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AN ANALYSIS OF THE COST OF HEALTH CARE

IN THE UNITED STATES AND MONTANA

AND THE STRATEGIES DESIGNED TO CONTAIN THESE COSTS

By

James Frederick Schwering

B. S., Drexel University, 1972

Presented in partial fulfillment of the requirements

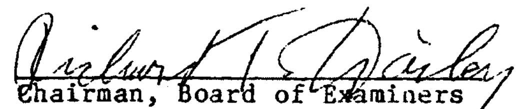
for the degree of

Master of Business Administration

University of Montana

1988

Approved by



Chairman, Board of Examiners

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August 5, 1988

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TABLE OF CONTENTS

CHAPTER

INTRODUCTION i

I. AN OVERVIEW OF HEALTH CARE COSTS BOTH LOCALLY (MONTANA) AND NATIONALLY 1

II. GOVERNMENT POLICY 1945-65, INCREASING THE SUPPLY OF MEDICAL SERVICES AND CREATING PAYMENT MECHANISMS 7

III. GOVERNMENT AND BUSINESS EFFORTS TO CONTROL HEALTH CARE COSTS 11
1. Health Maintenance Organizations 19
2. Preferred Provider Organizations 23
3. Beneficiary Out-of-Pocket Costs 28
4. Utilization and Consumption of Medical Services 30
5. Other Alternatives to Traditional Indemnity Insurance Plans 36

IV. FACTORS AFFECTING FUTURE COST CONTAINMENT EFFORTS 37
1. The Aging Population 37
2. Future Government Policy 39
3. Management's Future Role 39

V. SUMMARY AND CONCLUSION 40

FOOTNOTES 42

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Introduction

Health Care and its associated costs are a very personal and emotional topic. In the final analysis, there is no viable alternative to good health, and access to the best medical care when one is in need. However, there is a cost associated with the delivery of medical care. The focus of this paper is an analysis of these costs, including what has and what will influence demand for medical services, and what is currently being done to control costs. The objective of this paper is to provide the reader with an overview of health care and the tools currently used to affect economic changes and control health care costs.

This paper describes where costs are today, how they have evolved to this cost structure, what government and industry are doing to control costs, what strategies are being used, what has been successful, and what future factors may influence the health care industry. No single action or solution exists. It is up to the manager of the institution's health care benefits program to use those tools and concepts that are available to them and manage their costs. The manager will have to become a prudent buyer or lose control of the costs of their health care benefits.

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I. An overview of Health Care Costs both Locally (Montana) and Nationally

Since 1950, both nationally and in Montana, health care expenditures have been rising faster than the average annual rise in the Consumer Price Index (C.P.I.) In 1950, annual national health care spending was at a rate equivalent to 4.4 percent of the Gross National Product (G.N.P.) according to data published by the Health Care Financing Administration (H.C.F.A.)[1]. Recent cost data published by H.C.F.A., which is responsible for the management of our national health care programs, showed our annual national health care spending rate had reached a level equivalent to 10.9 percent of the G.N.P. for the year 1986[2]. In 36 years, the national average annual health care expenditure rate had risen 148 percent, and projections made by H.C.F.A. indicate that this expenditure rate will exceed or approximate 15 percent of the G.N.P. by the year 2000, if this rate of growth continues[3].

The cost to employers for providing health care benefits to employees also increased rapidly during a similar time frame. Employer payments for health insurance, computed as a percent of employee wage and salary expense, was .5 percent in 1950[4]. By 1984 the cost to employers for health insurance had risen to a rate equivalent to 5.3 percent of wages and salaries paid to employees[5]. Health insurance costs had added 4.8 percent to the cost of employees for employers.

In Montana, data for a more recent time period indicated rapid cost escalation for health care. According to Montana Blue Shield (BS),

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a health insurance company in Montana, their payments to hospitals and physicians for care provided to BS insured individuals outpaced the rise in the C.P.I. for a similar period, as depicted in Table I, which follows[6].

Table I
Blue Shield Cost Experience in Montana

	1979	1980	1981	1982	1983	Percent Change 1979-83
A. Average Inpatient Charge For One Day In The Hospital	$244	$283	$330	$392	$509	
Percent Annual Increase		16.0	16.6	18.8	29.8	108.6
B. Average Outpatient Hospital Charge	$ 42	$ 72	$ 89	$113	$141	
Percent Annual Increase		71.4	23.6	26.9	24.7	235.7
C. Percent Annual Increase in Average Physician Charge	9.5	12.6	11.2	8.8	7.4	
D. Consumer Price Index (all items)[8] Percent Annual Increase		13.6	10.4	6.1	3.2	

This data depicts costs only for those individuals who were insured for health care by Blue Shield of Montana. The proportion of the state of Montana population Blue Shield insures is unavailable. However, the data does follow the national trends of rapid increases in health care costs.

In 1985 Governor Schwinden of Montana formed the Health Care Cost Containment Advisory Council, to analyze the cost of health care in the state of Montana. The Council's report depicted similar escalations in the cost of health care for Montanans, as shown in Table II, which follows[7].

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Table II
Selected Hospital Data For The State of Montana

	1981	1982	1983	1984	Percent Change 1981-84
A. Total Hospital Revenues ($ Millions)	$234.2	$275.7	$319.2	$332.8	
Number of Hospitals	60	60	58	59	
Percent Annual Change		21.2	15.8	4.2	42.1
B. Gross Hospital Inpatient Revenue Per Patient Day	$323	$389	$464	$525	
Percent Annual Increase		20.6	19.4	13.1	62.5
C. Hospital Inpatient Revenue as a Percent of Total Revenue	86.6	86.3	86.2	85.2	
D. Hospital Outpatient Revenue as a Percent of Total Revenue	13.4	13.7	13.8	14.8	
E. Utilization of Services					
Total Admissions	127,827	129,053	126,568	119,191	
Percent Annual Change		+1	-1.9	-5.8	-6.8
Average Length of Inpatient Hospital Stay	5.3	5.33	5.38	5.18	
Percent Annual Change		+6	+1	-3.7	
F. Consumer Price Index (all items)[9] Percent Annual Change		6.1	3.2	4.3	14.2

The data in Table II is subject to a variety of interpretations. However, it is clear that hospital revenues, which represents the cost to Montanans for care provided in a hospital, increased at three (3) times the rate of growth of the C.P.I. This increase could be attributable to changes in hospital prices equal to the annual inflation rate increase, as measured by the change in the C.P.I., if the quantity of services provided by hospitals increased three (3) times during the same time period. One measure of the quantity of services provided by hospitals is

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to count the number of admissions and multiply that number by the average length of stay per admission to arrive at the total inpatient days provided. In Montana, both admissions and length of stay decreased, resulting in a decrease in patient days for the years 1981-84 in excess of 7 percent. This 7 percent decline in patient days contrasts with an increase in inpatient hospital revenue per patient day of 62.5 percent, and a 14.2 percent change in the C.P.I. Therefore, it can be inferred price increases were the major factors behind the increase in hospital costs in Montana. The cost of hospital care in Montana accounted for 38 percent of the total dollars Montanans spent on health care in 1983, which is a rate of spending approximately 71 percent of the spending rate of the nation for hospital care[10].

A contributing factor to the rise in Montana hospital costs was the continued rise in the cost of labor to hospitals. What causes rising labor costs is unclear. It may be that hospital administrators have been unable to reduce their labor force at the same time sophisticated technology has been introduced that requires more labor. What is clear is the labor force in Montana hospitals rose from 9.6 full time employees per 1,000 patient days in 1975 to 13 per 1,000 in 1982, a rise of 35 percent[11]. Though data are not available, it can be inferred that the cost of labor in Montana hospitals has risen very rapidly during this time period due to the increase in number of employees.

Minimal data on physician costs in Montana are available. What is known is that physician costs accounted for 12 percent of total health care spending for Montanans in 1983[12]. However, we have seen from our

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Blue Cross/Blue Shield data, that physician costs are also rising faster than the C.P.I., but at a lesser increasing rate than hospital costs. The major portion of the analysis in this paper for physician costs will be based on national data.

Data on our national health care expenditure rate confirms that health care costs are rising faster than the rise in the C.P.I., as can be seen in Table III, which follows.

Table III
Average Annual Percent Change

	1950-55	55-60	60-65	65-70	70-75	75-81	81-82
A. C.P.I. All Items	2.2	2.0	1.3	4.2	6.7	9.1	6.1
B. Physician Services	3.4	3.3	2.8	6.6	6.9	9.9	9.4
C. Hospital Room	6.9	6.3	5.8	13.9	10.2	12.6	15.7

Sources: Bureau of Labor Statistics, U. S. Department of Labor; Consumer Price Index, various issues.

From 1950 to 1970, physician services rose at an approximate rate equal to 1.5 times the rise in the C.P.I., matched the C.P.I. from 1975 to 1981, and rose again at 1.5 times the C.P.I. at the beginning of the 1980's. The rise in hospital costs was more pronounced as measured by the cost of a day for a hospital room. From 1950 to 1970, the rise in the cost of a hospital room rose approximately three times the rise in the C.P.I. These costs rose during 1970 to 1975 at a rate 1.5 times the C.P.I., from 1975 to 1981 at a rate 1.4 times the C.P.I., and began to rise at a rate 2.5 times the C.P.I. at the beginning of the 1980's.

Some changes in who received payment for health services, and who paid for these services, occurred during the past three decades. In

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Table IV, which follows, we see that hospitals' portion of the national health care dollar increased approximately 40 percent while physicians' share decreased slightly.

Table IV
National Health Expenditures
Percent Distribution of Total Costs

	1950	1960	1965	1970	1975	1980	1981	1982
Physician Care	21.7	21.1	20.3	19.2	18.8	18.8	19.1	19.2
Hospital Care	30.4	33.8	33.3	37.2	39.3	40.3	41.2	42.0

Source: Bureau of Data Management and Strategy: National Health Expenditures, 1981, by R. M. Gibson, D. R. Waldo and K. R. Levit. Health Care Financing Review, HFCA Pub. No. 03154. Health Care Financing Administration, Washington, D. C., U. S. Government Printing Office, Fall 1983.

Who paid the national health care bill also changed during this period. In Table V, which follows, the data shows that the individual's out-of-pocket costs, as a percent of health care costs, declined almost 45 percent, while employer sponsored health insurance as a source of payment increased almost 40 percent. During this same time period governments' share of the bill increasing more than 56 percent[13].

Table V
Percent Health Care Expenditures by Source of Payment

	Personal/Individual	Employer Provided Health Insurance	Government	Other
1966	49.4%	22.9%	25.4%	23%
1983	27.2%	31.9%	39.8%	1.1%
Percent Change	-44.9%	+39.3%	+56.7%	

Who paid for health care, how much of Montana's and the Nation's resources were committed to health care, and who received these dollars, all changed during the period 1950 to the present time. Concern for the rate at which the health care industry was consuming local and national

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dollars would foster changes in business and government policy, both locally and nationally, which were designed to slow this escalating rate of spending. Before these measures are described, a review of some of the underlying causes for this change will be presented. Knowing how these changes occurred, and what influences health care expenditures, will provide the necessary background knowledge to develop future controls.

II. Government Policy 1945-65, Increasing The Supply Of Medical Services And Creating Payment Mechanisms.

The preceding data depicts an environment of rapidly increasing costs for health care in the state of Montana and in the United States. The policy of the Federal government for the past forty (40) years has been a major factor in the development of the health care system and its related costs, as we see it today. Understanding how this policy evolved may shed some light on our current problems and offer some insight to our future policies. From 1945 until the present, there were three distinct underlying objectives in our national health care policy; expansion of the provision of health care services, programs to pay for this increased supply of medical services, and finally, our current policies aimed at controlling the overall costs of the system.

At the close of World War II, our government policy began to increase the supply of facilities and medical practitioners available to provide medical care to our increasing population. This was partly in response to demands from the public to build more hospitals. In the 1940's a coalition was formed which advocated the post war construction

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of hospitals that included[14]:

- American Hospital Association (A.H.A.)
- American Medical Association (A.M.A.)
- American Federation of Labor - Congress of Industrial Organizations (A.F.L. - C.I.O.)
- Railroad Brotherhood
- Farm Bureau Federation
- Farmers Union
- The Grange
- General Federation of Women's Clubs

This coalition's efforts and other social and political influences culminated in the passage of legislation commonly known as the Hill-Burton Act, named after the two Senators who sponsored this legislation. The actual name was the 1946 Hospital Survey Construction Act, which produced Federal financial support for the construction of community hospitals. Funds for hospital construction were provided to states whose supply of hospital beds was no greater than 4.5 hospital beds per 1,000 population. Between 1947 and 1971, $3.7 billion dollars in Federal money was disbursed under this program, which funded approximately 30 percent of all hospital construction projects nationally[15]. Further, it was estimated that this program generated an additional $9.1 billion for hospital construction from local and state matching funds[16]. The result was an increase in the number of beds from 3.4 beds per 1,000 population in 1950 to 4.3 beds per 1,000 population in 1983, an increase of 26.5 percent per 1,000 of population[17].

The increase in the number of hospitals, and therefore the number of beds per 1,000 of population, resulted in an increased ability to provide health care. But it also contributed to a rise in the labor force necessary to provide medical care. Between 1950 and 1970 the

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national medical workforce increased from 1.058 to 2.537 million people, an increase of approximately 140 percent[18]. Payroll costs rose from $2,191 million in 1950 to $15,706 million in 1970, an increase in excess of 600 percent[19]. During the same time period, the United States population grew from 151.1 to 203.8 million people, an increase of 34.8 percent[20].

To staff these hospitals, an increase in the number of physicians was necessary. A report by the United States Surgeon General concluded that the number of medical schools in the United States would have to increase to teach and graduate more physicians. The number of schools was not determined but the predicted demand for physicians would require an increase in the number of physicians graduating from medical schools to 11,000 per year, up from the 1950's graduation rate of approximately 7,400 per year[22].

To increase the body of knowledge available to the health care educational system, research in education also had to be supported. Between 1955 and 1960 Congressional support for increased medical research resulted in an increase in the budget of the National Institute of Health from $81 million to $400 million annually[23]. Having increased the supply of hospitals and physicians thereby increasing the national capacity to provide medical care, government policy next addressed how to pay for medical care.

Prior to World War II, health insurance coverage was not generally accepted as an employer-paid fringe benefit as it is today. In

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1946, the AFL-CIO declared health insurance programs for employees to be a high priority[24]. Gains made by union employees may also have been realized by other employees as evidenced by the fact that by 1954 over 60 percent of the general population had some type of hospital insurance[25]. This pool of insured persons would be increased by the advent of two Federal government sponsored health insurance programs; Medicare and Medicaid.

Medicare was initiated on July 1, 1965 under Title XVIII of the Social Security Act. There are two parts to Medicare; the Social Security Hospital Insurance Program for the aged that pays for hospital care (Part A), and the Voluntary Supplemental Insurance Program that pays for physician and other medical practitioner services (Part B). The Medicare program provides health insurance for all persons aged 65 and older. From 1965 to the present time everyone in the United States 65 years or older now had a guaranteed means of defraying hospital costs. While the Part A coverage is automatic, Part B is voluntary in that the individual pays for part of the premium if they choose this coverage.

During the same year, additional legislation was passed to provide a health care payment system based on the individual's financial circumstances or lack of same. The Federal government provided grants to the states for their use in medical assistance programs under legislation named Medicaide. Medicaide is administered by each state, funded jointly by the state and the Federal government, and is provided to the medically and financially needy. Medicaide provided a payment system that enabled the poor to attain access to, and receive health care in the health care

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system.

Thus, the era of increasing the medical supply of physicians and hospitals, 1945 to 1965, ended with legislation providing new sources of funds to pay for health care. The 1970's and 1980's would usher in a new era and government/business policy; containing health care costs would be the dominant objective.

III. Government And Business Efforts To Control Health Care Costs.

Similar strategies were developed by government and business to contain escalating health care costs. These strategies, though taking different implementation forms, were comprised of efforts to:

1) Control hospital fees (prices).
2) Control physician fees (prices).
3) Re-direct part of the cost of health care back to recipients. This is accomplished by the technique of increasing the beneficiary's out-of-pocket costs.
4) Control the utilization and consumption of medical services.
5) Introduce competitive elements to the health care system.

However, since its legislative efforts had been a major force behind the increasing cost of health care costs, as described previously, government could attempt to control government payments for health care by rewriting the terms for payment, contained within the existing legislation(s).

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A. Government

More than 30 laws affecting Medicare and Medicaid were enacted from 1980 to 1987[26]. The sole objective of these legislative changes was to reduce government payments for health care. Exhibit A, which follows this page, presents some of the Medicare legislative changes and their respective financial results are presented. The cumulative financial savings of these legislative changes are as follows:

1) Controls placed on the fees charged by physicians produced $2.24 billion in savings for the Federal government[27].

2) Controls placed on the fees charged by hospitals produced $4.66 billion in savings for the Federal government[28].

Foremost among the controls on Hospital fees was the enactment of the hospital Prospective Payment System (PPS) contained in the Tax Equity and Fiscal Responsibility Act (TEFRA) legislation, placed in effect on September 3, 1982.

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Exhibit A
Medicare
Federal Legislative Changes
1980-1987

Legislation Name	Effective Date	Cost Contained	Action Taken	Savings ($000's) Part A Hospital	Part B Physician
Omnibus Reconciliation Act (ORA)	12/05/80	A) Physician services	Physician services would be paid based on date services were rendered, not the date claim was processed	0	279,000
		B) Benefit payments when automobile/ other liability insurance is available	Benefits were coordinated with other insurances making Medicare a secondary payee	0	45,000
Omnibus Budget Reconciliation Act (OBRA)	8/31/81	A) Limited cost differentials for routine nursing salaries[1]	Reduced reimbursement to hospitals for routine nursing care costs	235,000	0
		B) Payments to physicians	Increased part B deductible, increasing patient out-of-pocket costs for Physician services	0	260,000
Tax Equity and Fiscal Responsibility Act (TEFRA)	9/03/82	A) Reimbursement system for hospital services	Limited the rate of increase in Medicare payments per case to hospitals for a 3 year period[2]	3,640,000	0

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Legislation Name	Effective Date	Cost Contained	Action Taken	Savings ($000's) Part A Hospital	Part B Physician
		B) Payments for persons age 65-69 who remained employed	Medicare required coverage for ages 65-69 to be identical to other employees. Made Medicare secondary payee	335,000	75,000
		C) Reduced payments to hospital Radiologists and Pathologists for hospital in-patients	Reimbursed Radiologists and Pathologists at 80% of reasonable charge (reasonable defined by medicare).	0	280,000
		D) Increases for Part B premiums paid by beneficiaries	Temporarily froze a provision mandating increases in premiums to increases for Social Security payments	0	440,000
		E) Nursing salary differentials	Eliminated the routine nursing salary differential paid to hospitals	44,000	0
Deficit Reduction Act (DEFRA)	7/18/84	A) Outpatient Laboratory costs	Established fixed reimbursement schedules for outpatient laboratory services	0	235,000
		B) Physian fees to beneficiaries	Physician fees frozen 7/1/84 - 9/30/85	0	325,000

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Legislation Name	Effective Date	Cost Contained	Action Taken	Savings ($000's) Part A Hospital	Part B Physician
		C) Shifted costs for spouses, ages 65-69 to employed	Required employer-sponsored group health plans to cover employees' spouses who are 65-69. Medicare became secondary payee	235,000	80,000
Comprehensive Omnibus Budget Reduction Act (COBRA)	4/07/87	A) Hospital reimbursement for the indirect costs of medical education	Reduced the amount paid to hospitals for medical education	175,000	0
		B) Maintained new caps on Physician fees	Curtailed and reduced Physicians' fees	0	125,000
				4,664,000	2,244,000

Source: United States General Accounting Office, Report to the Chairman, Select Committee on Aging, House of Representatives, Medicare and Medicaide. Effects of Recent Legislation on Program and Beneficiary Costs, Appendix I and II, General Accounting Office, Washington, D. C. 20548, April 8, 1987.

Notes: [1]Hospitals originally argued the elderly required more intense nursing care and services.
[2]PPS was to be budget neutral in its initial years, therefore all savings accrued to TEFRA legislation.

The PPS method for paying hospitals was a radical change from the existing Medicare Cost Reimbursement System (CRS). Under CRS, hospitals were paid by the Federal government as follows:

1) The hospital documented its total costs incurred for the care of a specific patient.
2) A government approved rate of return was then added to this cost figure.

Clearly, the higher the hospital's costs, the higher the return in dollars which resulted from applying the percent rate of return. As a result, no prudent manager of a hospital devoted any attention to reducing costs because that would also reduce the hospitals dollar return. The PPS approach forced hospital management's attention to costs.

Under PPS, payments to hospitals were not based on the cost of providing care but were based on a predetermined payment according to the diagnosis descriptive of the patient's medical problem. The initial difficulty for this system was developing a methodology for categorizing patient illnesses into a finite (and manageable) number of possibilities, and assigning a payment for that illness. This was accomplished by a group of Yale University researchers who developed a system known as Diagnosis Related Groupings (DRG's). DRG's are derived by taking all the possible diagnoses identified in the International Classification of Diseases (the ICD-9-CM system is used universally by physicians in the United States), classifying them into 23 major diagnostic categories based on organ systems, and listing the various diagnosis possibilities for each organ. The result was a list of 468 DRG's, each of which was assigned a payment. Now the hospital had to make sure their costs were

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below the payment level or it would suffer a loss for treating the patient. In addition to placing controls on the amount of hospital and physician fees the government would pay, these legislative changes increased the amount paid by the recipient of care (beneficiary) of both bills. As a result, beneficiary out-of-pocket costs increased almost 100 percent[29].

The utilization and consumption of medical services by patients also may have been curtailed by these legislative changes. Utilization refers to the number of times patients access the health care system as represented by an admission to a hospital. Utilization is measured by the number of days a patient stays in the hospital per admission. The average number of days per admission paid for by Medicare dropped from 10.7 in 1980 to 7.9 in 1985, a decrease of over 26 percent. Lastly, the number of admissions per 1,000 Medicare beneficiaries decreased from 400 in 1983 to 365 by 1985[30].

Competition among health care providers also assisted government and business to control health care costs. Government's initial attempts to encourage competition occurred during Richard Nixon's initial term in office. President Nixon's 1971 Health Message to Congress endorsed and began legislative efforts to encourage the development of Health Maintenance Organizations (HMO's). The major difference between conventional health insurance and HMO insurance is the payment methodology. Conventional insurance pays for each service provided to a subscriber, no matter how many services are provided. Therefore, there is no risk to the providers of medical services; rather, the insurance

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pays for all risks. Under HMO insurance plans, the providers of medical care (hospitals and physicians) are placed at risk rather than the insurer. This is done by prepaying providers an actuarily determined portion of the health insurance premium for every insured person who designates that provider for their care. That is, out of the premium dollars charged to and paid for by the employer, portions are allocated to cover services provided to their insured employees by physicians and hospitals. These services are paid for prior to the delivery of the service (thus the name prepaid care) and are based on a dollar value per person insured (capitation).

B. Business

Business has utilized a number of strategies to contain health care costs including:

1) Increasing the use of managed care products such as Health Maintenance Organizations (HMO'S) and Preferred Provider Organizations (PPO's).

2) Increasing beneficiary (recipient of care) out-of-pocket costs through cost sharing.

3) Controlling utilization and consumption of medical services.

These strategies are intended to save the employer money by controlling the prices charged by providers (hospitals and physicians), increasing the amount the insured employee pays for health care received, and limiting the use and consumption (quantity) of medical services to that which is absolutely necessary.

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1. Health Maintenance Organizations

Utilizing HMO's has become a very popular strategy for businesses. The number of HMO's has increased 900 percent over the 15 year period 1971 to June 1, 1985, with 39 HMO's in operation in 1971 increasing to 550 in 1985[32]. Total enrollment has risen to almost 24 million people during this time period[33]. By providing comprehensive medical care for a prepaid fee, providers assume the financial risks associated with the delivery of health care, not the employer, who pays a fixed premium. Therefore, the providers fees are controlled since the providers are responsible for providing care regardless of their costs.

In most HMO's physicians are paid a fixed fee per person (capitation) with a negotiated percentage of that fee held in escrow by the insurer (withhold). This withhold is paid to the physician only if the aggregate costs of the insurance plan are held to a specific level. Typically this is done to encourage the physician to send patients to the hospital or for other expensive services only when necessary. This is a very effective way to control physician price since it is predetermined. However, Exhibit B on the following page demonstrates that attempts to control hospital prices through the use of HMO's has produced mixed results. The likelihood of successfully negotiating reduced fees with a hospital is unlikely in low population areas, but increases in likelihood when the hospital is located in a higher population area. Sixty-seven percent of hospitals in population centers of less than 100,000 people would not negotiate price, as compared to 37.5 percent of hospitals in population centers of 100,000 to 250,000 expecting full price, to

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Exhibit B

HMO Payment Methods Used in Hospital Contracts During Fiscal Year 1985

Payment Type	All Hospitals	Rural	By Population (000's)					
			<100	100-250	250-500	500-1,000	1,000-2,500	>2,500
1) Full Charges	27.1%	50.0%	67.0%	37.5%	33.6%	25.6%	25.6%	16.7%
2) Discounted Charges	25.0	29.3	5.5	25.0	22.4	26.0	23.4	26.9
3) Per Diem Rate[A]	16.3	2.1	0.0	10.8	21.0	20.7	16.1	17.8
4) Multiple Diem[B]	13.8	2.9	0.0	12.5	6.3	11.4	18.0	16.5
5) Fixed Rate Per Diem[C]	7.8	6.4	5.5	6.7	6.8	6.5	9.0	8.0
6) Capitation Fee	4.1	2.9	1.1	0.8	1.0	2.7	5.0	5.7
7) Billed Charges up to a Maximum Level	2.8	2.9	5.5	4.2	3.4	3.1	1.7	3.3
8) Retrospectively Applied Formula	2.4	2.9	5.5	1.7	3.4	2.4	0.7	3.7
9) Fee for Leased Beds	0.8	0.7	0.0	0.8	2.0	0.3	0.3	1.4

Source: Managed Care, Formal Hospital/HMO Contracts Increase: Survey; Hospitals, July 20, 1987, Derived from Table 2, P. 48.

[A]Usually covers all costs of services provided by the hospital for one average day of care.
[B]Unbundles hospital services. Services are then priced separately.
[C]Fixed cost negotiated using the PPS, DRG's classification.

27.1 percent of all hospitals expecting full price. Hospitals in population centers in excess of 2.5 million people expect full price only 16.7 percent of the time. A variety of negotiated hospital prices are also depicted in Exhibit B which supports the conclusion that the lower the population the less likely a hospital will negotiate its fees.

However, HMO's have been very successful in controlling utilization and consumption of services. A 1981 Rand Corporation study found that hospital utilization for HMO's was 40 percent lower than traditional health insurance programs that provided full coverage for the insured and did not include cost sharing[34]. This same study concluded that HMO's reduced utilization by 20 percent over health insurance plans requiring a 5 percent copayment for medical services by the beneficiary[35]. A General Accounting Office study found that participation in HMO's resulted in hospital utilization 59 percent lower than the utilization pattern of the general population. Further, HMO's were found to be 38 percent lower than the average utilization patterns of all persons with health insurance coverage through all Blue Cross plans nationwide[36].

Despite these results, HMO's may not reduce the overall rate of cost increases in employer paid premiums due to a Federal requirement that employers must pay the same amount for an HMO premium as the employer pays in premiums for traditional health insurance plans. Thus, the employer pays premiums based on the entire community's costs, not the specific costs of the employees of a specific employer enrolled in the HMO.

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The key determinant is how premium prices are calculated. HMO's generally must use community experience ratings to establish premium prices. That is, the entire community's health care cost experience is used. Most traditional insurance plans use the specific experience of the insured group to establish premiums. Therefore, community ratings have the potential to have a higher premium price. The employer's potential for savings will depend on the type of insurance that younger (and healthier) employees choose. If young employees choose the HMO, employer savings may not materialize since they must pay the community rated premium. Conversely, if these employees choose traditional insurance, and their costs are less, this will be reflected in a lower employer premium cost because of the use of specific ratings.

The U. S. Department of Health and Human Services has proposed that this requirement be ended[37]. Until this provision is changed, employers may obtain control and savings only in the initial years that employees enroll in the HMO. If legislatively permitted, employers will achieve the maximum amount of savings from HMO's when employer premiums are calculated using the employees specific costs experience. Then the efforts of the employers will need to shift to educating employees about health care costs and plans, and especially HMO's, so that employees will be making an informed choice concerning health insurance plans. To date, unfortunately, employers have shown little skill in educating employees regarding the alternatives and costs of various insurance plans[38].

A further impediment to the growth of HMO's, from their origin in the early 1900's until today, has been organized physician

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resistance. This resistance is understandable since HMO's attempt to control the utilization of medical services which is viewed by physicians as their responsibility, not the responsibility of an outside agency. Traditional plans pay the fee the physician charges for every service provided. Since this service is provided exclusively at the discretion of the physician, the physician determines the utilization of services and benefits economically by providing those services. It is understandable that since HMO's attempt to control fees and utilization, opposition is encountered, as can be seen in Exhibit C which follows this page.

2. Preferred Provider Organizations

Preferred Provider Organizations (PPO's) are also becoming more popular for employers. PPO's, sometimes called Preferred Provider Arrangements (PPA's) are agreements between health care providers (physicians and hospitals) and third-party payors (insurance companies or businesses themselves), to provide health care at a discounted price. Generally the insured employee is free to choose any physician or hospital they prefer, but they are given financial incentives (due to lower provider fees), to choose from the discounting preferred providers. However, unlike HMO's, the providers assume no risk for the medical care needs of the employee other than those they specifically provide, since they are paid only when services are provided.

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Exhibit C

Resistance To HMO's

Year	Event	Physician/Group Name	City/State	Opposition Activity
1910	Prepaid Medical Contract	Drs. Curran & Yocum/ Western Clinic	Tacoma, WA	Pierce County Medical Society tried to block these contracts
1910's	Prepaid Medical Contracts	Dr. Bidge/The Bidge Company	Tacoma, WA 20 other locations in WA and OR	Bureau unable to prevent prepaid medical contracts
1927	Shares sold to individuals in return for hospital care	Dr. M. Shadid	Elk City, OK	Medical Society revoked Dr. Shadid's membership, but eventually paid him $300,000 in damages for its anticompetitive actions as a result of a legal suit.
1929	Prepaid contract with Los Angeles Water & Power Department employees	Drs. Ross & Loos/ Ross-Loos Clinic	Los Angeles, CA	Both physicians expelled from Los Angeles Medical Society, later reinstated after an appeal to the A.M.A.
1932	Report Recommendation: groups of consumers, through various organi-	Committee on the Costs of Medical Care Report, 1983	U.S.A.	American Medical Association (A.M.A.) strongly opposed pre-

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Year	Event	Physician/Group Name	City/State	Opposition Activity
	zations, pay installments into common fund and arrange with physicians to furnish them with complete medical services in return for regular payments.			paid medical care programs.
1937	Group Health Association of Washington, D. C. formed by Home Owner's Loan Corp. because of financial hardships due to medical problems causing mortgage defaults.	Group Health Association	Washington, D.C.	District of Columbia Medical Society lost major Supreme Court Decision cementing right of HMO's to exist.
1947	Consumer Group in Seattle formed pre-paid plan.	Group Health Cooperative	Seattle, WA	1957-King County Medical Society lost court case which established rights of consumers to develop pre-paid medical practice organizations.
1973	Health Maintenance Act of 1973 proposed by President Nixon.	HMO Act of 1973	USA	Federal law to encourage formation of HMO's by providing funds for research and development, weakened by AMA lobby efforts providing stipulations and limitations restricting growth which was

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Year	Event	Physician/Group Name	City/State	Opposition Activity
				removed by amendments in 1976 and 1978. A final restriction exists which requires insurers use Community Rating to calculate premiums.
1976	HMO Act of 1973 Amended			
1978	HMO Act of 1973 Amended			

Source: T. R. Mayer, M. D. and G. G. Mayer, R. N., E.D.D., HMO's: Origins and Developments, New England Journal of Medicine, Vol. 312, February 28, 1985, PP. 590-594.

PPO's are growing rapidly, outstripping HMO's in both number of locations and enrollment according to Modern Healthcare's 1987 multi-unit provider survey[39]. According to the American Hospital Association (AHA), 33 PPO's were operating in 1982 with the number growing to 115 in 1984, an increase of almost 250 percent in two years. These PPO's are currently providing insurance for 1.3 million people[40]. To be successful PPO's must discount services and be composed of providers whose medical practices carefully use health care resources and not allow overutilization by patients.

Care must be taken to ensure that the discounts are real, that is, discounted prices are based upon the average price of a particular service, not on a discount of a high price. This may add costs for the employer since they will need to develop a data base for the costs of medical services within a specific delivery area. Currently, PPO's are a growing competitive alternative to HMO's and traditional insurance plans. Though most of the savings are due to discounted prices with hospitals and physicians[41], the potential exists to reduce utilization. By accumulating data on company-specific employee health care patterns and comparing this data to national or regional norms and standards, excess utilization can be identified and steps can be initiated to control utilization. Inefficient providers will be forced to conform or be deleted from the employers preferred list of providers. The potential result will be that the employers premium cost will reflect the full savings attributable to price reductions and utilization controls.

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3. Beneficiary Out-of-Pocket Costs

By increasing the costs borne by the employee for their own health care costs, the employer may be able to realize a reduction in premium cost. Two common ways in which employers try to achieve this savings include use of deductibles and copayments. A deductible is the amount of the initial expense the insured person pays prior to the insurance plan making any payments. For example, the insured will pay the first $100 of medical costs incurred. A copayment is the proportion of the medical costs that the insured person pays of the medical costs, sometimes after the deductible amount is paid. For example, after meeting a $100 deductible, the insured pays 20 percent of all costs incurred up to a predetermined maximum amount.

According to 1985 U. S. Department of Labor data, 90 percent of all health plan participants in medium and large businesses had a deductible and/or a copayment for both hospital room and board, and physician services provided outside the hospital setting[42]. Further, the dollar amount of the cost sharing has been increasing for employees. Data on employers health insurance plans in 1985 showed that 45 percent had raised their deductible amounts, 25 percent had raised their copayments and 31 percent had raised the percentage of the premium that employees were required to pay[43].

Copayments and deductibles make the insured more sensitive to the costs of the medical treatment received. This increased price consciousness may help reduce unnecessary use of medical services[44].

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Cost sharing, however, does not effect the cost of hospitalization and may increase costs in the long run, if necessary medical services are delayed beyond the early stages of a disease when treatment costs may be lower. Research to date has not yet verified this argument. What is clear, however, is that individuals use health services less often when confronted with increased deductibles and copayments, according to two different Rand Corporation studies[45,46]. The results of these studies show the following:

1) Deductibles reduce expenditures for ambulatory care more than for inpatient hospital care.

2) Cost charing for ambulatory care reduces hospitalizations but cost sharing for hospital care does not reduce hospitalization.

3) Cost sharing has no effect on hospitalization of children.

4) Medical service consumption and utilization falls steadily as cost sharing increased.

Cost sharing does lower consumption of outpatient care by making the patient more aware of the costs, but once the physician determines that hospitalization is necessary, cost sharing generally has no effect.

The Rand Corporation Study demonstrated that cost sharing can reduce the consumption of routine services such as tests and hospital admissions, with no apparent short run compromise in the quality of health care. However, cost sharing does not control utilization as efficiently as HMO's[47]. Employers have been reluctant in the past to dictate where an employee must receive their health care, therefore cost sharing has become an easier alternative to use in controlling health

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care costs. As Table VI below indicates, individuals were paying a smaller percentage of their health care costs in 1983 (27.2 percent) than was they did in 1966 (49.4 percent). The result was a decrease in the individual's share of payments by 44.9 percent. By contrast the government's share rose 56.3 percent and private insurance, primarily paid by business, rose 39.3 percent. The price for freedom of provider choice, and insurance plan choice, will likely be paid for by increased cost sharing to be borne by the insured employee.

Table VI

Health Care Expenditures By Source Of Payment As A Percent Of Total

Year	Individuals	Paid by Private Health Insurance	Government	Philanthropy and Industry
1966	49.4%	22.9%	25.4%	2.0%
1975	32.5%	26.6%	39.5%	1.4%
1980	28.5%	30.7%	39.6%	1.2%
1981	27.9%	31.1%	39.8%	1.2%
1982	27.1%	31.9%	39.8%	1.2%
1983	27.2%	31.9%	39.7%	1.2%
Percent Change 1966 - 1983	-44.9%	+39.3%	+56.3%	-40.0%

Source: Derived from Table 58, P. 50. Source Book of Health Insurance Data, 1984-1985. Health Insurance Association of America, 1850 K Street, N. W., Washington, D. C. 20006.

4. Utilization And Consumption Of Medical Services

There have been a number of changes in traditional indemnity insurance plans in an attempt to control health care costs. Among these changes has been the requirement for preadmission testing. Many tests routinely performed when the patient is hospitalized can be performed in

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the less expensive outpatient setting prior to being admitted to the hospital. This requirement typically utilizes financial incentives such as paying outpatient tests in full versus paying 80 percent of a hospital inpatient bill, while the insured pays the remaining 20 percent. By having the tests done in advance of the admission to the hospital, charges for one or more days of hospital room and board charges may also be saved.

Another change in insurance plans has been to encourage outpatient versus inpatient surgery. Moving the delivery site for surgery to an outpatient setting is less expensive because no hospital room and board charges are incurred. Savings will vary and will depend on the relative cost of care in the outpatient surgery suite and recovery room versus the cost of hospital inpatient room and board expenses. An obvious saving is less consumption of hospitalization days. Outpatient surgery is becoming more common and more medically acceptable to surgeons. An estimated 20 to 40 percent of the 18 million surgical procedures performed in hospitals each year could be performed in outpatient settings, producing the potential for significant savings[48].

The employer must be careful that hospitals don't raise the price of outpatient services to compensate for the decline in inpatient revenue. In their analysis of hospital revenues and costs, Davis, et. al. found that while hospital admissions declined three percent and total hospital inpatient days declined eight percent, hospitals were able to increase profit margins despite reduced utilization and little downward trend in costs[49]. It can be inferred that price increases in the

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outpatient setting may have occurred. However, preadmission testing and ambulatory surgery are currently perceived by employers as effective cost containment measures. A 1984 Wyatt Company survey found that 82 percent of 1,115 employers surveyed encouraged preadmission testing and 69 percent encouraged ambulatory survey[50]. Similarly, an Equitable survey found that 47 percent of 1,250 firms with 500 or more employees had introduced financial incentives over a three year period to have tests and surgery performed on an outpatient basis[51].

Another method utilized to control health care costs has been the use of second surgical opinions. Second opinions are intended as a review process which provides the patient (or employer) with a second doctor's opinion as to the appropriateness of the surgery. Obtaining a second opinion can potentially reduce unnecessary surgeries. The Comptroller General's study referenced in footnote 48 indicates that nine to twelve percent of all surgeries might be avoided if patients seek second opinions. Second opinions provide a quality control screening measure and may even reduce the individual's anxiety regarding the need for surgery. As a result, employer use of second surgical opinions has increased to 80 percent according to the Wyatt Company Survey[52]. The Equitable Survey found that 54 percent of surveyed employers have introduced this type of program in the last three years[53].

In addition to encouraging delivery of care in an outpatient setting, other alternative delivery settings have been encouraged, including home health care and hospice care.

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Home health care is intended to reduce the hospitalization time associated with recovery, by reducing both the number of hospital days and the bill for hospital care. Home health care also reduces the risk of potential contact with other illness while hospitalized, thus decreasing the potential for complications and increased cost of treatment. Among the types of treatment which can be done at home are occupational, physical and speech therapy. Various levels of nursing care (skilled or unskilled), and kidney dialysis can also be provided through the home health care system.

Hospice care can be provided in the home or in a hospice facility. Hospice care is given to terminally ill patients in a non-hospital setting. Typically, hospices counsel terminally ill patients and their families while limiting medical intervention with the patient's consent.

While there is little research documenting cost reductions related to home health care and hospice care, anecdotal evidence suggests that coverage of care outside the hospital setting can reduce health care expenses. As a result, 62 percent of businesses surveyed offered coverage for home health or extended care in 1982, according to the Bureau of Labor Statistics[54]. By 1985, 67 percent had extended care coverage and 56 percent offered home health coverage[55].

Employers have increasingly been considering the effect of encouraging employees to live a more healthy life style. The general concept is generally referred to as wellness programs. Promoting healthy

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lifestyles and disease prevention are the cornerstones of any wellness program. Data on the effectiveness of wellness programs are scarce because benefits are long term and difficult to evaluate. However, the concept is simple; healthy employees will require fewer health care services, thereby decreasing health care costs. A growing number of businesses have begun wellness programs. According to the Wyatt Company survey, 10 percent of the firms surveyed had initiated wellness programs[56]. The Equitable survey showed that 26 percent had initiated a wellness program within the previous three years[57].

Just as HMO's have aptly demonstrated, the most significant savings occur by controlling utilization through formal utilization review systems. Utilization review focuses on the medical treatment patterns of physicians. These treatment patterns are reviewed as to their appropriateness. In addition, pressure is placed on health care providers to document reasons for hospital stays that are longer than indicated by established medical standards. They are intended to induce physicians to monitor their own treatment methodologies and to help focus attention on variations in medical practice that might be unnecessary.

Typically a utilization review program can be either a preadmission review, a concurrent review or retrospective review. A preadmission review usually requires certification prior to a patient being admitted. This review evaluates the necessity for hospital admission to provide medical care, including the number of days that care will be provided barring any complications. A concurrent review monitors care while the patient is being treated in a hospital. It is also

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intended to eliminate unnecessary hospital days but is less effective than the preadmission review because the patient is already in the hospital. Lastly, retrospective review is an examination of care already provided. The care is reviewed for appropriateness of the treatment provided, including the length of the stay in the hospital. Since the review is done after care has been provided, this type of review provides the least opportunity for savings.

Though not yet very common in traditional insurance programs, utilization review is the cornerstone for success in HMO's and PPO's. These programs can be expensive and complex to implement and administer; however, among large employers they are becoming more common. The 1984 Wyatt Company survey showed that 14 percent of the respondents had preadmission authorization programs[58]. The Equitable survey found that 28 percent of the surveyed firms had introduced at least a preadmission authorization program since 1983, while 27 percent had initiated a more general utilization review program since 1983[59]. Another survey conducted in 1985 of the 633 largest U. S. employers found that[60]:

1) 45 percent of the firms had a concurrent utilization review program, up from 17 percent in 1983 with reported savings approximating seven percent of paid insurance claims.

2) 37 percent of the firms used preadmission authorization programs, up from 16 percent in 1983 with reported savings approximating eight percent of paid insurance claims.

3) 30 percent used retrospective review programs, up from 19 percent in 1983 with reported savings approximating two percent of paid insurance claims.

Utilization review programs are growing very rapidly and becoming more popular for use by business in their efforts to control their health

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care costs.

5. Other Alternatives To Traditional Indemnity Insurance Plans

Other alternatives have been utilized to control health care costs including self-funding and the auditing of medical bills.

Self funded insurance plans are characterized by the following elements:

1) The organization buys administrative services to process the medical claims of the insured, and usually buys some type of utilization review system.

2) Stop loss coverage is purchased for the insured employees (and their dependents if covered by the insurance) to limit the amount the organization will pay in claims. This may take the form of capping medical bills paid by the organization for each employee, and in the aggregate for their family at a predetermined dollar amount.

The organization has an actuary determine the premium rate as if this were a traditional indemnity insurance plan. The organization creates a fund based on the premium calculation out of which it pays for the claims processing and stop loss insurance, while retaining the remaining cash (perhaps in an interest bearing account). If claims are less than actuarially predicted, the difference, plus interest, is retained as savings. A 1983 Health Research Institute (HRI) survey of 1,500 firms (which included all of the Fortune 500 companies) found that 11 percent of the companies surveyed were self-funded and processed their own claims. Another 25 percent were self-funded but purchased claim processing services. In total, 36 percent of the firms indicated that they were self-funded and reported savings amounting to approximately

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eight percent of claims[61].

In addition to the potential savings, self-funded plans avoid state regulations which specifically state which services the insurance plan must cover. Additionally, they do not pay premium taxes that normally are levied on commercial insurers premiums.

Though there is no research data detailing savings from the audit of medical bills, the HRI survey found that 68 percent of large United State firms audited the medical bills of their employees[62].

IV. Factors Affecting Future Cost Containment Efforts.

1. The Aging Population

Americans are living longer, as evidenced by increased life expectancy for those aged 65 and older, both male and female. This will continue to increase the demand for medical services, thus continuing to place pressure on the government's proportion of the national health care bill. The potential impact on demand can be seen by observing some of the demographic data on the elderly.

In the early 1900's, only four percent of the U. S. population was 65 years of age or older. By 1980 this had swelled to 11.3 percent. The elderly are predicted to comprise 20 percent of the total U. S. population by the year 2030[63]. The demographics of the elderly population itself is changing, as people increasingly live well beyond

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the age of 65. Persons aged 85 or older are the fastest growing segment of the elderly according to a number of studies[64,65,66]. Those aged 85 and older are projected to increase by the year 2040 from nine percent of the elderly population to 20 percent, swelling to a total of 13.3 million persons. Of these, approximately 30 percent will require intense care or personal care assistance either in hospitals, nursing homes or at home[67].

The payment systems developed by Medicare legislation have dramatically increased the elderly's access to the health care system. This access has contributed to increasing the life expectancies of the elderly. Contributing factors to the increase in average life span have been reduction in the number of fatal heart diseases and strokes, improved surgical techniques and early detection of cancer. These advances in medical treatment have been achieved by well funded medical research and treatment programs. However, living longer has increased the elderly's requirements for medical care[68]. Chronic health conditions as opposed to injury and trauma, have become the major cause of death and disability. These chronic conditions will increase the need and demand for long-term care. Therefore, medical success has created an ever-increasing demand for the consumption of geriatric medical services.

As a result, health care expenditures for the elderly are high and will probably continue to grow. The elderly average 1.75 more office visits to physicians, and almost twice as many hospitalizations per 1,000 persons than the population as a whole. In addition, the elderly's average hospital stay in 1982 was 2.6 days more than the national average[69]. On a per capita basis, the elderly consume health care three

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times the average of the balance of the population[70]. This results in less than 12 percent of the population consuming 30 percent of the total U. S. health care dollar[71].

2. Future Government Policy

Despite the overall success in increasing the elderly's access to the health care system, political pressure is building to fund a new program for Medicare recipients. This new program is intended to ensure that the elderly are covered for catastrophic long-term illnesses. Catastrophic insurance is conceptually intended to prevent major medical illness (and its associated costs), from consuming the resources of the elderly person who is ill. Funding this program will increase the Federal government's health care bill.

An alarming number of Americans are not covered by health insurance. This can result from business and economic dislocations such as plant closings or workforce reductions, or simply be the plight of the chronicly poor. Whatever the cause, uncompensated care provided by hospitals and physicians is estimated nationally at $1.7 billion and is increasing[73]. If legislation is passed to resolve this problem, one result will be another increase in the Federal health care budget.

3. Management's Future Role

Managers who are responsible for controlling their organization's health care costs will have a difficult task balancing the

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need to provide adequate health insurance for their employees against fiscal restraint. Managers will have to maintain their vigilance over costs, utilizing the various tools available (e.g., HMO's, PPO's) and creating new strategies, if they expect to see costs abated or controlled. This may also take the form of management becoming more involved than before, through direct negotiations with physicians and hospitals for health care delivery. Success is dependent on the resources committed and the skills of the manager of health benefits who must evolve into a prudent buyer of health care services. Their success is far from certain, but doing nothing will guarantee higher costs.

Summary and Conclusion

We have seen our National policy for our health care system evolve from increasing the supply of hospitals and providers, to the development of payment systems to pay for care, to mechanisms to control overall costs. Containing costs will be the dominant objective for the remainder of this century. A number of control mechanisms have been reviewed and their relative success and use by government and business depicted. Whether these cost containment measures are effective will be a function of the ability of organizations to effectively implement them.

The data suggests that the most effective cost containment tool utilized to date has been effective utilization control strategies. HMO's have been the most successful in reducing unnecessary utilization of medical services long before cost containment was a business and government policy objective. It is the author's opinion that controlling

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utilization works most effective when a group of physicians of all specialties are placed at financial risk for their collective provision of medical services. This ensures that only necessary services are provided at an appropriate cost. In a collective risk scenario, all physicians are concerned regarding the cost and quality of services provided. Perhaps self-insured health insurance plans can someday match the utilization results achieved by HMO's, thus providing the manager with another effective cost containment tool. To date HMO's have a clear edge. Perhaps someone reading this will develop the future's most effective strategy.

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