	5 9

SOURCE Minnesota Department of Health, Health Economics Program unpublished data Minneapolis MN 1993

People without insurance in Minnesota are more likely to be male and younger than people who are insured. Uninsured adults in Minnesota are less likely to have a high school education, more likely to have lower incomes, less likely to be married, and more likely to be nonwhite than those insured by group plans. In 1990, only 28 percent of the uninsured people in Minnesota had incomes that were below the Federal Poverty Line (FPL). However, 71 percent had incomes that were below 200 percent of the FPL. Only 3 percent of the insured group were below the FPL, with 20 percent at 200 percent below the FPL (42).

Enrollment in Managed Care Plans

In 1992, in the Twin Cities metropolitan area, 44 percent of the population were enrolled in HMOs. Total enrollment by HMO in Minnesota at the beginning of 1992 is presented in table 3-6. Medica Choice was the largest HMO, followed by Group Health and MedCenters. The majority of enrollees, 82 percent, are in commercial plans, with 12 percent in Medicare and 6 percent in

[1]Estimates from different surveys may differ due to the way the question is asked. Therefore this comparison should be interpreted cautiously.

TABLE 3–6: Twin Cities HMOs-

HMO	Headquarters	Parent, owner or manager	Year opened	1991 Enrollment	History/Status
Blue Plus	Eagan	Blue Cross and Blue Shield of Minnesota	1974	69,884	Changed name from HMO Minnesota in 1988. Absorbed Coordinated Health Care HMO in 1988 Affiliate Minnesota Health Plans, Inc., merged into Blue Plus, effective Dec. 31, 1990
Group Health	Minneapolis	Group Health, Inc	1957	294,969	Includes Group Care, nonfederal!y qualifled HMO, In 1992, announced intent to merge with MedCenters Health Plan,
MedCenters	St Louis Park	Aetna Health Plans	1973	258,839	Formed by merger of MedCenter Health Plan and Nlcollet-Eitel Health Plan in 1983 In 1992, announced intent to merge with Group Health.
Medica					
Medica Choice	Minnetonka	United HealthCare	1975	352,378	Formerly known as Physicians Health Plan (PHP) Combied with Share Health Plan to form Medica, effective Jan. 1, 1991.
Medica Primary	Minnetonka	United HealthCare	1973	28,637	Formerly known as Share Health Plan.
Metropolitan Health Plan	Minneapolis	Hennepin County Bureau of Health	1983	28,712	Created for Medicaid Demonstration Project and Voluntary AFDC Managed Care Program. ,
NWNL Health Network	St Paul	Northwestern National Life Insurance Co	1984	19,586	Founded as Senior Health Plan Acquired and renamed by NWNL in 1987.
UCare	Minneapolis	University of Minnesota, Department of Family Practice	1989	10,709	Created for Medicaid Demonstration Project

SOURCE Citizen's League Research, "Minnesota Managed Care Review 1992," Minneapolis, MN, August 1992

TABLE 3-7: Minnesota Primary Care Physicians per 100,000 Population by Geographic Unit and Specialty, 1988

	All primary care	Family practice	Internal medicine	Pediatrics	OB/GYN
Statewide	90.5	42,3	27.3	11,8	9 0
Nonmetro counties	552	41.7	8.3	2.2	2.8
Nonmetro counties (c 10,000 population)	48.8	43,2	3.4	1,1	11

SOURCE Area Resource File as analyzed by J Christianson, B Dowd, J Kralewski, et al , Institute for Health services Research, School of Public Health, University of Minnesota, Minneapolis, MN, 1994

Medicaid. Medicaid enrollment increased by 25 percent from 1990 to 1991 in contrast to a decrease in enrollment in both commercial and Medicare plans during the same period (54). (More detail on trends in HMO enrollment is provided in a later section of this background paper).

Health Care Providers

Table 3-7 displays the number of Minnesota primary care physicians per 100,000 population, by geographic unit and specialty for 1988. There were 42.3 family practice physicians per 100,000 population, and 27.3 internal medicine specialists per 100,000. Statewide, Minnesota had 90.5 primary care physicians per 100,000 population, which is close to the Bureau of Health Professions manpower requirements of 91.9. It should be noted, however, that Olmsted County (the location of the Mayo Clinic) has a high concentration of primary care physicians. Excluding Olmsted County from the calculation, the ratio for Minnesota is 83.1 primary care physicians per 100,000 population (52).

Nationally, the rate of growth of physicians has exceeded that of the population (table 3-8), with similar trends in Minnesota. Thus, physician to population ratios increased for both metro and nonmetro areas in Minnesota from 1975 to 1988 (table 3-9).

Minnesota ranks 10th among the 50 states in active physician-to-population ratio (66). For nonmetropolitan counties, Minnesota ranks 37th among states (64). Nonphysician providers are active in Minnesota, with approximately 700 nurse practitioners and 159 practicing physician assistants cunently practicing in the state (52).

Availability of Inpatient Care

The Minnesota Department of Health reports 7,480 beds in 1990 in the Twin Cities' metropolitan area, as compared with 10,193 beds in 1971 (54). The Department of Health reports that the number of beds per 1,000 population dropped from 5.1 to 3.0 during this time period and occupancy rates fell from an average of 73.6 percent in 1971 to 43.6 percent in 1990. Another data source reports a slight increase in the percent occupancy of hospital beds in the Twin Cities from 1985 to 1991, as calculated using staffed beds and licensed beds (table 10) (44). From 1982 through August 1993, six Twin Cities' hospitals containing more than 2,021 beds closed. These data are consistent with the decline in hospital beds experienced nationwide.

DEVELOPMENT OF MINNESOTACARE

Within the past decade, Minnesota has enacted a number of reforms to improve access to health care services and control health care costs. In 1987, the Minnesota legislature passed the Childrens Health Plan (CHP). This was followed by a second major reform in 1992, originally called the Health Right Act and later renamed the 1992 Minnesota Care Act. The 1992 Act was followed by the 1993 Minnesota Care Act and the 1994 Minnesota Care Act.

Implemented in 1988, CHP provided outpatient acute care services to non-Medicaid-eligible, low-income pregnant women and children under age six. CHP was expanded in January of 1991 to include all low-income children through age 19.

TABLE 3-8: The Supply of Physicians in the United States in Seiected Years, 1963-1986

	1963	1973	1978	19s3	1986
Total physicians	276,475	366,279	437,486	519,546	569,160
Physicians per 100,000 population	146	174	196	218	232
Average annual percent increase in physicians (from previous year shown)		2.9	3.6	3.5	31
Average annual percent increase in population (from previous year shown)		11	1.2	1,3	1.0

SOURCE U.S Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, *Seventh Report to the President & Congress on the Status of Health Personnel in the M/led States*, DHHS Pub No HRS-P-0D-90-1(Rockville, MD HRSA June 1990)

Then in 1992, the state of Minnesota enacted the Health Right Act, now called Minnesota Care. This bill built on CHP and provided subsidized health insurance coverage through a program known as the Minnesota Care Program. A cigarette tax increase and a 2 percent provider tax were used to finance the program and other health reform-related activities (11).

Subsequently, the 1993 and 1994 Minnesota-Care Acts established the goal of achieving universal health coverage of all Minnesotans by July 1997 and beginning in July 1997 requires that all Minnesota residents obtain and maintain health coverage (53). However, the 1993 and 1994 bills did not specify a financing mechanism for universal coverage under the Minnesota Care Program (the subsidized insurance program) and universal coverage is contingent upon the development of a financing mechanism in the 1995 legislation. The Minnesota Care Act did establish other reforms in an effort to expand coverage, including voluntary purchasing pools, a prohibition on underwriting, restrictions on the use of preexisting condition limitations, and a requirement that health plan companies offer plans that are issued on a guaranteed basis.

The Minnesota legislature has also advanced a number of reforms to try to slow the growth rate of health care spending. The 1992 Minnesota Care Act created the Minnesota Health Care Commission (MHCC), consisting of 25 members representing labor unions, consumers, providers, employers, health insurers and others, to develop a cost-containment strategy for health care reform to slow the rate of growth in total private and public health care spending in Minnesota by at least 10 percent per year over the next five years(51). MHCC delivered a cost-containment plan to the legislature in early 1993.

Based on the work of the MHCC, the 1993 Minnesota Care Act established a comprehensive cost-containment plan. In the plan, a limit on total health care spending was created and the Commissioner of Health was charged with enforc ing annual limits on the rate of increase in health care costs. The Minnesota Department of Health estimated that Minnesota Care would yield a total of $7 billion in savings by 1998. The Department aimed (in consultation with the MHCC) to have detailed legislation and regulations developed and to begin implementing the plan by July 1994. However, this target date proved to be overly optimistic. Interim controls are being used until final regulations are established.

The Minnesota ent of "Integrated Service Networks" (I SNS), to be formed by providers, payers, and/or purchasers of medical care. The intent was that ISNs would provide a comprehensive set of personal health care services to a designated population of individuals, for a prospectively set budget. The Minnesota Commissioner of Health can establish limits for total ISN budget increases, but competition among ISNs is also encouraged to control costs (50). Under the 1993 law, the State Health Commissioner can approve ISN arrangements, exempting participants from state and fed-

TABLE 3-9: Minnesota Active Physicians per 100,000 Population in Metropolitan and Nonmetropolitan Counties, 1975 and 1988

	1975	1988	Percent Change 197S88
Active physicians			
Metropolitan counties	195.5	268,4	37.3
Nonmetropolitan counties	64.3	80.4	25.1
Primary care physicians			
Metropolitan counties	88.7	108.6	22.4
Nonmetropolitan counties	44.3	55.2	246

SOURCE U S Department of Health and Human Services, Health Resources and Service Administration, Bureau of Health Professions *Seventh Report to the President & Congress on the* Status *of Health Personnel in the United States*, DHHS Pub No HRS-P-0D-90-1 (Rockville, MD HRSA June 1990)

era] antitrust liability. A recent study identified 19 organizations that are developing ISNs (37).[2]

In addition, the 1993 legislation establishes a Regulated All-Payer Option (RAPO) for providers delivering health care outside of an ISN. Providers are required to accept reimbursement at the all-payer level as payment in full for services provided to: (1) Minnesota residents; (2) persons covered by all-payer insurance; and (3) out-of-network services provided to ISN enrollees. RAPO will provide an alternative to ISNs for those who prefer to participate in a fee-for-service system and is expected to be fully implemented by July 1, 1997.

Minnesota has also enacted a number of other programs to improve coverage and reduce health care costs. The 1994 Minnesota Care Act established voluntary purchasing pools to negotiate and purchase health care coverage for employers, groups, and individuals. By July 1, 1997, large purchasing pools are expected to be available to all purchasers, regardless of employment status or group membership. Recommendations will be submitted by the MHCC to the 1995 legislative session regarding whether all or some purchasers should be required to obtain coverage through purchasing pools. Recommendations also will be made regarding the creation of a state-administered purchasing pool, which would serve all Minnesotans who do not have access to other purchasing pools (53).

A universal, comprehensive benefit set will be the standard coverage for all Minnesotans in 1997. The benefit set will be the basis for coverage under state health care programs, with additional wrap-around provisions to meet the special needs of populations served by government programs (53).

The national health care reform proposed by the Clinton Administration is similar to Minnesota Care in several respects. Minnesota Care did not initially propose to provide universal coverage, as did the Clinton plan; however, the 1994 Minnesota Care legislation does support universal coverage. Minnesota Care differs from the Clinton plan in that it does not have employer mandates for the purchase of health insurance. A financing mechanism for achieving universal coverage under Min - nesota Care is still being developed.

Under the Clinton proposal, regional or corporate insurance purchasing alliances would be created to "manage competition. " The regional alliances would be mandatory for firms with fewer than 5,000 employees. Alliances would administer subsidies to eligible individuals, enforce the premium limits, and have other administrative responsibilities. Purchasing pools formed under the Minnesota legislation are currently voluntary and will not be involved in the enforcement of cost

[2]The target date of ISN implementation (July 1994) established in the 1993 legislation was postponed. The 1994 MinnesotaCare Act allows ISNs to form voluntarily after July 1, 19%, and rules governing ISNs will be adopted by Jan. 1, 1997.

TABLE 3-10: Percent Occupancy of Twin Cities Hospitals

Year	Average daily census	% Operating occupancy	% Licensed occupancy
1985	4,677.3	62.1	45.8
1986	4,517.8	61.8	45.0
1987	4,450.4	61.9	44.9
1988	4,457,1	64.0	47.2
1989	4,463.1	68.2	49.9
1990	4,422,5	66.5	48.2
1991	4,303.7	65.7	47.6

•Table 3-10 shows aggregate occupancy rate and bed capacity figures for Twin Cities hospitals The number of staffed and licensed beds were obtained from the Minnesota Department of Health, Survey and Compliance SectIon Only those hospitals for which data was available from both The Health Care Council and the Minnesota Department of Health appear in occupancy and bed capacity analyses

Occupancy rates were calculated using a combination of Council discharge data and hospital bed statistics obtained from the Minnesota Department of Health To determine percent occupancy in a given year, the average daily census was first calculated by dividing the total number of Inpatient days for Twin Cities hospitals (excluding newborns and neonates) by 36.5 days. Average daily census was then divided by the total number of either licensed or staffed beds to determine percent occupancy

SOURCE Metropolitan Health Care Council, Report on Twin Cities Hospitals from the Council of Hospital Corporations Inpatient Utilization Data Base, Minneapolis, MN, 1993

containment regulations or in the administration of subsidies.

Under the Clinton proposal, a National Health Board would enforce the health alliance average premium targets. A similar function under Minnesota Care will be provided by the Minnesota Commissioner of Health, who will be responsible for enforcing the cost controls that apply to prov iders under the Regulated All-Payer Option (RAPO) and to the ISNs. Both the Clinton plan and Monesota Care include the development of standards for quality of care and monitoring of provider compliance. Consumer empowerment through more informed decision making is also part of both efforts.

SUMMARY

There are no published data that would allow a comparison of health care expenditures in the Twin Cities to other metropolitan areas while controlling for differences in benefit. coverage and size and characteristics of groups by metropolitan areas. Two uncontrolled studies have found that health care expenditures are lower in the Twin Cities, while a third study found the opposite. Some data indicate that health care costs in the Twin Cities may be rising at a slower rate than in the nation as a whole. The medical price index in the Twin Cities was above the national average from 1981 until 1987. However, since 1987 it has been below the national average. One study found that between 1971 and 1990 the annualized rate of increase in hospital costs per capita in the Twin Cities was 10.0 percent, compared with 11.2 percent nationwide. There are fewer uninsured individuals in the Twin Cities than the national average.

Minnesota is implementing an ambitious health care reform plan designed to improve access for the uninsured and control health care costs. Like the Clinton Administration's health reform proposal, Minnesota Care relies on competition among health care organizations and government regulations to control costs. However, it differs from the Clinton Administration's plan in several important respects.

Growth of Managed Care and Integrated Delivery Systems

4

The health care delivery system in the Twin Cities is best known nationally for its reliance on HMOS, and for the high proportion of community residents enrolled in HMOs. It has been scrutinized as a community where "competition" among health plans has occumed, although there remains debate about the exact nature of that competition and its effects. This section describes the evolution of the Twin Cities' health care market in three phases. The first phase covers the development and early growth of HMOs. The second phase spans the 1980s, when a large number of studies sought to evaluate the impact of that HMO development on various measures of market performance. The third phase focuses on the recent consolidation of the supply side of the Twin Cities' health care market.

DEVELOPMENT OF THE HMO MARKET: 1970-1980

The first health maintenance organization (HMO), Group Health, Inc. (GHI), was founded in the Twin Cities metropolitan area in 1957 (6). This plan, which was managed as a consumer cooperative, employed salaried physicians and purchased hospital services by contractual arrangements with community hospitals. The strongest early advocates of HMOs in the Twin Cities were union groups and public sector employees. Most physicians viewed Group Health as inferior socialized medicine, and private employers were generally opposed to offering GHI as a health plan option (28).

In January 1970, Dr. Paul Ellwood, a health care reformer in the Twin Cities, coined the term HMO in a *Fortune* article dealing with prepaid medical care. Ellwood advocated the development of a large number of HMOs nationwide to compete for patients

with each other and traditional insurers. The hope was that the internal incentives associated with prepayment, together with competitive pressures to contain premiums, would result in a more efficient health care delivery system and lower rates of increase in health care expenditures. The ideas of Ellwood and his colleagues appealed to the Nixon Administration to the extent that President Nixon, in his 1971 address to Congress, promoted HMOs as a national strategy to contain health care costs.

In 1972, a highly respected multispecialty group practice in the Twin Cities, the St. Louis Park Medical Center (now Park-Nicollet Medical Center), created a prepaid alternative called MedCenters Health Plan, thereby improving the image of HMOs in the Twin Cities (28). St. Louis Park Medical Center had begun to lose patients to Group Health, and large employers in the community showed interest in offering a competing HMO. The launching of the HMO initiative by the Nixon Administration provided further impetus for the formation of MedCenters. MedCenters was a group HMO, allowing physicians to provide care to patients not enrolled in the HMO. In this respect. it differed from Group Health, Inc., where physicians were salaried and treated only Group Health enrollees.

In the increasingly competitive environment of the Twin Cities, physicians outside the HMO system sought to offer alternatives to fee-for-service and the existing staff and group model HMOs (5). In 1975, Physicians Health Plan (PHP) was formed as an independent practice association (I PA) model HMO. Independent physicians could be associated with PHP while maintaining their fee-for-service practices. PHP was a much looser HMO model than MedCenters or Group Health, in that physicians in PHP were not salaried, and PHP enrollees had considerably more freedom to choose their physicians, with no physician gatekeepers to determine if visits were necessary. Enrollees, therefore, had access to a system where they could use their own doctor and favorite hospital. with the added benefit of an improved payment mechanism. Without intense price competition from indemnity plans, the HMOs could be generous in the benefits they offered (57).

From 1971 to 1978, HMO enrollment in the Twin Cities grew at an average annual rate of 27 percent. By December 31, 1978, there were 240,800 individuals (12.4 percent of the standard metropolitan statistical area) enrolled in seven HMOs, compared with 5 percent enrollment in HMOs nationally at that time (10). In 1980, the Twin Cities had an enrollment in HMOs per capita that was three times larger than in the rest of the country. Table 4-1 shows HMO enrollment growth in the Twin Cities from 1970 to 1981. During the 1980s, HMO enrollment continued to grow, reaching almost 50 percent of the Twin Cities' population by the end of the decade (58). This was attributed primarily to PHP entering the HMO market. Within six years of entering the market, PHP's enrollment grew to 95,141, making it almost equal in size to MedCenters and half as large as Group Health. It has been speculated that this rapid growth was due largey to PHP promoting its policy of consumers being able to choose their own providers (28).

Why did HMO development proceed more rapidly in the Twin Cities during the 1970s than in other cities? Anderson and colleagues argued that three factors supported the development and growth of HMOs in the Twin Cities (6). The first was the "pre-existing environment." Anderson and colleagues concluded that the social homogeneity, political progressiveness, and economic stability in Minnesota were primary causes of the accelerated development of HMOs (6). These characteristics were manifested in the large number of multispecialty group practices existing in Minnesota (which facilitated the formation of HMOs), employers with a track record of successful community leadership, and a community proud of the quality and accessibility of its health care and concerned mainly with the cost of health care.

The second factor described by Anderson and colleagues involved the "initiatives" taken by employers (6). Because the primary concern in the Twin Cities regarding health care was cost, the

TABLE 4-1: Minneapolis–St. Paul HMO Market[a]

Enrollment	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Group Health Plan	35,996	42,879	52,230	59,172	66,638	76,883	91,372	107,517	121,184	130,810	153,869	181,328
Coordinated Health Plan			1,715	1,945	2,184	2,941	3,578	3,985	4,025	4,459	4,922	5,243
MedCenter			1,000	4,233	7,049	10,090	17,591	31,797	46,706	61,278	70,616	90,282[b]
Nicollet-Eitel Health Plan				441	1,853	2,370	3,179	5,491	8,485	14,957	20,984	27,373[b]
SHARE				2,846	3,299	9,189	12,130	17,121	21,862	27,449	33,898[b]	37,486[b]
HMO Minnesota					1,725	2,914	3,368	6,400	12,170	26,195	48,309	49,511[b]
Physicians Health Plan						53	9,708	14,227	26,422	45,240	85,173	95,141[b]
TOTAL	35,996	42,879	54,945	68,637	82,748	104,440	140,929	186,538	240,854	310,388	417,771[b]	486,364[b]
% Growth		19	28	25	21	26	35	32	29	29	35	16
Metropolitan population	1,874,440	1,883,100	1,891,600	1,899,200	1,914,900	1,912,500	1,924,100	1,931,500	1,945,600	1,959,800	1,985,700	1,989,600
% Metropolitan population	1 9	2 3	2 9	3 6	4 3	5 5	7 3	9 7	124	158	21.0	244

[a]Seven-county metropolitan area

[b]Includes Medicare Demonstration Project Enrollment

SOURCE O Anderson, T Herold, B Butler, et al, *HMO Development Patterns and Prospectives* (Chicago, IL Pluribus Press, 1985)

payers, and particularly large corporate employers, supported the development of alternative payment mechanisms for health care. Other areas of the country were more concerned with access and quality; therefore, efforts in these other communities were led by consumers and providers, and did not focus on alternative payments.

The third factor identified by Anderson and colleagues concerned the "responses" in the community (6). Anderson and colleagues found excellent communication and responsiveness within the Twin Cities, in contrast to other communities they studied. In the Twin Cities, when St. Louis Park Medical Center formed an HMO, the entire community was aware of and interested in its progress. Other communities were either wary of the development of HMOs or viewed them as relatively unimportant experiments. When mandated to include federally qualified HMOs in their benefit options, employers in the Twin Cities decided to offer a selection of those not federally approved as well. This greatly aided in the distribution and growth of HMOs in the Twin Cities.

In summary, the decade of the 1970s was a time of rapid growth of HMO enrollment in the Twin Cities. This appeared to have occurred in part as a response to the rising cost of health care, supported by strong interest on the part of Twin Cities' employers, and the general progressive nature of the Twin Cities' political climate. The HMOs spanned a variety of '*models," with most Twin Cities' physicians affiliated with one or more HMOs by the early 1980s (6).

COMPETITION AMONG HMOS AND ITS EFFECTS: 1980-1990

The seven Twin Cities HMOs that began the 1980s had two opportunities for growth. They could gain new enrollees from the fee-for-service sector, or they could capture business from each other. The HMOs' emphasis on the former strategy led to accusations that they "shadow priced" the fee-for-service sector and to a perception among employers that competition among HMOs had failed. The first criticism appears to have some validity, but the extent to which competition failed, succeeded, or indeed was ever really tried during this period is a much more complicated issue.

In 1980, about 20 percent of Twin Cities' residents were enrolled in HMOs. Clearly, HMOs had an opportunity to grow rapidly by underpricing competing fee-for-service insurance plans. There are several reasons why the HMOs may not have pursued this strategy more aggressively. The first and perhaps most important reason relates to the conditions under which employers offered these option to their employees. Paul Ellwood, an early proponent of HMOs in the Twin Cities, in a 1984 interview with John Iglehart, in the New *England Journal ofitledicine(31*) said:

> His 'biggest disappointment' about health care developments in the Twin Cities is the failure of corporations to take advantage of their purchasing power in the market. Major national corporations based here (in the Twin Cities) . . . have been unwilling to go out and buy care on the basis of price.

In the same article, Walter McClure, another Twin Cities' health policy analyst, noted that:

> Employers and unions have been willing to offer workers health care coverage through the high-cost, traditional insurance plan, which almost totally lacks incentives to make the consumer price-sensitive, and then make that same amount available to HMOs. HMOs have been delighted to pick up that money.

In the early 1980s, few employers that offered more than one health plan set a "defined," or fixed, contribution at or below the premium of the lowest-cost plan, which would have required employees to pay the additional cost of more expensive plans out of their own pockets. Feldman and colleagues examined 44 Twin Cities' firms offering multiple health - plans and found that fewer than half had adopted a level-dollar contribution method for the family coverage premium and only about one-third paid a level dollar contribution toward the single coverage premium (27). Other contribution formulae, such as a level percentage contribution, or explicit subsidy of the traditional fee-for-service plan, mitigated the incentives of

HMOs to reduce their premiums, since a $1.00 decrease in an HMO's premium would not necessarily increase the premium differential between the HMO and its competitors by $1.00.

Also during the 1980s, some policy analysts argued that high-risk. fee-for-service enrollees were more likely to have a long-standing relationship with their fee-for-service physicians and therefore were less likely to join a staff or group model HMO. The ● 'favorable selection" of relatively healthy employees into group and staff model HMOs in the Twin Cities was documented by Jackson-Beeck and Kleinman and Dowd and Feldman (14,32).

Feldman and Dowd modeled HMO enrollment growth, assuming that HMOs experienced initial favorable risk selection that decreased over time (22). They further assumed that, in a two-plan employee benefits offering consisting of one HMO and one fee-for-service plan, the fee-for-service plan would experience-rate, charging premiums that equaled the average cost of care for its enrollees, plus an administrative fee, while the HMO would be free to set its premium, subject to the constraint of employee demand. Under these assumptions, Feldman and Dowd showed that the HMO could maximize its profits by setting premiums at levels that would capture only a portion of the fee-for-service sector's enrollees, rather than driving the fee-for-service plan from the market. In order to capture enrollees from other HMOs, the HMO might have to set premiums so low that fee-for-service plans would be driven from the market (22). From the HMO's point of view, this would not be a profit-maximizing strategy in the longer run.

In addition to experiencing favorable selection, HMOs appeared to enjoy a "technological advantage" over the fee-for-service sector. HMOs were able to produce "output" (i.e., treatment of their enrollees) using fewer or lower cost "inputs" (e.g., hospital days and physician visits) than the fee-for-service sector. If HMOs had competed fiercely among themselves on the basis of price, the premium for HMO enrollees should have driven down the cost of producing treatment using the HMOs improved "technology." As noted above, however, excessively low premiums might have reduced fee-for-service market share below the profit-maximizing market share.

This HMO pricing strategy. coupled with a relative lack of employer information on the health status of their employees, resulted in disappointing effects of HMOs on employer health insurance costs. Employers who offered their employees a choice of HMOs and the fee-for-service sector sometimes saw their total health insurance costs *increase* as the relatively healthy employees left the experience-rated, self-insured, fee-for-sexvice plan to join HMOs (26).

If employers had known the health expenditures of their HMO enrollees, they might have been able to prevent some of the losses associated with this selection process. Unfortunately, however, early attempts by employers to obtain information on the actual health expenditures of their employees who were enrolled in HMOs were generally not successful. Because their premiums were community-rated, HMOs were able to tell employers that they kept no data on the experience of employees by firm. The ability of employers to threaten HMOs with expulsion from their benefit plans was limited because the national HMO Act of 1973 required employers to offer at least one federally qualified HMO of each "type" available in a market area, if "mandated" by a federally qualified HMO. Throughout the 1980s. employer pressures for experience-rated products and more data on utilization of services by HMO enrollees increased, and HMOs began to offer products that were not federally qualified in order to meet these demands.

When employers offered a choice among health plans, *employees* were quite sensitive to out-of-pocket premium differentials. Feldman and colleagues studied the choice of health plans by employees in 17 large Twin Cities' firms in 1984 (28). Unlike previous studies, the authors were able to identify precisely the health plan choice set (i.e., single versus family coverage) for each individual, and incorporate information on the availability of coverage through the spouse. The elasticities estimated by Feldman and colleagues are considerably higher than those found in pre-

vious studies, as large as -8.6 for choice among single coverage plans. This means that a one percent increase in the out-of-pocket premium differential between two plans reduces the enrollment share of the higher cost plan by 8.6 percent.

Although the HMOs' incentive to cut prices to consumers was limited by employer premium contribution methods and (for some HMOs) favorable selection, the HMOs' incentive to reduce their costs was not so impaired. Cost-cutting efforts on the part of health plans precipitated a significant reorganization of the Twin Cities' health care market during the latter 1980s from a relatively close, collaborative relationship between plans and providers to a distinct division between financing and service delivery functions. The change was often slow and subtle, but sometimes it was abrupt, contentious, and played out on the front pages of the local press. Blue Cross and Blue Shield of Minnesota evolved from a traditional insurance plan to an aggressively managed health plan engaged in outcomes research and the development of preferred provider networks in both urban and rural areas (see discussion below). Physicians Health Plan, started by physicians for physicians, experienced a bitter dispute between physicians and the health plan's management over fees and administrative practices (38). The same fate befell MedCenters Health Plan in its relationship with the Park-Nicollet Clinic.

The changes in the relationship between health plans and providers that occurred in the latter part of the 1980s were driven largely by consumer demand. In the Twin Cities' health plan market, consumers had grown accustomed to being offered a choice of health plans and recognized that not all health plans offered access to all providers. Because the majority of consumers are in good health, the choice of health plan, based on factors such as coverage, clinic locations, and out-of-pocket premiums, tended to override consumer loyalty to specific health care providers. Since premiums were an important determinant of health plan choice, even in the face of employer premium contribution policies that reduced out-of-pocket price d inferences, consumer willingness to change health plans gradually produced pressure on plans to restrain premium increases (28). That pressure eventually was transmitted to providers in negotiations over contracts.

I Empirical Studies

Hospital Finances and Demand for Hospita/ Services

During the 1980s there were several attempts to evaluate the competitiveness of the Twin Cities' hospital market and the changing relationship between health plans and hospitals. In a case study of the Twin Cities, using data primarily drawn from the 1970s, Luft and colleagues found no convincing evidence that the growth of HMOs had affected hospital use (40). Feldman and Dowd estimated the price elastic it y of demand for hospital services from 1981 data on 31 Twin Cities hospitals (23). They found that price sensitivity at that time was either totally lacking, as in the case of Medicare patients, or fell far short of the competitive ideal. In another study, Feldman and colleagues examined the effect of HMO discounts on hospital revenue, cost, and profits (25). This study, based on Twin Cities hospital data from 1979 to 1981, found that neither HMO discounts, nor a larger share of HMO, Medicare, or Medicaid patients, were associated with lower hospital costs. Furthermore, neither HMO market share nor HMO discounts adversely affected hospital profits. The authors concluded that, if competition among health plans was to reduce hospital costs or profits, it would have to encompass more than just growth of HMO market share. Kralewski and colleagues also found that HMOs were not using competitive bidding in their contractual relationships with hospitals during the period 1977 to 1980 (36).

By 1986, however, the pattern of HMO-hospital relationships had begun to change. In a study of six HMOs in four large metropolitan areas (one of which was the Twin Cities), Feldman and colleagues found that HMOs, especially staff and network HMOs, were beginning to concentrate their patients at hospitals and that price played an

TABLE 4–2: Twin Cities Hospital Utilization by Service

Service group	19a28282 Discharges	1988 Discharges	1982 Length of stay (days)	1988 Length of stay (days)
Oncology	10,856	8,835	8.82	5,92
Cardiology	26,741	28,302	8.22	5,38
Psychiatry	13,328	13,924	17.84	1195
Chemical dependency	7,906	7,422	1545	11,31
Ophthalmology	7,528	1,742	3.10	2.24
ENT	10,830	6,938	2,51	1.97
Neurology	15,188	11,751	8.69	604
Orthopedics	31,769	21,833	785	5.38
Urology	12,650	9,884	5.85	407
Gynecology	11,036	7,525	5.22	4.05
Obstetrics	39,002	41,635	3.52	269
Newborns	35,438	37,482	4,23	324
General medicine	78,369	66,542	7,02	563
Total	300,641	263,727	6.91	613

SOURCE Council of Hospital Corporations (renamed the Metropolitan Health Care Council), *Trends in Twin C/(/es Hospital Utilization* 1982-1988 St Paul MN, 1989

important part, not so much in the HMO's choice to affiliate with a particular hospital, but in the volume of services demanded from the hospital (21). The estimated price elasticit y of demand for admissions in HMO-affiliated hospitals was -3.0, indicating a considerable degree of price sensitivity (a 3 percent reduction in admissions associated with a 1 percent increase in price). Independent practice association HMOs were not found to exhibit the same degree of price sensitivity. The estimated price elasticity of demand for independent practice associations was -1.0, similar to the elasticity estimate in Feldman and Dowd's study based on 1981 data (22).

Inpatient Resource Use

During the 1980s, Twin Cities' hospitals faced declining discharges and lengths of stay across virtually all types of services that were tracked by the Metropolitan Health Care Council, which is the Twin Cities' hospital trade association (table 4-2). Even among the service groups experiencing some increase in discharges (i.e., cardiology, psychiatry, obstetrics, and newborns), lengths of stay fell precipitously. Part of the declining use of inpatient resources mirrored a trend in national data. Dowd estimated the proportion of reduced admissions from 1977 to 1982 that could be attributed to HMOs in the Twin Cities' market (13). That estimate depends crucially on the amount of credit that HMOs receive for reducing length of stay in the *non-HMO* sector. If HMOs are given credit for none of this "spillover" effect, then the reduced admissions among HMO enrollees, plus the growth in HMO market share, would imply that HMOs were responsible for one-third of the decrease in admissions over that time period. If HMOs are given credit for the entire decline in discharges in the non-HMO sector, then HMOs could be responsible for 85 percent of the total drop in admissions.

The HMO effect on length of inpatient hospital stays provides an interesting example of the refinement of resource management techniques used by health plans. In early studies of HMOs in the Twin Cities, HMO membership was associated with a 40 percent reduction in hospital admissions but no reduction in length of stay (see Dowd, et al., 1986 (16) and Johnson, et al., 1989 (33) for reviews of the literature). However, by the mid- 1980s, Dowd and colleagues found that enrollees in group practice HMOs in the Twin Cities

had significantly shorter lengths of stay than indemnity-insured patients in five of seven diagnostic groups examined, while enrollees in IPA HMOs had significantly shorter lengths of stay in three of these groups (16). Johnson and colleagues also examined data from Twin Cities hospitals over the three-year period 1982 to 1984 and found that lengths of stay for group practice HMO enrollees were significantly shorter than stays for either indemnity-insured patients or IPA enrollees (33).

Why were Twin Cities' HMOs, and particularly group and staff model plans, able to reduce length of stay, relative to indemnity insurers, when HMOs in other study sites were not? All health plans should want to minimize their costs, whether those savings are passed on to consumers or not, but some cost-saving techniques may have higher payoffs and be less costly to implement than others. Dowd and colleagues suggested that reductions in admissions were easier for health plans to achieve than reductions in length of stay, since reduced admissions can occur simply by switching treatment to the outpatient setting (16). Length of stay reductions, however, involved direct intervention in the physician's onsite treatment decisions. Thus, the initial focus of HMOs on reducing admission rates is not surprising. Once HMOs had reduced admissions rates, however, the competitive advantage to be gained by reducing length of stay made that task worth pursuing, although more difficult. The maturity of the HMOs in the Twin Cities' market also may have had some effect, but competition from other HMOs does appear to have been an important factor. In three of the studies that preceded Johnson and colleagues' study, the HMOs that had not achieved reductions in length-of-stay relative to the fee-for-service sector had no close HMO rivals in their market areas (33).

Access and Health Outcomes

Three studies used data from the mid- 1980s to compare the health outcomes of subpopulations of Medicare or Medicaid beneficiaries in the Twin Cities enrolled in HMOs with beneficiaries receiving care from providers under normal program managements. One examined the difference in physical functioning and perceived general health status between Medicare beneficiaries enrolled in HMOs and in traditional Medicare (69). A second assessed the effects of HMO enrollment on the health and functional status of "*dual eligible" Medicaid/Medicare beneficiaries, while a third assessed the effect of HMO enrollment on health, functional status, and service utilization among severely mentally ill Medicaid beneficiaries (9,41 ,43,55).

The study of Medicare beneficiaries found no significant difference in predicted health status as measured by physical functioning between those enrolled in HMOs and traditional Medicare (69). However, there was a difference between the two groups in predicted health status, as measured by perceived general health status, with those enrolled in HMOs having a significantly higher level of perceived health status. For a subgroup of lower income enrollees, no significant differences were found in predicted health status. This does not support Ware and colleagues' 1986 findings that low-income individuals have worse outcomes in HMOs, as compared with fee-for-service care (67).

Lurie and colleagues examined the effect on health and functional status measures of enrolling noninstitutionalized elderly Medicaid recipients in prepaid plans as compared with traditional fee-for-service Medicaid (41). Beneficiaries were randomly assigned to a group receiving prepaid care from one of seven health plans, with only the Medicaid proportion of their care being capitated. A sample of beneficiaries (400 in prepaid care and 400 in traditional Medicaid) were interviewed at baseline and one year later. Major outcome measures in the study included general health status, activities of daily living, instrumental activities of daily living, corrected visual acuity, and blood pressure and glycosylated hemoglobin for hypertensive and diabetic persons, respectively. The analysis found no significant difference between the two groups in number of deaths or any of the 1isted outcome measures, thus providing no evi-

dence, in the short-term, of harmful effects of enrolling elderly Medicaid patients in Twin Cities' HMOs.

Lurie and colleagues also studied the effect of HMO enrollment on chronically mentally ill Medicaid recipients (43). Of 739 clients identified as chronically mentally ill, half were chosen at random to remain in traditional Medicaid, and half were permitted to choose among four capitated health plans. The beneficiaries were followed for an average of 11 months. Outcome measures consisted of general health status, physical functioning, social functioning and psychiatric symptoms. No significant differences were found in general health or mental health between beneficiaries in traditional Medicaid versus HMOs. However, among the subgroup of subjects with schizophrenia, scores on the Global Assessment Scale, a measure of community function, were 7.6 points lower for the HMO group than the traditional Medicaid. The authors concluded that there was "no consistent evidence of short-term adverse health effects" among HMO enrollees relative to traditional Medicaid enrollees.

Access to services and utilization of services by the same group of chronically mentally ill Medicaid recipients also was analyzed (9,55). There were slight improvements in the majority of access measures studied for HMO enrollees, although they were not statistically significant. Thus, enrollment in HMOs did not reduce access to physical or mental health care for this group. There also were no significant decreases in the use of inpatient or outpatient services for the HMO enrollees (55). In particular, there was no statistically significant evidence that Medicaid enrollees with severe mental illness used community-based treatment programs differently than beneficiaries in fee-for-service Medicaid. However, there was evidence that HMOs reimbursed these programs at a lower percentage of their charges (9).

Summary

In summary, the 1980s saw important changes in Twin Cities' health plans and their relationships with providers. These changes included the institution of more aggressive management strategies by health plans. The aggressive management of provider relations was made possible by the growing willingness of consumers to choose health plans based on characteristics such as required out-of-pocket premium contributions, with a weakening of loyalty to specific providers. The pressure on premiums experienced by health plans caused some plans to be more sensitive to the prices they paid for hospital care, leading to greater price shopping in the hospital market.

The empirical evidence also suggests that hospital lengths-of-stay were lower in HMOs, relative to traditional insurers in the 1980s. However. there have been no studies measuring the direct effect of the recent growth of managed care and integrated delivery systems on the growth rate of health care expenditures.

There is very limited information regarding the effect of increased HMO enrollment and competition among providers for HMO contracts on access to services and the health status of Twin Cities residents. The available evidence applies to subgroups of the population, and not to HMO enrollees from private employed groups. These studies do not find significant differences in health status and access measures for HMO versus non-HMO enrollees.

THE CONSOLIDATION OF THE TWIN CITIES HEALTH CARE MARKET

Three recent mergers involving Twin Cities' HMOs have captured national attention. The first was a merger of two large HMOs, Group Health, Inc. and MedCenters. According to one policy analyst, this merger is unique in that "we've never had a merger...in the national HMO market between two equal partners of this size" serving the same community (35). .The second major con solidation involved the merger of an HMO and a hospital, and the third was a merger between an HMO and a hospital system, creating the first vertically integrated health care organization in the Twin Cities. In this section we begin by providing an historical context for understanding the importance of these mergers and the public policy issues they

TABLE 4-3: Admissions for Major Twin Cities Hospitals, by Payer, 1991

Hospital	Admissions	HMO (%)	Medicare (%)	Medicaid (?/0)	Other (%)
Abbott-Northwestern	30,504	15.0	34.0	8.0	43,0
Fairview-Southdale	18,927	46.3	28.4	2.8	22.5
Hennepin County	19,031	10.1	24.8	43.0	22.1
Mercy	11,555	51.8	15.8	6.1	26,3
Methodist •	20,012	0.0	21.6	2.5	76.0
Metropolitan-Mt. Sinai	6,200	32.0	44.0	9.0	15.0
Minneapolis Children's	5,972	35.2	0.0	22.6	42.2
North Memorial	22,367	44.3	20.0	81	27,7
Riverside	23,855	67.6	17.1	8.6	6 7
St. Joseph's	13,208	44,0	25.2	134	174
St. Luke's	8,505	8.6	33.0	16.7	41,7
St Paul-Ramsey	13,989	0.0	28.6	34.4	371
United	18,900	38.4	32.1	10.1	194
Unity	10,944	54.3	15,1	6.8	23.8
University of Minnesota	7,848	10,7	26.3	11.1	51.9

•Methodist (and possibly other hospitals) groups HMO admissions with other payers

SOURCE Citizen's League Research, "Minnesota Managed Care Review 1992, " Minneapolis, MN, August 1992

raise. We do this by documenting merger activity over time in the Twin Cities involving hospitals and health plans. We then describe each of the three recent mergers noted above, focusing on the motivations for the mergers and the expectations of the merger parties. We conclude by discussing several ongoing developments in the reconfiguration of the Twin Cities' health care delivery system.

Hospital Consolidation

In 1976 there were 35 hospitals in the Twin Cities with approximately 10,000 acute care beds at an average of 70 percent occupancy (8). By 1992, as described in the previous section, the number of acute care hospitals had declined dramatically, as had the total number of beds and hospital occupancy rates. Also, by 1992 almost all hospitals in the Twin Cities were owned by one of four multihospital systems: Fairview, HealthOne, HealthEast, and LifeSpan. The hospitals that were independent of these systems at that time included: University Hospital, St. Paul Ramsey Hospital, Methodist Hospital, North Memorial Hospital, Hennepin County Medical Center, and children's hospitals in St. Paul and Minneapolis. Table 4-3 contains data on admissions in major Twin Cities' hospitals in 1991 by payer.

The four major, multihospital systems were formed in the 1980s through a series of mergers and acquisitions. In 1986, five different hospitals in St. Paul came together to form HealthEast (59). In 1987, the Fairview system, which existed prior to the 1980s, added St. Mary's Hospital through a partnership with the Carondelett Catholic order. In 1987, two existing multihospital systems HealthOne and HealthCentral merged to form an expanded HealthOne Corporation that included hospitals in the northern suburbs of the Twin Cities as well as facilities in both downtown St. Paul and Minneapolis. The downtown Minneapolis facilities were subsequently reduced in scale and sold to Hennepin County to augment Hennepin County Medical Center's capacity. LifeSpan, a four-hospital urban/rural system, was represented in the Twin Cities' metropolitan hospital market area primarily by its flagship, Abbott-Northwestern Hospital, a tertiary care facility located near downtown Minneapolis.

Several different but interrelated motivations for the "horizontal mergers" that occurred in the Twin Cities' hospital market have been offered by

hospital and HMO executives. The early 1980s was a period of creation and expansion of multihospital systems nationwide, and the aggregation of hospitals in the Twin Cities could be viewed as part of this general trend. The perceived advantages of multihospital systems included improved access to capital, the potential sharing of management expertise, and cost savings from the con solidation of certain administrative functions and the aggregation of purchasing power. It was also believed that the downsizing of individual hospitals or the conversion of facilities to other missions (e.g., psychiatric care) could be more readily accomplished under the umbrella of a multihospital organization. All of these motivations have been identified by Twin Cities hospital administrators as important factors in the hospital mergers that occurred during the 1980s in their community. In addition, a motivation more closely tied to the development of the HMO market in the Twin Cities was identified by some hospital administrators.

During the mid-1 980s, HMOs Twin Cities were able to take advantage of substantial overcapacity in the Twin Cities hospital market to negotiate relatively low prices for hospital care for their members. As enrollment grew in some plans, so did the potential for these plans to shift a substantial number of admissions from one hospital to another through renegotiation of hospital contracts. Anticipating further HMO enrollment growth in the future, hospitals pursued the development of multi-hospital organizations as a means of negotiating more effectively with HMOs over prices and to position themselves to offer broader geographic coverage for HMO enrollees. The hospital organizations hoped that by offering broad geographic coverage they could secure long-term exclusive contracts with HMOs that would generate more predictable streams of patients and revenues for their facilities.

The consolidation of the hospital market in the Twin Cities continued in the 1990s when, in 1992, HealthOne and LifeSpan merged to form HealthSpan. This was the first merger that generated public debate over whether the consolidation of the hospital market in the Twin Cities had gone too far (35). The Minnesota State Attorney General's office brought suit in federal court, charging that the HealthOne/LifeSpan merger violated federal antitrust laws. It argued that because the merged organization (HealthSpan) would control 28 percent of the Twin Cities hospital market. it could exercise undue market power in negotiations with payers. The state ultimately negotiated an out-of-court settlement that required HealthSpan to freeze its revenues for 1993 and document subsequent revenue reductions.

| HMO Consolidation

Approximately the same number of HMOs existed in the Twin Cities in 1991 as in 1977. In 1977, five plans contained the great majority of HMO enrollees: Group Health, MedCenters, PHP, Share, and HMO-Minnesota (Blue Cross/Blue Shield). Group Health was the dominant plan in terms of market share. In 1991, Medica had the largest HMO market share, followed by Group Health and Medcenters. The other HMOs Twin Cities had relatively small enrollments.

In the early 1980s, some reorganization took place in the HMO market, but most of that reorganization did not have a substantial impact on overall market structure. In 1983. the St. Louis Park Medical Clinic acquired the Nicollet Medical Clinic, precipitating the incorporation of Nicollet-Eitel Health Plan into MedCenters. HMO Minnesota, the Blue Cross/Blue Shield HMO, changed its name to Blue Plus in 1988 and absorbed Coordinated Health Care HMO in the same year. Two HMOs were created in the 1980s as the result of Medicaid demonstration projects: Metropolitan Health Plan sponsored by Hennepin County and UCare sponsored by the University of Minnesota. Both, however, have attracted relatively limited numbers of enrollees. An HMO managed by Northwestern National Life Insurance Company also entered the market in the 1980s but had fewer than 20,000 enrollees by 1991.

One of the most important consolidations in the HMO market occurred when SHARE Health Plan, a group model HMO, merged with Physician Health Plan, a physician-sponsored I PA model plan. The resulting entity, renamed Medica, had

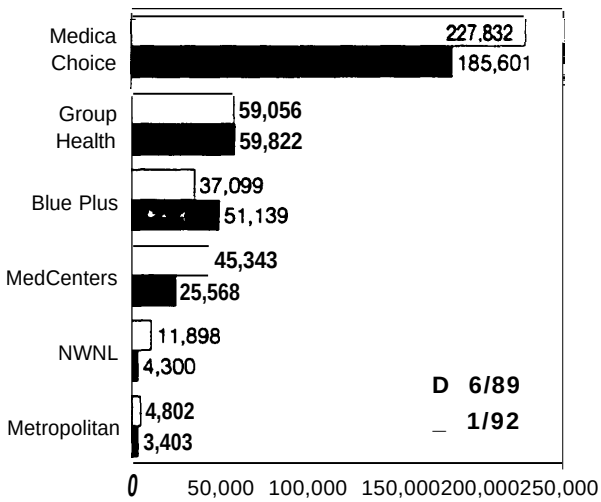
480,000 enrollees in 1991, making it the largest HMO in the community. Medica continued to offer both the group and IPA model plans separately to employers, renaming them Medica Primary and Medica Choice, respectively. The ability to offer a single employer both a group and an IPA model managed by the same entity was one of the major motivations for the merger. During the 1980s, many employers felt that biased selection into some health plans made it difficult for them to realize cost savings from offering HMOs to their employees. They believed they could avoid problems associated with biased selection by contracting with a single firm that was able to offer multiple plan options (see discussion of buyer coalitions below). The merger allowed Medica to be rsponsive to these employer demands and thereby strengthened its competitive position relative to other HMOs in the market.

While the SHARE/Physician Health Plan merger represented a major consolidation in the HMO market, prior to this merger the most significant market developments involved product diversification on the part of the HMOs and the emergence of Preferred Provider Organizations as close competitors to HMOs. Product diversification was pursued by the HMOs primarily through the development of "open-ended" (also called point-of-service) options to the traditional closed-panel HMO product and through the sponsorship of Preferred Provider Organizations. The "bopen-ended" product allowed enrollees to seek care from providers that were not part of the HMO network but, if they chose to do so, they were required to pay for a greater portion of their care '"out -of-pocket ." Premiums for these plans typically were set somewhat higher than for the standard HMO product, and some types of services were excluded from coverage. PHP was particularly agggrssive in marketing its open-ended plan and by 1992 it had enrolled 228,000 members (almost two-thirds of all enrollees) in this option (figure *4-1).*

Some HMOs also established Preferred Provider Organizations, in collaboration with insurers, so that they could offer a broader range of insurance alternatives to employers. The provider networks for these products general] y were broader than the networks offered as part of the basic HMO product. Under a PPO, enrollees typically receive more comprehensive benefit coverage with lower out-of-pocket costs, if they obtain care from the Preferred Provider Network rather than from the general provider community. The PPOs developed by HMOs offered broader provider networks to self-insured firms. Over the past few years, enrollment in self-insured plans in the Twin Cities has steadily increased, reaching almost 900,000 at the end of 1993 (12). Their PPO networks permitted HMOs to serve this market.

In addition to HMOs, sponsors of PPOs in Minnesota during the 1980s and early 1990s included Blue Cross/Blue Shield (which reconfigured its standard insurance product as a PPO), hospital systems (including Fairview and LifeSpan), and indemnity insurers (table 4-4). Hospital systems developed PPOs to reduce their dependence on HMOs for patients and as a means of developing closer ties with their physicians.

FIGURE 4–1: Enrollment in HMO Point–of–Service Plans: 1989 and 1992



SOURCE Interstudy, The *Inyrtdyufy Edge,* Excelsion, MN, 1990, 1992

TABLE 4-4: Twin Cities Based PPOs

PPO	Headquarter	Parent, owner or manager	1991 Eligibles/ enrollment
Aetna PPO	Ed ma	Aetna Health Plans	9,600
Blue Cross and Blue Shield of Minnesota	Eagan	Blue Cross and Blue Shield of Minnesota	1,058,805
Ethix-Midwest	Bloomington	Investor-owned	78,202
Group Health PPO	Minneapolis	Group Health	4,453
Medica Choice PPO	Minnetonka	Medica	54,551
NWNL PPA	St Paul	Northwestern National Life Insurance	o*
Preferred One	Minneapolis	HealthOne, Fairview and North Memorial hospitals	237,000
Prudential Plus and PruNetwork	Minneapolis	Prudential	o'
Select Care	Bloomington	LifeSpan hospitals	170,000

•Both NWNL and Prudential reported that they first began PPO enrollment on Jan 1, 1992
Enrollment Includes individuals living outside the Twin Cities metropolitan area

SOURCE Citizen's League Research, "'Minnesota Managed Care Review 1992 " Minneapolis, MN August 1992

I Recent Mergers

The consolidation of health care providers in the Twin Cities occurred in three phases. During the 1980s, the consolidation largely centered on horizontal integration of hospitals to form multi-hospital systems. During the 1980s mergers among HMOs began, but the absorption of relatively small HMOs by larger ones had little effect on the overall HMO market. The beginning of the 1990s saw a substantial shift in the scale of mergers for both hospitals and HMOs. The merger of Health One and LifeSpan was the most significant merger among hospital systems to that point and, for the first time, raised serious concerns about aggregation of market power relating to the provision of inpatient services. The merger of SHARE and PHP was the first merger of large HMOs in the Twin Cities and resulted in a substantial consolidation of enrollment in the HMO market. As it turned out, these mergers represented only the leading edge of a series of consolidations and organizational reconfiguration that fundamentally changed the nature of the health care delivery system in the Twin Cities.

The Merger of Group Health and MedCenters

Merger discussions first began between MedCenters and Group Health in 1991 in the wake of the SHARE/Physician Health Plan merger discussed above. There was a concern on the part of both organizations that they would not be able to compete effectively with Medica and Blue Cross/Blue Shield for employer contracts when employers demanded a "total replacement" product offered by a single health care organization. Neither MedCenters nor Group Health offered provider networks with the comprehensive geographic coverage that could be offered by Blue Cross/Blue Shield and Medica, and both HMOs had lost employer contracts because of this. The immediate precipitating factor for the merger, however, was the development of the Business Health Care Action Group and the Request For Proposals (RFP) that it issued in the Spring of 1992. (The development of the BHCAG is discussed in detail in the next section.) In order to offer a competitive bid, both MedCenters and Group Health believed that they needed to increase the size and geographic coverage of their provider networks. Therefore, they began to discuss the possibility of submitting a joint bid in response to the BHCAG RFP. This led naturally into discussions of a more formal merger between the two organizations.

A merger agreement was signed by MedCenters and Group Health in August 1992. The agreement created a holding company, HealthPartners,

to be governed by a board drawn from both organizations. The 17-member board consisted of 13 consumer representatives and four providers. This reflected an insistence on the part of Group Health that the merged entity maintain a governance structure dominated by consumers. HealthPartners continued to offer both HMOs as separate products with separate governing boards but developed a new joint product as part of its response to the BHCAG RFP. HealthPartners was subsequently chosen by the BHCAG as the winning bidder. At the time of the merger, HealthPartners had 40 medical clinics (24 owned and 18 under long-term contracts) and contracts with four hospitals. Most of HealthPartners enrollees receive inpatient care at FairView-Riverside Hospital and at Methodist Hospital, the hospitals that historically have provided the majority of care to Group Health and MedCenters enrollees, respectively. In 1992, the merged organizations reported about 580,000 enrollees and revenues of approximately $860 million, making HealthPartners slightly larger than Medica at that time. After the merger, Medica and HealthPartners accounted for about 90 percent of HMO enrollees in the Twin Cities (12).

In addition to the precipitating factors already mentioned, there were several other considerations on the part of both parties that supported a decision to merge. For example, during the late 1980s, MedCenters had experienced substantial discord in its relations with its major physician group. the Park-Nicollet Clinic. Relationships between the Clinic and the HMO, while greatly improved. were still somewhat unsettled when Group Health initiated merger discussions. These strained relationships made it difficult for MedCenters to respond quickly to changes in the health care market and to engage in longer-range planning efforts. Also, MedCenters suffered a decline in its enrollment beginning in the late 1990s that was linked to price competition and limitations in the geogaphical coverage of its provider network, and this made the board of MedCenters receptive to examining a wide range of alternatives for the health plan.

From Group Health's standpoint, the merger offered several advantages in addition to those already described. The strength of Group Health's physician group was in primary care, and MedCenters' brought a strong multispecialty group practice to the program. Affiliation with MedCenters' specialty physicians was seen as an asset in enhancing Group Health's image in the community as a provider of quality medical services. Also, while Group Health had strong penetration of public employee groups, MedCenters' enroillees were drawn primarily from the private sector, with a substantial number of enrollees from firms that participated in the BHCAG. Thus, from both an employer group and a physician network standpoint, the merger offered advantages to Group Health.

The Merger of HealthPartners and Ramsey HealthCare

The creation of HealthPartners set the stage for the merger of that organization and Ramsey HealthCare (48). The merger of MedCenters and Group Health caused a reassessment of hospital relationships for the combined entity. When HealthPartners was awarded the BHCAG contract, it became necessary for HealthPartners to develop new hospital relationships relatively quickly in order to be able to deliver services within the premium offered to the BHCAG. HealthPartners issued an RFP to all hospitals in the Twin Cities asking for proposals for new long-term relationships with the health plan. The intent of these new relationships was to develop closer collaboration between the health plan and the hospitals used by its members, while at the same time holding increases in hospital expenditures to zero in the near term. This process stimulated initial discussions between HealthPartners and Ramsey HealthCare in August of 1993 that converged very quickly on the possibility of merger of the two organizations. A letter of intent to merge was signed on September 15, with the formal merger completed on December 2, 1993. Under the terms of the merger, the two nonprofit organizations com-

bined their assets. HealthPartners assumed management control of the three different components of Ramsey HealthCare: the hospital with 325 staffed (435 licensed) beds, a 200-member multispecialty physician group (the Ramsey Clinic), and an educational and research unit (the Ramsey Foundation). Since Ramsey HealthCare was created as a public benefit corporation by state legislation in 1986, the merger cannot actually be completed without action by the legislature that would change the status of Ramsey HealthCare. Legislation will be introduced in 1994 to accomplish this.

From the perspective of Ramsey HealthCare, the merger with HealthPartners offered several advantages. As a result of its own long-range planning process, Ramsey HealthCare had concluded that the Twin Cities' health care market would soon be dominated by a very small number of provider organizations and purchasing groups. As an independent organization, Ramsey HealthCare believed that a merger with an existing HMO would be more desirable than an affiliation with a hospital group that was attempting to form an ISN, because the HMO would possess greater experience and expertise in performing the functions of an ISN. Ramsey HealthCare believed that it was well-positioned to be a partner in such a merger. It had generated operating surpluses over the past few years, was in the process of renovating and adding to its existing facility, was capable of providing primary and specialty care onsite, and possessed substantial strength in the areas of trauma and bum care. A merger with HealthPartners promised a continued patient flow to support Ramsey HealthCare's teaching mission and was expected to help the Ramsey Clinic in attracting and retaining physicians.

HealthPartners found the prospect of a merger with Ramsey HealthCare to be attractive for several reasons. Foremost was the belief that to achieve savings on inpatient cost in the future it would need to develop a much closer management relationship with hospitals. A merger with Ramsey HealthCare offered the potential for better integration of inpatient and outpatient services received by enrollees living in the east metropolitan area and therefore greater cost control in the long run. And, to maintain geographic coverage of the metropolitan area with respect to inpatient care, HealthPartners needed a linkage with a hospital or set of hospitals in the eastern metropolitan area. The merger with Ramsey HealthCare filled this need.

The Merger of HealthSpan and Medica

The merger of HealthSpan and Medica, announced on December 8, 1993, was the first merger in the Twin Cities between a hospital system and a health plan. The assets of the existing organization were merged under a new entity, Allina, that was itself organized as three divisions: delivery system (including hospitals, long-term care facilities, and home health care agencies), physicians (employees of the hospital system or contracting physician group practices), and managed care (insurance and managed care components, including integrated service networks that will be formed in the future). There are approximately 750,000 members in existing Allina health plans (550,000 in Medica products and 200,000 in SelectCare, a PPO sponsored by HealthSpan). The combined annual revenues of Medica and HealthSpan are $8 billion, and the organizations together employ about 16,000 individuals. HealthSpan owns or manages 17 hospitals in Minnesota and Wisconsin as well as 45 clinics. It has 3,200 affiliated physicians. Medica contracts with 5,000 physicians and is managed by United Health Care Corporation under a long-term management contract. (The merger will necessitate a renegotiation of the terms of this contract.) The new Allina will be the largest nonprofit firm in Minnesota and the eighth largest firm overall (61). To manage Allina, the existing boards of Medica and HealthSpan will be dissolved and a new board will be created.

The merger partners point to the MinnesotaCare legislation as the motivation for the merger. Allina will form the basis for an Integrated Service Network (ISN) that will meet the requirements of an integrated health care delivery system under the new legislation. It is expected that some reduction in the number of hospital beds will occur un-

der Allina, and there will be consolidation of other services as well. Allina also plans to create a health plan option it hopes members of the Business Health Care Action Group will offer to their employees as an alternative to HealthPartners.

I Ongoing Developments

Obviously, the Twin Cities' health care market is in a period of very rapid change with the ultimate configuration of the delivery system still open to debate. Most of the actors in this system believe there will be three to four large organizations, formed through merger or contractual aflliation, that will dominate health care delivery in the Twin Cities. The ultimate closure or conversion of four or five more hospitals is anticipated with a reduction in the number of acute inpatient beds of as much as 50 percent. The current trend involving the purchase of physician practices by hospital systems and HMOs is expected to continue; already, there are very few independent physician practices in the eastern metropolitan area.

While there is agreement among key actors in the Twin Cities' market about the general form that the community's health care delivery system will take in the future, there are several ongoing developments that will have an important impact on this form. These include the conditions of contractual arrangements and other agreements among provider groups, the definition of the University Hospital and Clinics' role in the new system, and the strategies adopted by Blue Cross/Blue Shield.

Contractual Relations Among Provider Organizations

In theory, ISNs will be fully integrated systems that will be able to rationalize the use of health care resources and increase the efficiency with which care is delivered through close collaboration among participating providers. The necessity to compete for patients will provide a stimulus for the coordination of resources to achieve system efficiencies. Presumably, provider incomes will be closely tied to the success of their ISNs, so they will have a strong motivation to work collaboratively to keep costs down while at the same time providing a product that is responsive to the desires of consumers. Again, in theory, competitive incentives would be strongest if ISNs offered consumers and payers a clear choice among provider systems. Then providers that collaborated under ISN organizational umbrellas would benefit financially if their organizations prospered relative to competitors.

In general, the development of the Twin Cities market to date has not resulted in close exclusive ties between provider groups and health care organizations. Even HealthPartners, which may at this time be the organization in the Twin Cities that most closely approaches this model, does not have exclusive contractual arrangements with some of its key providers. For instance, the Park-Nicollet Clinic, HealthPartners' major provider group in the western metropolitan area, has recently announced a merger of assets with Methodist Hospital, the major supplier of inpatient care to HealthPartners in the same area of the Twin Cities, to form Minnesota Health Systems. One of the purposes of the merger is the development of an ISN under MinnesotaCare. Minnesota Health Systems is seeking an insurance partner for this purpose, with Blue Cross/Blue Shield being the logical candidate. Thus, HealthPartners faces the possibility of being in direct competition for enrollees in some markets with a major component of its delivery system. Even if a non-compete clause were negotiated in its contracts with Minnesota Health System providers, it could be difficult for HealthPartners to establish sufficient organizational loyalty on the part of providers to achieve delivery system rationalization under these circumstances.

A second example is provided by relationships between hospital systems and emerging ISNs in the Twin Cities. Most hospitals expect to continue to sell services to a range of purchasers regardless of their own sponsorship or ownership positions in ISNs. For example, Allina, which owns hospitals in the northern suburbs, expects to continue to provide inpatient services to HealthPartners and B1ue Cross/Blue Shield enrollees living in this area. Fairview Hospital Systems, which has en-

tered into a collaborative arrangement with Blue Cross/Blue Shield and the University Hospital and Clinics to form an ISN, expects to continue to provide inpatient care to HealthPartners' enrollees.

In short, an interlocking web of contractual relationships among different provider organizations continues to exist below the overlay of ISN formation, and these relationships often are among entities that will presumably compete with each other through their affiliations with or ownership of ISNs. It is not clear at this time how or whether these relationships will be modified over time to link specific groups of providers more closely to specific ISNs. It is also not clear how they might affect the process of health care rationalization through competition among large integrated health care delivery systems as envisioned by the legislative architects of MinnesotaCare.

Blue Cross/Blue Shield

During the 1970s, Blue Cross and Blue Shield of Minnesota (BCBSM) enrolled over 70 percent of the private health insurance market in the Twin Cities. During the early 1980s, as HMOs gained market share and reportedly attracted healthier enrollees, BCBSM premium increases were often substantial. Despite this, the company lost over $10 million during 1986 and nearly $20 million during 1987. These operating losses caused BCBSM to completely restructure its health insurance product lines. A PPO (Blue Cross and Blue Shield of Minnesota) was formed that had over one million enrollees by 1990. A network model HMO (Blue Plus), featuring an open-ended option, evolved from HMO Minnesota, a Blue Cross/Blue Shield-sponsored HMO. This program grew slowly during the early 1980s, but by 1990 had 70,000 enrollees. An indemnity health insurance plan (Aware Gold), was developed that was very similar to the traditional BCBSM program but offered a comprehensive benefit package competitive with the HMO products and devoted a great deal of effort to cost controls. Aware Gold was very popular in the early 1980s because it gave consumers a generous benefit package and free choice of provider. By 1989. there were over 600,000 enrollees in this plan.

To compete in the current Twin Cities health care market, BCBSM has developed a new managed care strategy with three components (47). The first and most prominent is an extensive ongoing analysis of small area variation in physician resource utilization. While this approach reportedly has been effective in changing the practice styles of some physicians. it does not provide a major competitive advantage for BCBSM. Any savings resulting from changes in physician resource use accrues to other health plans as well as BCBSM. The second component focuses on provider payment systems. Here the main thrust is to link payment to severity of illness, institute risk-sharing agreements with groups of physicians, and provide extra payments for preventive services. Again, the gains from this strategy are often shared by competing plans (e.g., prevention) and BCBSM patients are often a relatively small proportion of a physician's practice, reducing the impact of these interventions. The final component consists of a series of initiatives relating to the management of resource use (e.g., use of primary care physicians, gatekeepers. designation of referral specialists, and drug formularies).

In addition to these strategies, BCBSM intends to pursue ISN development. in May BCBSM announced a partnership with Affiliated Medical Centers in Willmar for the creation of an ISN to serve a 14-county area in southwestern Minnesota. In June it indicated that it would participate in a partnership with Park-Nicollet Medical Center and Methodist Hospital to form an ISN in the west metropolitan area. In July it announced a partnership with Aspen Medical Group to lay the groundwork for an ISN to serve residents in the Twin Cities' metropolitan area. This ISN would be developed in cooperation with Fairview Health Systems and University of Minnesota Hospital and Clinics.

BCBSM also intends to create a package of services that can be marketed to hospitals and medical groups that are developing ISNs. These services will include actuarial services, claims

management, payment systems, information systems, quality assurance programs, utilization review systems, and some clinical guidelines. This package, or parts of it, will be available as a service component provided under subcontract to ISNs or through partnerships to establish ISNs.

University of Minnesota Hospital and Clinics

In a competitive health care market an obvious issue is: can, or should, a university hospital and affiliated clinics compete effectively for patients? In the Twin Cities, most actors acknowledge that all would benefit from the continued presence of a strong medical school that can provide high-quality training for new physicians. However, there is less consensus concerning the appropriate role for the university of Minnesota hospital and clinics in the evolving system. Some contend that the education and research components of the university's mission seriously limit its ability to compete with more service-oriented community hospitals for the patients of large health plans. Others argue that the university may be able to successfully compete for tertiary care patients, but will not be able to maintain a broad enough patient base to sustain excellence in clinical training programs. Under these circumstances, one alternative is for the University Hospital to be purchased by or merged with one of the existing large health care organizations under an agreement to continue to operate it as a university teaching and research institution. The acquiring organization could then concentrate the patients needed for that role at the University Hospital and phase out duplicate services in other parts of its system. Acquiring the University Hospital could result in a competitive advantage for the purchaser because of the prestige of the university system. However, it might be very difficult to preserve the role of the hospital, as envisioned by the university, when control is given over to others.

An alternative strategy which the University Hospital appears to be pursuing is to be an aggressive competitor in the evolving system. To do so, the hospital has formed a corporate structure that brings the clinical faculty and hospital together to contract with ISNs and negotiate with health insurance plans. This organization, the University of Minnesota Health System, has the capacity to develop health services programs, create new health plans, and bid on contracts to provide services to employers or health plans. As noted previously, the university has chosen to become a partner with Blue Cross/Blue Shield and Fairview Health System in the formation of an ISN. The University Hospital will be the secondary and tertiary care facility in this system. It hopes that by participating in this ISN it will be able to assure a continued flow of patients for its teaching and research programs. The danger in this approach is that providers affiliated with competing organizations could restrict referrals of patients to university physicians and withdraw from participation in its teaching programs. These losses could outweigh the gains from the ISN partnership. The university has responded to this concern by remaining available as a participant in other ISNs. According to the president of the University of Minnesota Health System, "Not to join [an ISN] could mean being left without a patient base in the competitive Minnesota health care environment. At the same time, we won't be an exclusive partner. Our mission makes it imperative that we be available to any Minnesotan who needs us." (63)

Development and Role of Purchasing Coalitions

5

As was previously discussed, many employers in the Twin Cities have begun to restructure the way in which they purchase health care (60). Their actions have had a major influence on health plans and have contributed to the ongoing reconfiguration of the health care delivery system in the Twin Cities. In this chapter, several of these efforts are addressed. First, the development of the Business Health Care Action Group (BHCAG), a consortium of major employers in the Twin Cities, and the implementation of its purchasing approach are discussed. Second, the ● 'managed competition" approach used by the State of Minnesota Group Insurance Program to purchase health care for 144,000 individuals in Minnesota is described. This program has been cited as one example of how a "health alliance" might function under the Clinton Administration's health care reform proposal. Finally, two approaches--one public and one private--to the formation of insurance pools for health care purchasing are examined.

BUSINESS HEALTH CARE ACTION GROUP

Formation

During 1988, several large private-sector firms headquartered in Minneapolis/St. Paul formed a coalition called the Business Health Care Action Group to lobby for health care reform. During the fall of 1991, the coalition decided to create a health plan for their employees and dependents. All of the firms were self-insured, and they ranged in size from 8,000 to 200,000 employees nationwide. BHCAG contracted with a benefit consulting firm to develop a request for proposals (RFP) that could be circulated to potential provider groups and third-party administrators. The resultant RFP was a very detailed document in which potential bid-

rs were asked to identify the specific sources of high-cost, complex technological services such as MRIs, lithotripsy, and hemodialysis, and to specify the volume of services provided by those sources during the past year. Bidders were also requested to submit the credentials of the physicians providing these services along with any available information on clinical outcomes. The benefit package included in the RFP was based on the existing programs offered by the sponsoring firms and, consequently, included an extensive array of services consistent with the traditionally generous health care benefits of these firms.

Six health care provider groups bid on the BHCAG request for proposals. These firms included two large HMOs (MedCenters Health Plan and Group Health, Inc.) that joined together to respond to the RFP, Medica health plan (a large independent practice association HMO), Blue Cross and Blue Shield of Minnesota, and Preferred One (a hospital-owned PPO). The MedCenters/Group Health coalition (HealthPartners) was the successful bidder, although at least one other bidder offered the services at a lower price. However, Health Partners and its providers were judged to be In a position to provide services that were more appropriate and accessible while still assuring that complex technological procedures were appropriately limited to settings with highly qualified personnel, extensive experience, and sufficient volume to assure quality of care.

The network offered by Health Partners includes approximately 1,000 primary care providers practicing in over 175 primary care clinic sites. The network's primary care physicians are supported by more than 4,000 specialty physicians, nearly 30 community hospitals and specialty hospital "centers of excel lence." When enrollees join the pian, they must select a primary care clinic within the network. However, each member of the family may choose his or her own clinic and can choose a physician from among those practicing at the selected clinic. The clinics have different policies concerning access to specialty care. Most c1inics require that a patient receive a referral by a primary care physician before making an appointment with a specialist. If enrollees seek care outside the network, they have a lower level of benefit coverage and must submit claims forms.

| Implementation

At the firm level, the Health Partners product is being offered as the basic self-insured plan. Most employers offer employees an option to enroll in this plan or select one of the other plans offered by their employer. Currently, employers are offering their employees two or three competing plans, but it is generally assumed that these plans will be replaced over time with new health plans that contract with BHCAG. In most cases, the employer's contribution to an employee's health plan is 1imited to the contribution that would be made to the BHCAG plan.

During the first year of operation, 10 of the 14 coalition members offered the BHCAG health plan. During 1993, an additional eight employers joined the coalition, bringing total membership to 22 companies. While interest was reported to be high, many of the firms had employee and union contractual agreements and commitments to other providers that made it difficult to shift to the BHCAG plan. During 1992, the first year of' the Health Partners' contract, 55,000 employees enrolled, with about 70 percent of these being previous MedCenters or Group Health members. It is anticipated that enrollment will grow to 85,000 enrollees during 1994, representing about 30 to 35 percent of the eligible employees.

Although the BHCAG plan is modeled on the HMO concept, it is not currently operating on a c:apitation basis. Instead, providers are paid on a fee-for-service basis. Each employer has a contract with the providers. To do otherwise would violate the self-insured provisions of ERISA and would place the program under the supervision of the state insurance commissioner. This reportedly would limit the flexibility of employers in structuring their benefit package. Currently, there is no standard fee schedule. Rather, fees are negotiated, often resulting in discounts of 20 to 30 percent. BHCAG is experimenting with severity measures to adjust fees, and is attempting to implement the Johns Hopkins Ambulatory Care Groups method-

ology for selected cases. Health Partners is paid a set fee (currently 8 percent of total expenditures) to administer the program. BHCAG employers estimate that the plan reduced their expected health care costs for the enrolled employees by about 10 percent during 1993 compared with similar coverage available through competing managed care products.

Programs for Quality Improvement

The BHCAG quality improvement program consists of both clinical guidelines focused on cost-effective modalities and clinical outcomes assessment programs. Eight of the provider medical groups have volunteered to serve as pilot sites for testing and implementing guidelines. Sixteen guideline topics were selected for the initial program, and installation of these guidelines is now under way at pilot medical groups. In total, 18 medical groups will participate in guideline development and implementation, representing about 88 percent of the volume of care delivered by participating providers in the BHCAG health plan.

Six clinical indicators have been identified to begin benchmarking quality across the BHCAG provider network (table 5-1). Joint purchaser/provider assessment of new and emerging technologies is another key quality control initiative. During 1993, a joint purchaser/provider group was established to review the effectiveness of certain medical technologies. The scientific assessment of these technologies will be linked to benefit coverage decisions. Topics reviewed to date include: cochlear (ear) implants, bone marrow rescue with chemotherapy for breast cancer, laser surgery to correct vision problems, pancreas transplants, chest compression devices for cystic fibrosis, immune globulin for neurological conditions, lung transplantation, and PSA for prostate cancer screening. Development of a prototype automated medical record will be completed by the end of 1993.

Implications

The employers who formed BHCAG feel that knowledgeable purchasing groups are the key to restructuring the health care system. To that end, they believe BHCAG has the responsibility to develop quality assurance programs, structure health plans, and use its purchasing power to create competing cost-effective provider systems. From this perspective, they view BHCAG as a community service as well as a service to the member firms. Consequently, although BHCAG plans to invest at least $30 million in the development of practice guidelines, these guidelines will be available at no cost to non-BHCAG health care providers as well as competing health insurance plans.

According to BHCAG'S annual report, the average cost to employees for single coverage is $1,200, while family coverage is $2.500. BHCAG estimates its savings in the first year to be about 11 percent. However, it cautions that approximately 2 percent of these savings are due to higher copayments and another 2 percent are due to state taxes and fees not payable under self-funded plans.

BHCAG has expressed strong support for competitive markets for health services. However, its actions helped precipitate the merger of two large HMOs—MedCenters and Group Health. In response to criticisms that it has not promoted a competitive health plan market in the Twin Cities, BHCAG has stated its intention to offer other products in the near future to member firms in competition with the current health plan--HealthPartners. These products presumably will offer more choices with respect to benefit coverage, providers, and coinsurance and deductible provisions.

THE STATE OF MINNESOTA GROUP INSURANCE PROGRAM

The State of Minnesota Group Insurance Program (or State of Minnesota Employees Health Benefit Program) covers 57,000 employees. Along with dependents and retirees, the number of lives covered by the program is approximately 144,000, making it the largest employer-based health insurance group in the state. State employees work in every county in Minnesota and,

TABLE 5-1: BHCAG Clinical Indicators for Quality Indicators

Breast cancer
% of women with mammogram ordered
% of women aged 50-74 with mammogram
% of newly diagnosed cases stage I or less
% of diagnosed cases stage II or less
Total hlp replacement
Measure of functional status before and after surgery
Childbirth
Vaginal birth after C-section rate
C-section rate
% of deliveries that occur at <37 weeks
Heart disease
30-day mortality following Coronary Artery Bypass Graft
Childhood infectious disease
% of children aged 27 months who have had lmmunizations recommended by the Minnesota Department of Health
Asthma in children
Rate of hospital admssion for asthmatic children aged 0-18 years

SOURCE Business Health Care Action Group, *7993 Annua/Repor,* Mmnetonka, MN, 1993

therefore, the state's health benefits program must serve the needs of people in urban and rural areas, and in areas with and without HMOs.

| Eligibility

Employees and their dependents are eligible to enroll. However, spouses of eligible employees who can participate in their own plan, but who have received cash or credit not to participate, are ineligible for state health benefits. There is a 28-day wait for eligibility from the point of hiring. Upon becoming eligible, the employee has an open enrollment choice of plans. Moving to an area where the employee's plan is not available is the only situation in which the employee is allowed to change plans between scheduled annual open enrollment periods. If the employee moves to a county where the present plan is offered but where the employer's premium contribution is different, the contribution is frozen at the previous level for the rest of the year.

| History -

The original health plan offered to state employees before the advent of HMOs, and the only plan available to employees statewide, was a fee-for-service, Blue Cross and Blue Shield of Minnesota product. During most of the 1980s, this plan enrolled half or more of the State of Minnesota group. By state law, any HMO that wished to be offered to state employees was allowed into the state employees' program. As a result, the state offered a large number of HMOs--at times as many as 10. Under the same law, the state's contribution toward the cost of health insurance was tied to the fee-for-service premium--100 percent contribution for employee coverage and 90 percent for dependent coverage. Employees did not receive a premium rebate if they picked an HMO that cost less than the fee-for-service plan, but they had to pay the difference if they picked a more expensive plan. HMO rates tended to cluster near the fee-for-service rate. The rates submitted by the HMOs and Blue Cross/Blue Shield were not examined criticall y by the state. In other words, the State of Minnesota was a fairly typical large employer offering multiple health plans.

During 1985 the state consolidated its HMO offerings and changed the basis for determining its premium contribution. The number of HMOs participating in the state employee's program fell from a high of 10 to 6 at the beginning of 1990. This reduction occurred for a variety of reasons, including: the 1985 repeal of the law requiring an open-door policy toward HMOs; HMO attrition and mergers; rejection of applications to join the plan submitted by HMOs that did not meet the state's criteria and objectives; departure of an HMO that could not maintain reasonable premium rates; and, an insurer or HMOs no longer being allowed to offer more than one option to employees or to add plans at its own initiative. Offering fewer HMOs resulted in larger market shares for the remaining plans and provided a chance for them to gain even more enrollees by offering an attractive, well-managed plan. Offering fewer HMOs also diminished the prospects for biased selection and eliminated the possibility that health

plans could add options to undercut a competitor's position and/or to ● *shore up" an existing plan.

The most significant reform during this period was changing the formula for determining the employer contribution. The state, through collective bargaining with 10 unions that represent state employees, replaced the formula based on the fee-for-service plan with one based on the low-cost carrier (health plan) serving a given county. Under the new formula, which was adopted in October 1985 for the 1986 contract year, the state continued to pay 100 percent of the premium for employee coverage and 90 percent for dependent coverage, but the contribution was based on the low-cost carrier in each county rather than the fee-for-service plan premium. To be eligible to be the low-cost carrier, health plans were required to serve the entire county.

In the first few years after the low-cost carrier formula was introduced (from 1986 through 1988), the fee-for-service plan continued to have the lowest rate and remained the basis for the employer contribution. (From 1985 to 1988, the state continued to contract with an outside vendor for its computerized payroll systems, and this vendor had difficulty implementing the low-cost formula. For that reason, HMOs may not have fully reacted to the low-cost carrier program until the computer system was changed in 1989.) Over time, however, the HMOs were able to offer lower rates despite offering better coverage. In 1989, seven different HMOs were low-cost carriers in at least some part of the state. (Plans submit one statewide premium, but not all plans are offered in all count ies, so d ifferent plans are the low-cost carrier for different counties.)

Introduction of the low-cost carrier formula led to striking changes in the pattern of health plan premiums, as shown in tables 5-2, 5-3, and 5-4. HMO premium rates in 1988 (the last year before the formula began to have an impact) still tended to cluster around the fee-for-service rate. Premiums for the four largest HMOs (Group Health, Share, MedCenters, and Physicians Health Plan) averaged 112 percent of the low-cost fee-for-service plan sponsored by BCBSM. Table 5-5 shows the trend in average total premiums (the portion paid by both the employer and employee) for single and family contracts for all state employees (not just Twin Cities' employees) from 1980 to 1994. These average premiums reflect not only changes in premiums from year to year, but also changes in the health plans' market shares. The transition period to the low-cost program (1985-1988) was chaotic, characterized by wild swings in premiums. During much of this period, the premium growth rate was above the national average. Since 1989, however, the percentage increase in total expenditures on health insurance by the state and its employees has fallen steadily to less than 3 percent in the period 1993 to 1994 and has been below the national average (62).

The low-cost carrier formula created a substantial incentive for plans to submit the lowest possible rate regardless of the fee-for-service rate. Holding the premiums of other plans constant, each health plan knows that a $1.00 increase in its premium will *reduce* the employee's out-of-pocket premium differential between itself and higher cost plans by $1.00 and *increase* the premium differential between itself and lower cost plans by $1.00. The effect of both types of changes resulting from a premium increase will be to decrease the health plan's market share. The new formula enhances regional competition among HMOs even if a plan is not the low-cost carrier in the Twin Cities, it may be low-cost in another area.

Since 1989 Group Health, a staff model HMO, has been the low-cost carrier in every county in which it was offered with family premiums sometimes $1,500 per year below those of competing plans. In contrast, independent practice association-model HMOs with open networks, and plans that allow out-of-network coverage, have had the highest premium rates. This pattern was not evident until the low-cost carrier formula took effect. Over the period 1988 to 1994 it is interesting to note the experience of the two largest plans: BCBSM, which evolved into the "State Health Plan" option, and Group Health. The BCBSM plan typically was the most expensive or second most expensive plan during that period, while Group Health was consistently the lowest cost

TABLE 5-2: Annual Premium For Family Health Coverage in Minnesota State Program, 1986-94

	1986	1987	% Increase	1988	% Increase	1989	% Increase	1890	% Increase	1991	% Increase	1992	% increase	1993	90 Increase	1994	% Increase
Group Health[a]	$2118	$2173	26%	$2315	65%	$2662	15 o%	$3050	14 6%	$3492	145%	$3715	64%	$3919	55%	$4205	7 3%
First Plan HMO[b]	2008	2059	25	2228	82	2759	238	3182	153	3822	201	4257	114	4450	4 5	4735	6 4
Share[b]	2142	2010	-62	2394	191	2848	190	3273	149	3665	120	3891	62	4274	9 8	4290	04
Central MN Group Health[b]	2361	1990	-157	2293	152	3031	322	3343	103	3834	147	—	—	—	—	—	—
MedCenters Health Plan[b]	2142	2207	30	2363	70	2834	191	3655	290	4087	118	4537	110	4603	15	5127	114
HMO Gold[c]	—	—	—	24(X)	—	3241	350	—	—	—	—	—	—	—	—	—	—
Physicians Health Plan[d]	2309	2076	-101	2481	195	3398	370	3909	150	4405	127	4790	87	5422	132	5497	1 4
Mayo Health Plan[e]	—	—	—	2397	—	3655	525	—	—	—	—	—	—	—	—	—	—
Blue Cross/Blue Shield[f]	1998	1908	-45	2128	115	3461	62.6	—	—	—	—	—	—	—	—	—	—
State Health Plan[g]	—	—	—	—	—	—	—	4037	—	4263	56	4477	50	4710	52	4759	10

a staff-model health maintenance organization (HMO)

b network-model HMO

c network-model HMO with out-of-network coverage

d independent practice association (I PA) with out-of-network coverage

e IPA-model HMO

f fee-for-service plan

9 preferred provider organization with out-of-network coverage

KEY — indicates that a plan was not offered

SOURCE: J Klein, State Employee Insurance Group Program Manager, Department of Employee Relations, State of Minnesota, Minneapolis, MN, personal communication, 1994

TABLE 5-3: Seven–County Metropolitan–Area Yearly Enrollment and Out–of–Pocket Premiums State Employees, Single Coverage Health Plans

Health Plan	988	989	990	99	992	993
State Health Plan	3,259	2,114	1,050	1,040	**1,079**	1,201
% of total	42.53%	23 49%	12,0170	11,97'?40	12.19%	13 65%
premium	$0	$40.06	$4676	$39,72	$4016	$4188
Group Health Inc	1,894	3,320	**3,900**	3,936	4,178	4180
% of total	24 72%	36.89%	44.59%	45.31 %	47 20%	47 51%
premium	$048	$0	$0	$0	$0	$0
Medica Choice	1,082	1,391	2,006	1,997	1,879	1,653
% of total	14.1270	15 46%	22.94%	22.99?4.	21 .23%	18 79%
premium	$2.22	$19.58	$22.88	$24.10	$2898	$4248
MedCenters	586	1,022	990	946	893	917
% of total	7.65%	11,3670	11.327.	10.89%	10.09%	10 42%
premium	$0	$2.92	$19.08	$18.70	$2668	$2200
Medica Primary	290	722	800	767	823	848
% of total	3.78%	8.02%	9.15%	8.83%	9.30%	9 64%
premium	$318	$218	$2.78	$0.54	$0.28	$580
Coordinated Health Care	114					
% of total	1 49%					
premium	$4.28					
HMO Gold	437	431				
% of total	5.70%	4,79%				
premium	$428	$2486				
Total	7,662	9,000	8,746	8,686	8,852	8,799
% of total	100%	100%'0	100%	100'XO	10070	1 00%

SOURCE J Klein State Employee Insurance Group Program Manager Department of Employee Relations, State of Minnesota Minneapolis, MN personal communication **1994**

plan. Group Health's market share rose from 18.7 percent for employee contracts (18.7 percent for family contracts) to 36.3 percent for employee contracts (29.5 percent for family contracts) from 1988 to 1994, while BCBSM's market share fell over the same period from 56.0 percent for both single and family contracts to 43.9 percent (50.4 percent for family contracts).

Feldman and Dowd evaluated the State of Minnesota's low-cost carrier formula by simulating the expenditures that. would have occured if the plan switching had not taken place and enrollment by plan had remained constant. They found that health plan switching saved the state employees $3.8 million dollars in 1993 alone (24).[3]

Evolution of the Fee-For-Service Plan

After the low-cost carrier system was installed, the BCBSM plan incurred a $9 million deficit and announced it would no longer offer the high-coverage option. Several options were considered, including limiting open enrollment to once every three years to discourage "hit and run" utilization,

[3]The authors caution that their estimate does not consider how premiums may have changed as a result of the reforms to the state employee program and, if plan competition increased, maybe too small. In addition, they note that the low-cost plans may have enjoyed favorable selection compared with the high-cost plans, m which case their estimate would be too large because it would include favorable selection as well as efficiency.

TABLE 5-4: Seven–County Metropolitan–Area Yearly Enrollment and Out–of–Pocket Premiums
State Employees, Family Coverage Health Plans

Health Plan	1988	1989	1990	1991	1992	1993
State Health Plan	4,452	2,757	1,526	1,618	1,733	1,957
% of total	41.8870	23.60%	13.81%	1 4,47%	1 5.37%	17.1 o%
premium	$9.96	$79.82	$97.28	$81.58	$81.90	$85.30
Group Health Inc	3,064	4,837	5,576	6,798	6,020	6,221
% of total	28.25%	41 .41%	50.46%	51 .84%	53,39°A	54.37%
premium	$25.52	$13.18	$15,10	$17.32	$18.42	$19.44
Medica Choice	1,284	1,122	1,669	1,538	1,384	1,113
% of total	11 .84%	9.60%	15,10%	1 3,75%	12.27%	9.73%
premium	$3940	$74.62	$86.62	$93.44	$107.98	$144.70
MedCenters	665	1,427	1,284	1,267	1,170	1,210
% of total	6.12%	12.22%	11 .62°A	11.33%	10.38%	10.5770
premium	$29.58	$27.54	$65.56	$66.94	$86.92	$76.42
Medica Primary	384	813	996	963	968	942
% of total	3.54%	6.96%	9.01%	8.61%	8.59%	8.23%
premium	$32.12	$28.72	$33.64	$31.80	$33.08	$49,02
Coordinated Health Care	190					
% of total	1 ,75%					
premium	$27.66					
HMO Gold	717	726				
% of total	6 581%0	6.21%				
premium	$32.66	$6146				
Total	10,846	11,682	11,051	11,184	11,275	11,443
% of total	100'%0	100%	100'%0	100%	10070	100%

SOURCE J Klein State Employee Insurance Group Program Manager, Department of Employee Relations, Stateof Minnesota, Minneapolis, MN, personal communication **1994**

dramatic increases in the plan's deductibles, gatekeeper systems and conversion of the fee-for-service plan to a preferred provider organization (PPO). The state felt that three-year "lock-ins" would decrease price competition among plans and the unions were not amenable to a "gatekeeper" system at that time. Large deductibles, on the other hand, had the potential to affect risk selection among the health plans. Ultimately, the state chose to replace the fee-for-service plan with a preferred provider organization. The specifications for the fee-for-service plan were revised according] y and the plan was put out for competitive bids. Because the plan had to be a PPO and cover providers statewide, BCESM was the likely choice and, in fact, was awarded the contract.

In 1994, further changes were made to the PPO and IPA plans (the State Health Plan and Medica Choice Select, respectively). Medica Choice Select was experiencing rapid premium increases relative to the other plans and responded with the installation of a gatekeeper system. The State Health Plan, fearing adverse selection, also installed a gatekeeper system. The effect of those changes was to hold the premiums virtually constant for the State Health Plan and the products offered by Medica. The family coverage premiums for Medica Choice (renamed Medicare Premier) and the State Health plan increased 1.0 and 1.4 percent, respectively.

Managing Open Enrollment

In February of each year, the state assembles information for the health plans, which it mails to the plans in March. This information includes full specifications for proposals from the health plans. In late April or early May, the plans submit their

TABLE 5-5: Average Premium* and Percentage Change in Premiums for Minnesota State Employees: 1980-1994

Year	Average premium for single coverage	Average premium for family coverage
1980	$ 37.93'	$96.45
1981	45.62	110.23
1982	54.21	130,79
1983	60.32	140,51
1984	68.32	156.67
1985	7276	17019
1986	73,31	171,71
1987	71.06	165,90
1988	78.37	186,03
1989	11146	262.99
1990	126.67	304.34
1991	138,82	333.04
1992	14758	352.81
1993	156.21	372.33
1994	160.36	38347

Year	Percent change in average premium for single coverage		Percent change in average premium for family coverage	
1980-81	2026		1428	
1981-82	1883		1866	
1982-83	1129		744	
1983-84	1326		11.50	
1984-85	650		8.63.	
1985-86	**0.75**		0.89	
1986-87	**-3.07**		-3.39	
1987-88	**10.28**	**12.54'"**	12.13	12.75"'
1988-89	**42.22**		41,37	
1989-90	1365		1572	
1990-91	9.59		943	
1991-92	631		5.94	
1992-93	5.85		5.53	
1993-94	2.66		2.99	

*Includes both the employer- and employee-paid portion of the premium

** Average over four years

SOURCE J Klein State Employee Insurance Group Program Manager, Department of Employee Relations, Stale of Minnesota, Minneapolis. MN, personal communication, 1994

proposals in two parts during meetings with the state. The first part lists participating providers along with the capacity of each provider. The health plans inform the state whether their networks are expanding or contracting. Plans have to indicate not only their participating providers, but also which providers are accepting new patients. Complaints registered by employees assist the state in determining if there are capacity problems with particular provider groups. In the past, there have been problems with providers not accepting new patients from particular health plans. A meeting is then held where the state entertains suggestions from the plans for plan design changes.

Rate requests submitted by health plans must be supported by demographic information on the state group and special categories of early retirees, the disabled, and COBRA continuations as well as key assumptions and methods used to project utilization and price trends. In evaluating the rate information, the state has found it necessary to develop a format to frame the discussion. The state's actuaries provide corridors for expected trends in various factors in a cost "grid" format of inflation rates, cost per service, and number of services. When this format was first instituted, deficiencies in HMO data systems made it difficult for them to comply. Now, however, the state describes the process as approaching a "partnership." During the process of rate negotiation, each plan remains unaware of the other plans' submitted prices. The state uses an independent actuary to help evaluate the proposed premiums, and premiums are finalized each year by June 30.

Collective Bargaining Considerations

It remains important for employee and union perceptions that a single plan be available on a statewide basis with uniform benefit levels and premium rates---criteria that no HMO has been able to satisfy. Blue Cross/Blue Shield played this role before 1990, with its statewide fee-for-service plan. However, cost increases forced the state to drop the BCBSM plan in 1990. In order to offer a statewide plan, the state and the unions negotiated reforms that substituted a preferred provider organization (PPO) administered by Blue Cross/Blue Shield. Aggressive management of the new PPO held its premium increases to 5.6 percent in 1990- 1991,5.0 percent in 1991-1992, and 5.2 percent in 1992-1993. These percentages compare favorably with premium increases posted by other plans, including HMOs. However, many state em-

ployees have expressed dissatisfaction with the PPO'S limited provider network.

The collective bargaining agreement specifies a certain percentage increase in total compensation for each year of the biennium. Health plans know that increases in benefit costs will cut into the increase in compensation, and that the state's negotiators will adopt a tougher stance when the increase in annual compensation is small. Every second year, when union contracts are being negotiated, meetings with unions begin in December, and contracts are settled by July 1 of the following year. The printing deadline for the fall open enrollment information distributed to employees is mid-August. Thus, health plans must project their costs as much as 18 months into the future. On September 15, information is mailed to state employees. Open enrollment takes place during October. There is no official grace period during which enrollees can change their mind with respect to their choice of health plan, but they are allowed to change during November and December if they offer a convincing rationale.

Current Strategy for Selecting Health Plans

The state has targets for participation by different types of plans. In general, the state has no wish to limit the number of "integrated" plans (e.g., Group Health, Share, First Plan, and Central Minnesota Group Health) in the state program. Nor does the state object to two *different types* of plans (e.g., an IPA and a network HMO) offered by the same corporation. However, the State is not interested in "look-alike" plans offered by the same corporation, including plans that vary only in the amount of coverage offered.

Summary

The performance of the State of Minnesota Group Insurance Program can be attributed to several factors. An important factor appears to be limitation of the employer's premium contribution to the lowest cost plan. Another important factor may be the size of the plan and its goals. At 144,000 covered lives, the program is large enough to elicit swift response on the part of health plans to demands for better products and lower prices. However, the program is not so large that its decisions have become politicized and subject to regulatory capture. The program's administrators expressed concerns about becoming too large or influential in the market (34). Rather than trying to reform the entire system, they have directed their efforts at providing the best possible products and prices to state employees.

THE MINNESOTA EMPLOYEES INSURANCE PROGRAM

Motivation for Formation

To understand the need for the Minnesota Employees Insurance Program, and the key role of insurance pools versus simple underwriting reform, it is useful to first discuss the nature of the problems faced by individuals and small groups in markets for health insurance. Consumers in this market may face higher administrative expenses (insurer overhead) than consumers in large groups and they have higher search costs. Most importantly, however, it has proven difficult for consumers in the individual and small group market to prevent having their risk redefined by their insurer after the occurrence of a serious illness or injury with lingering effects (15).

Insurers are often blamed for medical underwriting which results in high-risk consumers paying higher premiums but, in fact, the need for risk-rating arises not from insurer greed, but from consumer behavior. If an insurer offers a health insurance product that charges a single ● *community-rated" premium, enrollees are likely to be individuals with expected health expenditures above the premium. In order to keep premiums from rising, low-risk individuals and businesses must subsidize the costs of higher risk individuals and businesses. In the past, that sort of altruism has not been the norm. The response of insurers has been to risk-rate applicants, so that individuals in the same risk class pay the same premium, resulting in high-risk consumers paying higher premiums.

This problem cannot be solved by requiring everyone to purchase insurance. Suppose that consumers in the same risk class pay the same premium in the first contract period. During that first period, some people experience illness or injury that changes their risk going into the second contract period. When premiums are quoted for the second period, the insurer could continue to charge everyone the same premium, but only if the people who remained healthy during the first time period agreed not to switch to another insurer offering them a lower rate due to their low-risk status. In order to prevent the good risks from being picked off by competitors, insurers have had to protect the good risks within their own pools by putting them into a separate policy with a lower premium. Of course, that leaves the high-risk individuals paying a higher premium.

One approach to the problem of risk redefinition is simply to prohibit insurers from raising premiums when an individual or group of individuals become ill. However, at least one health economist has noted that forcing insurers to charge the same price to individuals in different risk categories may exacerbate, rather than alleviate, discrimination against high-risk individuals (56). Under these circumstances, insurers may find covert, nonprice ways to discriminate against high-risk individuals.

Employees of large firms, even those offering multiple health plans, do not face the problem of having their risk redefined, as long as they remain employed. Large employers offer employees a multiperiod contract that protects them against risk redefinition in exchange for the employees' willingness to remain in the "pool. " The employee contracts are with the *pool*, however, not with a single insurer. That arrangement allows employees to change insurers if they become dissatisfied with the service they are receiving, even if they are in poor health. Increases in an employee's premium are based on the experience of the pool, not the individual's experience. Insurance pools may have other advantages, including lower administrative costs, better consumer information on health plan choices and greater purchasing "clout" in the health insurance and health care services markets.

| Implementation

In Minnesota, the state legislature responded to the problems in the individual and small group market by creating the Minnesota Employees Insurance Program (MEIP) as part of the 1992 Minnesota Care legislation. Private businesses with two or more employees and 95 percent of their employees working in Minnesota are eligible to enroll all their employees in MEIP (but eligibility is not limited to small employers). Minnesota employers with less than 95 percent of their employees working in Minnesota may enroll their Minnesota employees in MEIP. Employees must work at least 20 hours per week for the business, and 75 percent of the business' employees must enroll in MEIP, not including those employees who have insurance through another source.

MEIP offers a choice of up to four health plans, depending on the county in which the employee lives. All plans have restricted access to specialists, with two offering some coverage of self-referral services not approved by the designated primary care (gatekeeper) clinic. Employers must pay at least 50 percent of the premium for single coverage but cannot pay more than 100 percent of the cost of the lowest priced plan in each market area. There is no requirement that employers contribute to the cost of dependent coverage. Employers must sign up for two years, but open enrollment among health plans is held every year, and employees have unrestricted access to health plans in their market area during open enrollment. Premiums are guaranteed for 12 months and policies are sold through private insurance agents or directly through a MEIP agent. The MEIP pool is designed to be self-financed, with no public subsidy of premiums or administrative costs. MEIP began taking applications in July 1993 and is just beginning to enroll firms in the pool.

MEIP is a blend of two programs started earlier and operated by the same group of administrators in the Department of Employee Relations. The

first is the State of Minnesota Group Insurance Program, which was described earlier in this section. The MEIP pool resembles this program in that multiple health plans are offered to consumers (statewide, when available), and consumers face the marginal cost of choosing more expensive plans. The second previous program is the Public Employees Insurance Program (PEIP), a pool started for the employees of small government units in Minnesota. PEIP also required employees to sign two-year contracts with the pool and the PEIP pool has remained stable through its renewal periods.

If the MEIP pool is successful, it has the potential, along with the Minnesota Care (subsidized premium) pool, to dramatically affect the market for health plans and health care services in the Twin Cities. A substantial portion of medical underwriting costs are eliminated by purchasing insurance through MEIP. Many people who previously purchased individual and small group insurance policies at high prices, and often found themselves in high-cost health plans with little management of care, may have the option to purchase lower cost coverage.

EMPLOYERS' ASSOCIATION HEALTH CARE BUYERS COALITION

Motivation for Formation

The Minnesota Employers' Association (EA) is a nonprofit association of approximately 1,300 businesses that provides its members with various training and management services (17). in late 1991, the EA began to develop a health insurance purchasing strategy in response to a survey of EA members that identified health care as a priority area for the provision of assistance by the EA. Members were experiencing yearly double-digit increases in their health insurance premiums that showed few signs of abating. Working with a consulting firm, the EA developed a joint purchasing strategy that resulted in the implementation of Innovation, a health insurance program made available to members beginning on January 1, 1993, through a contract with the Prudential Insurance Company.

Membership

In late 1991, the EA held a series of informational meetings for its members in which the outlines of the joint purchasing arrangement were explained and membership in a Health Care Buyers Coalition was solicited. By June 1993, a total of 363 companies representing about 160,000 employees and dependents had joined the coalition effort. These companies, which were mostly small to medium-sized, contributed between $300 to $600 each to cover the startup costs of the coalition. About 325 companies supplied data that were made available to insurers wishing to be offered to coalition members. Of these 325 firms, between 90 and 100 chose to offer the Innovation insurance product to their employees during the first year of the program, with about 90 percent of these located in the Twin Cities area. First year enrollment in Innovation consisted of 5,000 employee enrollees and their dependents. By the third year of the program, it is expected there will be 10,000 enrollees in Innovation.

Approach to Joint Purchasing

In designing its contracting approach, the coalition concluded that managed care itself was not sufficient to control costs. It identified the problem as a lack of competition among managed care plans on the basis of both price and quality (17). A strategy was developed that would pool the purchasing power of coalition employers, increase the amount of information available to providers, payers, and consumers about health care outcomes and qualiity of care, and provide consumers with a financial incentive to act on the information. The coalition viewed continuous quality improvement as the process by which cost increases could be restrained.

In the spring of 1992, a meeting was held with provider representatives to assess their interest in bidding for a contract to serve the coalition. A coalition committee was formed to develop a Request for Proposals. The RFP was issued in the summer of 1993 and responses were received from three organizations. (The scope of nonmetropolitan provider coverage requested of

bidders ultimately limited the number of organizations able to respond to the RFP.) After hearing presentations from each bidder, a coalition steering committee selected Prudential. Prudential offered premium increases guaranteed to be 10 percent or less a year over a three-year period, as well as access to data desired by the coalition.

Innovation is designed as a preferred provider model health plan. The preferred provider network in the Twin Cities consists of 865 primary care physicians, 1600 specialists, 18 urgent care facilities, 27 hospitals, and a large number of area pharmacies. If an enrollee seeks care within the network, all care is coordinated by a primary care physician and preventive care is provided without any copayment on the part of the enrollee. The primary care physician authorizes all specialty care. Enrollees who seek care from non-network providers must pay a higher share of the costs and also face a deductible.

Innovation network providers are involved in developing clinical "pathways" that contain criteria for physicians to use when making decisions relating to certain types of medical treatment. The coalition intends to develop data on outcomes, costs. and patient satisfaction for pathway conditions so that ● 'continuous quality improvement" can be achieved over time. A "quality council," consisting of physician, employer, consumer, and Prudential representatives, and chaired by EA professional staff, meets regularly to discuss pathway development and other quality-related issues. Also during the first year of Innovation, an array of wellness progams and health education materials were made available to enrollees.

A four-tiered premium structure was established for Innovation, based on previous expenditures and/or the demographics of each group. During the three-year contract period, an employer can move to a less expensive tier, if that is justified, but cannot move to a more expensive tier. Prudential is responsible for marketing the Innovation health plan, but employers who are prospective purchasers frequently indicate an interest in dealing directly with EA staff. Therefore, the EA has a staff person who assists with marketing, often accompanying the Prudential representative when an initial presentation is made to a firm.

1 Outcomes to Date

Prudential guaranteed it would not increase rates by more than 10 percent during any year under the three-year contract. At the end of the first year it increased rates by 8 percent. The rates paid by firms offering Innovation averaged 14 percent below the rates paid by the same companies for 1991 and 1992.

Initial data on enrollee satisfaction and patient outcomes are now being examined by the coalition's board, but no analyses of these data have been published as yet.

SUMMARY

The restructured State of Minnesota Group Insurance Program has increased the level of competition among health plans in the Twin Cities and reduced the costs of care for its enrollees. However, its effects on the reconfiguration of the health care delivery system in the Twin Cities are unclear. The largest coalition formed by private employers the Business Health Care Action Group (BHCAG) appears to be playing a more direct role in restructuring health care delivery. BHCAG was formed both as a mechanism to purchase health insurance in a more effective manner and as a way to leverage purchasing power to effect change in the health care delivery system. As stated by one health plan CEO, "We believed that this was just the beginning of a massive concentration of enrollees and felt that if we were not responsive at the front end we would be left out ." In contrast, the emphasis of the State of Minnesota Group Insurance Program was on creating and maintaining competition among health plans at the enrollee level.

In summary, the organization of the demand side of the market was both a response to health plan strategies and an important factor in shaping those strategies. First, some of the larger HMOs that offered IPA or point-of-service programs pressed employers to designate them as the sole

HMO offering. The justification for this was the potential for adverse selection if multiple plans were offered. In return for being designated the exclusive HMO, these plans promised to make available multiple options, with one option being a more restrictive set of providers similar to a staff or network HMO. This accelerated the trend toward multi-option plans among all HMOs. To achieve the levels of access and overall capacity needed to compete in this arena, some of the HMOs began to explore mergers. The formation of the BHCAG accelerated this process, since BHCAG contractual requirements included broad-based geographical coverage for providers under the contract. This, coupled with proposals for the development of Integrated Service Networks (ISNS) in Minnesota, with antitrust exemptions to facilitate that development, and national health care reform proposals, caused all of the major health care provider organizations in the Twin Cities to begin to explore ways to link hospitals, physicians, and health insurance plans more closely.

Relevance of the Minnesota Experience

6

This background paper has described the evolution of the health care system in the Minneapolis/St. Paul metropolitan area and has summarized the evidence regarding its performance. It has relied on published accounts of the development of that system, published empirical analyses of behavior and outcomes, and information collected through recent interviews with community informants. As such, it has many of the characteristics of the classic "case study," including some of the well–known limitations of this approach (7). The strength of a case study approach is that it can provide an in-depth understanding of how a community's delivery system evolves over time, identify the key events in that evolution, and describe the roles played by specific actors or organizations (30). However, case studies have several generic limitations that can restrict their usefulness. One limitation is that particular readers of a case study may find it does not provide enough detail on the issues that are of primary interest to them. For instance, hospital administrators may find that the case study lacks depth in the discussion of hospital motivations and roles, or employers may not find sufficient detail to inform them about specific actions taken by Twin Cities' employers to stimulate system change. This limitation is largely unavoidable. No case study can provide enough information to satisfy the interests of all potential readers without becoming so complex that it obscures the essential components of the story. Case studies can, however, set the stage for further, more focused analyses of issues that are of particular interest to different stakeholders by providing a useful overview of events and how they are interrelated.

Perhaps a more important limitation relates to the generalizability of case study findings. The dangers of generalizing from the findings of a single case study have been discussed at length in the evaluation literature (e.g. Wilson, 1979 (68)). Presumably, generalization is less risky when the comparison environment is similar in its characteristics to the case study setting. However, it is not always clear which characteristics are relevant in determining degree of environmental similarity or dissimilarity. For instance, is the health care market in Chicago similar to the Twin Cities because both contain multiple HMOs, or is it dissimilar because the population of Chicago is much larger and the employer community in Chicago is more fragmented? Obviously, determining the implications of the Twin Cities' experience for the nation as a whole is even more complicated than assessing its relevance to a single other metropolitan area.

IMPLICATIONS FOR MANAGED COMPETITION REFORMS

While the need to be cognizant of and sensitive to the dangers of generalizing from the Twin Cities' experience is obvious, there may be elements of that experience that *do* have implications for health care reform on a national scale. The remainder of this section briefly highlights and discusses several tentative conclusions suggested by the evolution and performance of the health care delivery system in the Twin Cities.

Development of managed competition is likely to be associated With reconfiguration of community hospitals, such as the creation of multihospi - tal systems.

During the 1970s and 1980s there was a reduction in the number of hospital beds nationally. During this period, hospital capacity in the Twin Cities declined even more dramatically and has continued to decline in the 1990s. As recently as January 1994, a large hospital system in the Twin Cities announced the closure of one of its hospitals for financial reasons. The increased enrollment in HMOs during the 1980s has been cited by hospital administrators in the Twin Cities as one of the reasons for reductions in community hospital capacity, both because inpatient use has declined with increasing HMO enrollment and because hospitals have been forced to contain costs by reducing capacity in order to offer price–competitive contracts to HMOs.

While the specific contribution of increased HMO enrollment to reductions in the number of hospital beds in the Twin Cities is difficult to determine in any rigorous way, the chain of events appears reasonably clear. Managed competition as structured in the Twin Cities first reduced demand for inpatient hospital services and then created price competition among hospitals for the patients of managed care plans. Hospitals responded by consolidating their operations into a relatively small number of systems in order to negotiate more effectively with HMOs and to facilitate the closure or conversion of individual facilities toreduce acute care capacity. Interview respondents associated with hospitals strongly believed that the reduction in acute care beds would continue, possibly resulting in a decline of over 50 percent in the next decade. Several respondents noted that hospital utilization would probably fall to about 200 days per 1,000 population within the next five years. From a strategic standpoint, survival in this environment has increasingly been viewed by hospitals as dependent on the establishment of strong linkages with managed care organizations or group practices, through merger or long–term contracts. Consequently, while the reconfiguration of the hospital system in the Twin Cities largely focused on the formation and merger of hospital systems in the 1970s and early 1980s, the restructuring that is now occurring has shifted to the vertical integration of hospitals, physicians, and insurance plans.

Managed care organizations will respond competitively to even moderately–sized purchasing coalitions, for example, by merging to provide greater geographic access.

In the Twin Cities, the Business Health Care Action Group (BHCAG), the State of Minnesota (group Insurance Program, and the Employers Association's Buyers Coalition all appear to have

influenced the delivery of health services to their enrollees. The BHCAG precipitated the merger of two large HMOs and stimulated collaboration among several provider groups, including the Mayo Clinic, in the development of practice guidelines. The Buyers Coalition has negotiated a long–term contractual relationship with a major insurer, instituting a total quality management approach and limits on premium increases. The State of Minnesota Group Insurance Program has managed a multiple health plan benefit offering with a fixed dollar contribution tied to the lowest priced health plan, and recently has benefited from declining increases in health plan premiums.

Organization of the demand side of the health care market under managed competition is likely to encourage the consolidation of providers and managed care plans, suggesting that specific public and provider sector strategies maybe needed to maintain a competitive market structure.

Organizing the demand side of the health care market often entails offering consumers discrete choices among standardized health care coverages with the consumer bearing the additional cost associated with the more expensive option. A '"sponsor" or purchasing alliance aggregates purchasing power and manages the processes of enrolling individuals into health plans and contracting with health plans. This organization of demand is intended to create pressure on health plans to control their premium increases. Recently, it appears to have been successful in the case of the State of Minnesota Group Insurance Program.

The Twin Cities' experience suggests that providers will respond to greater organization on the demand side with greater aggregation of supply. When the demand side of the market is organized, health plans have the potential to secure larger numbers of enrollees under each contract. Their control (actual or potential) over larger numbers of patients gives them greater leverage in contracting with providers. Providers quite naturally respond by consolidating to counterbalance the negotiating power of health plans and/or by affiliating with plans through mergers or long–term contracts. In the absence of antitrust actions (or, when state anti-trust policy facilitates consolidation), and with the encouragement of buyers' coalitions that value broad geographic coverage from contracting provider networks, the consolidation of the supply side of the market can occur relatively quickly, as it has recently in the Twin Cities.

The consolidation of the supply side of the health care market could benefit consumers in several ways. It creates the potential for the reduction of excess capacity and the achievement of efficiencies in service delivery. At least some of the gains from these effciencies may be captured by payers and consumers in the form of the lower premiums, if buyers coalitions are able to use their bargaining power effectively in negotiations with health plans. These coalitions may also be able to use their bargaining power to achieve improvements in the quality of care, and to effect changes in the way care is delivered. Ultimately, while consumers may have more restricted choices among health plans and fewer options in their benefit coverages, these drawbacks may be offset by the gains they experience due to improved quality and/or lower prices resulting from the efforts of the buyers' coalitions. This is thought to be particularly true for small firms, where it may not be feasible to offer employees multiple health plans under any circumstances.

The buyers* coalitions in the Twin Cities are aware that consolidation of the supply side of the health care delivery system poses risks in the longer term. Specifically, unless entry of new health plans into the market remains feasible, coalitions may become ● *locked into" their existing plan offerings and find their leverage in negotiations with these plans diminishes over time. In the Twin Cities, the existence of multiple buyers' coalitions helps to reduce the likelihood this will happen. Also, as described previously, at the present time the affiliations among providers and health plans are not exclusive. This permits some flexibility in the market that could allow development of new, competing plans through realignment of provider groups. However, the general issue remains an important one with far–reaching

implications. Feldman, using an econometric model to predict impacts, estimated that the benefits consumers receive from the purchase of health insurance could decline by 4 to 5 percent in the Twin Cities as a result of the Group Health/MedCenters merger (20). While Feldman acknowledges several limitations in his approach, his analysis nevertheless highlights the difficult policy issues raised by consolidation of the supply side of the health care system (20).

Feldman argues that aggressive enforcement of antitrust laws is needed to ensure that mergers among health care organizations benefit consumers and are not anti-competitive (20). However, some interest groups in the Twin Cities have called for very different initiatives in response to recent supply–side consolidation activity. Senior citizen advocates have characterized the consolidation as evidence that the '*managed competition" approach to health care reform in the Twin Cities is not tenable, and that stronger regulation of providers under a "single–payer" approach is needed. Clearly, "managed competition" reform efforts will need to develop an explic it strategy for creating and maintaining a competitive structure on the supply side of the market through public policy (e.g., antitrust), or through the management policies of purchasing coalitions and large private purchasers. Without such a strategy, the effectiveness of managed competition will be open to question and its political viability in the long-run as an acceptable approach to health care reform will be threatened.

CONCLUDING COMMENTS

Previous studies of the Minneapolis/St. Paul health care market (e.g. see Anderson, et al., 1985 (6)) have noted several characteristics that may have facilitated early support for the. HMO.model of health care delivery. These include participation of a substantial proportion of physicians in group practices, a relatively homogeneous culture, civic leadership provided by a small number of large corporations, and entrepreneurial efforts of several HMO supporters. To the degree that these factors were important in the early stages of HMO formation, they probably also contributed to the development of a mature HMO market more quickly in the Twin Cities than in most other metropolitan areas. This in turn contributed to the consolidation of the hospital market, putting building blocks in place for the very rapid aggregation of providers and health plans that is now occurring. One clear stimulus to these recent events—the actions of buyers' coalitions—would seem replicable in other areas, as these coalitions now are commonplace in most large cities and quite active in many. However, the ability of providers to respond quickly to attempts to organize demand is likely to vary across communities, depending on existing configurations of local health care delivery systems. While it seems clear that the actions of purchasing coalitions can contribute to the restructuring of relationships among health care providers, they may take longer to have an impact in communities where providers lack supportive organizational structures and have little experience in managed care.

A second important caveat relates to the inevitable difficulties encountered in attempting to identify and describe the important features of a health care market when that market is in a period of rapid transformation. While the description in this report of market evolution in the Twin Cities covers the period through the beginning of 1994, continuing change appears likely, at least in the near term. There is the possibility that the observations contained in the report have been distorted by the swiftness of the change that is now taking p l
to attempts to learn from most other health care markets during the current period of restructuring that has been stimulated by state and national health care reform initiatives.

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A

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References

1. American Hospital Association, *Hospital Statistics* (Chicago, IL: 1971-1990).
2. American Hospital Association, *Guide to the Health Care* Field (Chicago, IL: 1972-1990).
3. Anderson, G., Heyssel, R., and Dickler, R., "Competition Versus Regulation: Its Effect on Hospitals," *Health Affairs* 12(1):70-80, *1993.*
4. Anderson, H.J., "Choosing Sides in Twin Cities," *Modern Healthcare* 17(6):61-*66, 1987.*
5. Anderson, O., Aday L. A., and Kralewski, J., "An Empirical Analysis of the Twin Cities HMO Market," University of Chicago, Center for Health Administration Studies, Chicago, IL, July 1981.
6. Anderson, O., Herold, T., Butler, B., et al., *HMO Development: Patterns and Prospectives* (Chicago, IL: Pluribus Press, 1985).
7. Campbell, D., "Degrees of Freedom and the Case Study," *Comparative Political Studies* 8(2): *178-193, 1975,*
8. Christianson, J., *Do HMOs Stimulate Beneficial Competition?,* unpublished monograph prepared for Interstudy, Excelsior, MN, Apr. 27, 1978.
9. Christianson, J., Lurie, N., Finch, M., et al., "Use of Community-Based Mental Health Programs by HMOs: Evidence from a Medicaid Demonstration," *American Journal of Public Health* 82(6):790-796, *1992.*
10. Christianson, J., and McClure, W., "Competition in the Delivery of Medical Care," New *England Journal of Medicine*, *301(15): 812-818, 1979.*
11 Citizens League Research, "Minnesota Managed Care Review 1992," Minneapolis, MN, August 1992.
12. Citizens League Research, "Minnesota Managed Care Review 1993," Minneapolis, MN, September 1993.
13. Dowd, B.E., "HMOs and Twin Cities Admission Rates," *Health Services Research 21 (2): 177-188, 1986.*
14. Dowd, B. E., and Feldman, R., ● 'Biased Selection in Twin Cities Health Plans," *Advances in Health Economics: Volume 6,* R. Scheffler and L. Rossiter (eds.) (Greenwich, CT: JAI Press, 1985).
15. Dowd, B. E., and Feldman, R., "Insurer Competition and Protection from Risk Redefinition in the Individual and Small Group Market," *Inquiry* 29(2):148-157, *1992.*
16. Dowd, B. E., Johnson, A., and Madson, R. A., "Inpatient Length-of-Stay in Twin Cities Health Plans," *Medical Care* 24(8):694-710, *1986.*
17. Ebert, T. E., and Morrow, G.T., "A Partnership to Reduce Cost by Improving Quality," *Medical Interface,* April:43-45, *1993.*
18. Employee Benefit Research Institute, "Sources of Health Insurance and Characterisitics of the Uninsured: Analysis of the March 1993 Current Population Survey," Washington, DC, January 1994.
19. Families USA Foundation, "Per Capita Health Expenditures," Washington, DC, 1993.
20. Feldman, R., "The Welfare Economics of a Health Plan Merger," *Journal of Regulatory Economics* 6:67-86,1994.
21. Feldman, R., Chan, H., Kralewski, J., et al., "Effects of HMOs on the Creation of Competitive Markets for Hospital Services," *Journal of Health Economics* 9:207-222,1990.

22. Feldman, R., and Dowd, B. E., "Simulation of a Health Insurance Market with Adverse Selection," *Operations Research 30(6): 1027-1042, 1982.*

23. Feldman, R., and Dowd, B. E., "Is There a Competitive Market for Hospital Services?" *Journal of Health Economics* 5(3):277-292, *1986.*

24. Feldman, R., and Dowd, B. E., "The Effectiveness of Managed Competition: Results from a Natural Experiment," *Health Policy Reform: Competition and Controls,* R.B. Helms (cd.) (Washington, DC: The American Enterprise Institute Press, 1993).

25. Feldman, R., Dowd, B. E., Johnson, A., et al., "The Competitive Impact of HMOs on Hospital Finances," *Journal of Health Policy, Politics and Law* 10(4):675-697, *1986.*

26. Feldman, R., Gifford, G. G., and Dowd, B. E., "Effect of HMOs on Premiums in Employment-Based Health Plans," *Health Services Research* 27(6):779-811, *1993.*

27. Feldman, R., Jensen, G., and Dowd, B. E., '*What are Employers Doing to Create a Competitive Market for Health Care in the Twin Cities?" *Contemporary Policy Issues* 3(2): *69-88, 1984-85.*

28. Feldman, R., Kralewski, J., and Dowd, B. E., "HMOs: The Beginning or the End?" *Health Services Research 24(2): 191-211,* 1989.

29. Foster Higgins, " 1992 Health Care Benefits Survey: Medical Plans," *Medical Benefits,* Washington, DC, Mar. 30, 1993.

30. Greene, D., and David, J. L., ● 'A Research Design for Generalizing from Multiple Case Studies," *Evaluation and Program Planning 7(1):73-85,1984.*

31. Iglehart, J., "The Twin Cities Medical Market Place," New *England Journal of Medicine 311:343-348, 1984.*

32. Jackson-Beeck, M., and Kleinman, J. H., "Evidence for Self-selection Among Health Maintenance Organization Enrollees," *Journal of the American Medical Association* 250(20):2826-2829, *1983.*

33. Johnson, A.N., Dowd, B. E., Morris, N., et al., ● *Differences in Inpatient Resource Use by Type of Health Plan," *Inquiry* 26(3):388-398, *1989.*

34. Klein, J., and Cooley, R., ● *Managed Competition in Minnesota," *Managed Care Quarterly* 1(4):58-67, *1993.*

35. Kosterlitz, J., "'Monopoly Medicine?" *National Journal* 28: *1746-1749,* 1993.

36. Kralewski, J., Countryman, D., and Shatin, D., ● 'Patterns of Interorganizational Relationships Between Hospitals and H MOS," *Inquiry* 19(4):357-362, *1982.*

37. Kralewski, J., deVries, A., Dowd, B., et al., "The Development of Integrated Service Networks (ISNs) in Minnesota," prepared for the MinnesotaCare Legislative Oversight Committee, Minneapolis, MN, Feb. 21, 1994.

38. Kralewski, J., Dowd, B. E., Feldman, R., et al., "The Physician Rebellion," *New England Journal of Medicine* 316(6):339-342, *1987.*

39. Leichter, H., "State Model: Minnesota," *Health Affairs* 12(2):48-58, *1993.*

40. Luft, H. S., Maerki, S. C., and Trauner, J. B., "The Competitive Effects of Health Maintenance Organizations: Another Look at the Evidence from Hawaii, Rochester, and Minneapolis/St. Paul," *Journal of Health Politics, Policy and Law* 10(4):625-657, 1986.

41, Lurie, N., Christianson, J., Finch, M., et al., "The Effects of Cavitation on Health and Functional Status of the Medicaid Elderly," *American College of Physicians* 120(6): *506-511,* 1994.

42, Lurie, N., Finch, M., and Dowd, B., "Who are the Uninsured in Minnesota?: A Report to the Minnesota Health Care Access Commission," Institute for Health Serivces Research, University of Minnesota, Minneapolis, MN, October, 1990.

43. Lurie, N., Moscovice, I., Finch, M., et al., "Does Cavitation Affect the Health of the Chronically Mentally 111: Results from a Randomized Trial," *Journal of the American*

Medical Association 267(24):3300-3304, *1992.*

44. Metropolitan Healthcare Council, "Report on Twin Cities Hospitals from the Council of Hospital Corporation's Inpatient Utilization Data Base," Minneapolis, MN, 1993.

45. Milliman and Robertson, Inc., "Medical Costs by Geographical Area," research by Milliman and Robertson, Inc., Brookfield, WI, 1992

46. Minneapolis Star and Tribune, "HMOS Keep Twin Cities Health-Coverage Costs Down," Minneapolis Star and Tribune, Mar. 2, 1993.

47. Minneapolis Star and Tribune, "Minnesota's Big Blues Aim to Adapt," Minneapolis Star and Tribune, June 21, 1993.

48. Minneapolis Star and Tribune, "HealthPartners Will Merge with Ramsey HealthCare," Minneapolis Star and Tribune, Sept. 17,1993.

49. Minnesota Department of Health, "1992 HMO Operations in Minnesota, Volume II: Patterns in Health Care Utilization," *Health Maintenance Organization,* Minnesota Department of Health, HMO Unit, Minneapolis, MN, 1993.

50. Minnesota Department of Health, "Health Care Reform in Minnesota", Media Backgrounder, Prepared by the Minnesota Department of Health and the Minnesota Health Care Commission, Minneapolis, MN, September 1993.

51. Minnesota Department of Health, "Integrated Service Networks and Regulated All-Payer System: Design and Implementation Plan," discussion draft, Nov. 10, 1993.

52. Minnesota Department of Health, Health Systems Development Division, Health Economics Program, "Providing Medical Care in Rural Minnesota," Minneapolis, MN, March 1991.

53. Minnesota Department of Health, Minnesota Health Care Commission, "Universal Coverage Report," Minneapolis, MN, 1994.

54. Minnesota Hospital Association, ● 'Twin Cities Hospital Occupancy Rate," *Health Information Resources of Minnesota,* St. Paul, MN, 1992.

55. Moscovice, I., Lurie, N., Christianson, J., et al., '*Access and Use of Health Services by Chronically Mentally 111 Medicaid Beneficiaries," *Health Care Financing Review* 14(4): *75-87,* 1993.

56. Pauly, M., '*Is Cream Skimming a Problem for the Competitive Medical Market," *Journal of Health Economics* 3(1):88-95,1984.

57. Reece, Richard, "Information for Physicians in Control," *Reece Report* 2:4, *1987.*

58. Shadle, M., and Christianson, J., "The Impact of HMO Development on Mental Health and Chemical Dependency Services," *Hospital and Community Psychiatry, 40(11):11* 45-1 151, 1989.

59. St. Paul Pioneer Press Dispatch, "Speedy HealthEast Rise Startles Some," St. Paul Pioneer Press Dispatch, Aug. 23, 1987.

60. St. Paul Pioneer Press Dispatch, "Health Care's Future,*' St. Paul Pioneer Press Dispatch, p.1E, 3E, Nov. 1, 1993.

61. St. Paul Pioneer Press Dispatch, "Medica, HealthSpan Will Merge," St. Paul Pioneer Press Dispatch, p. 1A, 6A, Dec. 8, 1993.

62. Sullivan, C., Miller, M., Feldman, R., et al., "Employer-Sponsored Health Insurance in 1991," *Health Affairs* 11(4):172-185, *1992.*

63. University of Minnesota, Health Sciences, *Health Sciences News,* Special Edition, Jan. 11, 1994.

64. U.S. Congress, Office of Technology Assessment, *Health Care in Rural America, OTA-H-434* (Washington, DC: U.S. Government Printing Office, September 1990).

65. U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States: 1993, 113th* edition (Washington, DC: U.S. Government Printing Office, 1993).

66. U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, *Seventh Report to the President and Congress on the Status of Health Personnel in the*

United States (Washington, DC: U.S. Government Printing Office, March 1990).

67. Ware, J., Rogers, W., Davies, A., et al, "Comparison of Health Outcomes at a Health Maintenance Organization with Those of Fee-For-Service Care," *Lancet* 8488: 1017-1072, 1986.

68. Wilson. S., "Explorations of the Usefulness of Case Study Evaluations," *Evaluation Quarterly* 3(3):446-459, *1979.*

69. Wisner, C., "Health Plan Effects on the Health Status of Medicare Beneficiaries in the Twin Cities," unpublished Ph.D. dissertation. University of Minnesota, Minneapolis, MN, 1992.