The Evolution of Health Insurance in the United States*

A dossier by Ronald E. Compton and Neil Schlackman

Summary

Aetna Chairman Ronald E. Compton and Dr. Neil Schlackman, senior medical director for Aetna U.S. Healthcare, provide an overview of the continuing evolution in the U.S. health insurance market, the growing dominance of managed care and the many ways in which managed care can and does enhance the quality of care while controlling costs.

Managed care is an organized system of medical care that integrates financing and delivery of appropriate health care. Managed care plans generally offer several advantages over traditional insurance coverages, including lower costs, more comprehensive benefits, preventive services and lower out-of-pocket expenses for patients. Because managed care relies on performance measurement and use of data, the cost and effectiveness of treatments can be documented. Thus, managed care provides a mechanism to provide better quality care at lower cost.

The managed care model will continue to evolve over time. As rising costs, aging populations and technological advances continue to strain current systems, all parties involved must be willing to confront these issues and devise new ways to ensure that their finite resources are used appropriately to produce the best possible health outcomes.

1. Introduction

Aetna is a leader in the U.S. health care market, with more than 14 million members enrolled in our various health plans. Through our health and group insurance products, Aetna touches the lives of 27 million Americans, or 12 percent of the population. Over the years, Aetna has been at the forefront of many of the changes in the U.S. health care industry.

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A central thesis of this presentation is that, contrary to popular belief, there is no cause-and-effect connection between the cost of care and the quality of care. In medicine, “more” is not “better.” It has been amply documented that the most expensive medical care is not necessarily the best medical care; in fact, often the opposite is true.

In the U.S., health care funding and delivery are largely the province of the private sector, except for the indigent and the elderly, who are covered under government arrangements. Health insurance is usually provided by employers to employees as employment benefits. The genesis of this arrangement occurred just after World War II, when the U.S. had its first experience with wage and price freezes. Because group health benefits were not regulated, labor unions began to press for health and pension benefits as a way to provide additional compensation to American workers. Employers, who were competing for qualified employees, obliged.

For decades, health insurance was relatively simple. In traditional fee-for-service plans, patients visited the doctor. The doctor submitted a bill to the insurer. The bill was paid, no questions asked. Services were relatively cheap, so there were few cost concerns, and physician incomes were substantial. There was no coordination of services or tracking of medical outcomes.

The scenario began to change in the 1980s. Health care costs in the U.S. began to rise steeply, at annual rates of 10 percent a year, compounded. Health care began to consume an ever-larger share of the economy. Today, health care consumes nearly 15 percent of the U.S. gross domestic product.

Health care costs grew for many reasons. There was no incentive to hold down costs; in fact, the opposite was true. Traditional fee-for-service medicine encouraged overutilization of services. Sophisticated new technologies, such as MRIs, were valuable tools when used appropriately, but their usage was not monitored or managed. Physicians saw any attempt at reducing cost as a threat to their incomes. And, there developed a prevalent belief on the part of many Americans that any cost is appropriate to prolong life, even for a short time.

These industry-related issues were compounded by societal problems, such as the rapid growth in the size of the population, the aging of that population, the growing violence in American society and the onset of the devastating AIDS epidemic. As a result, the U.S. spent an ever-increasing amount of money on health care, yet fewer people were covered. Employers were increasingly unable to provide coverage for their employees. They looked to insurers to help them. At the urging of employers, a group of health experts, economists and insurance executives worked together to create a new market-based model. Thus, managed care began its explosive growth.

What is managed care? In its most structured form, managed care is an organized system of medical care that integrates financing and delivery of appropriate health care and measures performance. It manages both the utilization of care and the cost of services provided. I must emphasize that the goal of managed care is not to sacrifice quality for savings. The goal is a system that delivers value by giving people access to quality, cost-effective health care. Managed care can, and does, provide a way to achieve the most efficient, effective results for the money spent on medical care.

Managed care means intervention. Some doctors will claim managed care interferes with their ability to treat patients. However, there is abundant data to show that the coordination of care provided by managed care plans generally offers several advantages over traditional insurance coverages. Those advantages include lower costs, more comprehensive benefits, preventive services and lower out-of-pocket expenses for patients. Because managed care relies on performance measurement and use of data, the cost and effectiveness of treatments can be documented. Thus, managed care provides a mechanism to provide better quality care at lower cost.

There are many forms of managed care. They have in common several key components. Among them are:

- Negotiated arrangements with selected providers to furnish comprehensive services for a lesser fee, or sometimes for a flat fee, called "capitation."
- Explicit standards for selecting providers.
- Formal quality assurance and utilization review programs.
- Use of advanced information systems to track medical outcomes and measure the performance of the provider and the treatments used.
- Emphasis on healthful lifestyles, primary care services and prevention of illness.

The main difference is each plan's ability to coordinate care provided by the doctors, hospitals and other service providers in a cost-effective way. As the level of coordination increases, so do cost savings.

In this paper, we shall focus on health maintenance organizations, or HMOs. They are the strongest form of managed care and thus have had the most significant impact on the health system. HMOs have a good track record for achieving cost savings while offering more comprehensive benefits and lower out-of-pocket costs to patients. Most HMOs cover preventive health care services, such as adult physicals and well-baby care, which are not covered by traditional plans.

HMOs place significant emphasis on prevention and disease management. This focus has had profound, measurable impact on the practice of medicine. For example, among elderly patients covered under the government's Medicare program, those in HMOs are diagnosed at earlier stages of breast and colon cancer. Obviously, this benefits patients in terms of earlier treatment and better medical outcomes, but it also saves money because it costs much more to treat later-stage illnesses.

As managed care has proven that it can contain costs without sacrificing quality, it has become the dominant delivery system for health care in the U.S. And people like it. Between 1988 and 1995, the percentage of Americans in managed care plans jumped from 29 to 70 percent. That growth trend continues.

Managed care has fundamentally and permanently altered the way care is financed and delivered. The following takes you through the U.S. managed care experience, the rise of capitation and its effect on provider behavior, the shift from treating disease to managing health and how that shift has benefited patients, the increasing importance of performance measurement in assessing quality of care, and the incontrovertible data that prove that cost control and quality care can, and do, go hand in hand.

2. Key Issues in Managed Care

1

There has been a rapid and steep rise in spending on health care in the U.S., both as a percentage of the gross domestic product (formerly gross national product) and in comparison to education and defense.

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As costs rose, employers could no longer afford to pay ever-increasing health care premiums, thus larger numbers of people fell into the ranks of the uninsured.

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Health care spending per physician in the U.S. is appreciably greater than in comparable economies. Today, it stands at nearly \$3,500 per physician.

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Similarly, today, health care spending as a percentage of GDP is approaching 15%.

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Although the U.S. spends the most of any nation on health care, the steady rise in spending has not always yielded better quality of care. For example, as measured by World Health Organization, the U.S. has higher rates of infant mortality than comparable economies.

6

Similarly, the U.S. has a greater percentage of low-weight babies than other developed countries.

Growth Trends, 1987 - 1995

Year	Number of Operating HMOs	Enrollment (000)
1987	707	31,024
1988	659	33,715
1989	623	35,031
1990	610	37,538
1991	581	40,388
1992	562	44,373
1993	541	49,095
1994	556	55,006
1995	669	67,575

7

During the last decade, HMOs, the strongest form of managed care, have grown steadily both in number and in enrollment.

Most Physicians are in Managed Care

Source: "Socioeconomic Characteristics of Medical Practice 1993," American Medical Association, Chicago

8

Although physicians as a group have been reluctant to embrace the practice of managed care, in fact, they are joining the system in increasing numbers.

Traditional Provider Approach (FFS)

- Concept:** A fee for each service provided generates an addition to revenue.
- Funding:** Based on number of services provided (fee-for-service) and not related to number of patients.
- Incentives:** To earn more, provide more services or charge more per service.
- The sicker the patient or the later in the disease process, the more services required and the greater the revenue.

9

Under fee-for-service, the financial incentives reward physicians for each service they provide. Thus, the more services provided, the greater the financial rewards.

Managed Care Systems (MCS)

- Concept:** With prepayment of a fixed periodic amount per patient, each service provided is an expense charged against revenue.
- Funding:** Based on number of enrollees served—not on number of services.
- Incentives:** To earn more, MCS must effectively coordinate care consistent with quality.
With risk, MCS has incentive to provide early detection and treatment to make total cost of care less expensive.

10

In contrast, under managed care, services are covered by a prepayment based on number of enrollees. The financial incentives reward the efficient provision of care, with emphasis on early detection and treatment to make care less expensive.

Managed Care Spectrum

11

Managed care encompasses a variety of payment mechanisms. As you move along the spectrum from indemnity to HMOs, the most structured form of managed care, there are more opportunities to coordinate care, to assess the quality of care and to realize efficient expenditure of health dollars.

Key Trends in the Managed Care Market

- The rapid growth of for-profit HMOs
- The rapid growth of network and individual practice association (IPA) models
- The growth of mixed-model HMOs
- Product diversification
- Industry consolidation at the national and local levels

12

Managed care is continuing to evolve as it becomes the primary form of care in the U.S.

Key Trends in the Managed Care Market

- Altered payment arrangements with physicians
- Increased patient cost sharing
- Declining hospital use
- Increased use of clinical guidelines
- Increased use of clinical information systems to drive the process

13

Among the most positive trends is that managed care is increasing our ability to gather and analyze data that will help validate uniform guidelines to monitor and measure quality of care and service.

Rates of Inappropriateness After Physician Review

Percentage of Total Cases Deemed Inappropriate

14

One of the consequences of indemnity insurance rewarding more care is that a significant amount of the care delivered has been found to be inappropriate and/or unnecessary.

Proportion of Procedures Done for Equivocal or Inappropriate Indications among 4,500 Medicare Patients

Source: Chassin et al., JAMA, 1987

15

The Rand Corporation examined the frequency of several expensive, serious medical procedures to determine if they were being done appropriately. As this slide shows, often the procedure was not appropriate or the indications were found to be equivocal.

16

Further studies show that there is significant variation in the frequency with which hospitals appropriately perform the previously mentioned procedures. Data such as this is valuable in understanding how to evaluate the performance of the medical system.

Test Ordering for Hypertensive Patients in the United States (n = 351) vs. England (n = 511)

Test	Ratio of Testing
Electrocardiogram	41:1
Chest Radiograph	6.8:1
Blood Count	5.3:1
Urinalysis	4:1

Source: Epstein et al., JAMA, 1984

17

Studies show that many simple office procedures are performed with far more frequency in the U.S. than in England, yet controlled studies show that the outcomes for patients do not significantly differ.

18

John E. Wennberg, M.D., M.P.H., Dartmouth Medical College, documented that hospital admission rates vary significantly depending not on the nature of the illness or the health of the patient, but, rather, on the number of hospital beds in the patient's community.

‘Geography is Destiny’

“The basic facts are simple; the amounts and kinds of medical care patients consume depend more on where they live than on the diseases they have. In health care, geography is destiny.”

John E. Wennberg, M.D., M.P.H.
Director of the Center for the Evaluative Clinical Sciences
Professor of Epidemiology
Dartmouth Medical School, Hanover, New Hampshire
Hearing before the Senate Finance Committee
October 26, 1993

19

In some cases, the amount and kind of health care an individual receives depends solely on where he or she lives.

How HMOs Paid Primary Care Physicians 1989 and 1994

Source: A. Hillman, W. Walsh, M. Pauly, "Contractual Arrangement between and Primary Care Physicians: Three Tiered HMO and Risk Pools" *Medical Care* (February 1992) 136-143; and M. Gold et al., *Arrangements between Managed Care Plans and Physicians: Results from a 1994 Survey of Managed Care Plans* (Washington: Mathematica Policy Research, 1994.)
Note: HMO is Health Maintenance Organization

20

Capitation is now the most common health care payment method.

Stages of Addiction to Capitation

1. Take it or leave it. No behavioral changes. Gives a "buzz" to the practice.
2. Beyond the point of no return. Behavior begins to change.
3. Behavior has changed. Capitation is now more desirable than FFS.

21

Studies show that the more capitation is used, the more it influences physician behavior.

It is clear that once a threshold of the percentage of patients capitated in a practice is reached, physician behavior changes and there is greater attention paid to the issues.

Two Bands of Performance Problem of 'Technical Integration'

22

Hospital days are lowest in California, where managed care has grown in popularity over the past 20 years and capitation predominates.

Hospital Occupancy Rates Under Capitation

23

It has been estimated by researchers that only 43% of existing hospital beds would be needed if just half of the population were covered under capitated arrangements. If the entire population was capitated, far fewer beds would be needed.

Assumption of Risk = Change in Behavior

24

A study in California on the effect of capitation on physician behavior found an 80% decline in cardiac catheterizations after capitation was implemented. Since we know that there is significant overuse and inappropriate use, the question that needs to be answered is, "Which rates are the right ones?"

25

Managed care plans manage their networks by selecting providers and reviewing their qualifications. Plan members must choose among those providers. Thus, how quality is determined, evaluated and measured takes on added importance.

New Era of Measurement and Accountability

- Doctors
- Hospitals
- Managed care organizations

26

All participants in the delivery of care will benefit from the increased emphasis on measuring quality, but they will have to provide objective evidence of their accountability.

Sources of Information

• Claims	• Medical charts
• Encounters	• UR system data
• Discharge abstracts	• Surveys
• Pharmacy data	• Outcome instruments
• Laboratory result data	• Public databases

27

Quality measurement requires sufficient access to a vast array of data as well as sophisticated systems and processes to manage and measure that data.

28

An example of data measurement shows a pharmaceutical evaluation of two drugs and the effectiveness of each in controlling cholesterol.

29

Aetna U.S. Healthcare's compensation programs reward physicians for providing quality care.

30

Quality of care is measured a number of ways, ranging from patient perceptions to medical outcomes data.

31

Measurement can create guidelines that influence patient behavior. For example, when Aetna U.S. Healthcare encourages members over age 64 to get flu vaccines, a greater number of them do. Fewer are ill and there are fewer hospitalizations and lower costs. Everyone benefits.

Aetna U.S. Healthcare Chronic Disease Prevalence Statistics

Chronic Disease	Estimated Prevalence	Current Membership
Hypertension	9.0	108,884
Low Back Pain	7.2	83,083
Nonspecific Gastritis/Dyspepsia	7.2	85,517
Asthma	6.6	77,665
Migraine and Other Headaches	4.4	50,747
Diabetes Mellitus	3.1	39,331
Depression	2.9	36,180
Ischemic Heart Disease	2.9	33,963
Hypothyroidism	1.4	18,144
Epilepsy	1.3	16,403
Rheumatoid Arthritis	1.3	21,792
Osteoarthritis	1.2	13,811

32

The ability to manage certain chronic diseases requires systems to understand the affected population and its risk factors so that early intervention is possible.

Aetna U.S. Healthcare Chronic Disease Prevalence Statistics

Chronic Disease	Estimated Prevalence	Current Membership
Benign Prostatic Hypertrophy	0.9	10,898
Cholelithiasis	0.8	9,700
Cerebrovascular Disease	0.8	9,344
Kidney Stones	0.8	8,786
Congestive Heart Failure	0.7	8,120
Chronic Obstructive Pulmonary Disease	0.6	7,247
Diverticular Disease	0.6	7,086
Peptic Ulcer Disease	0.5	6,255
Atrial Fibrillation	0.4	4,727
Hyperthyroidism	0.3	3,310
Chronic Renal Failure	0.1	1,648
Multiple Sclerosis	0.1	1,436

33

Aetna U.S. Healthcare is able to characterize patients and monitor more than 60 chronic diseases.

34

Aetna U.S. Healthcare has identified 80,000 diabetics, focusing special efforts on the 1% of diabetics who consume more than half of the total cost of diabetes treatment.

35

Diabetes is the No. 1 cause of blindness in the U.S. Aetna U.S. Healthcare's diabetes program proactively encourages diabetic patients to get the special eye care they need. The increase in the eye exam rate was due to a program of identification of active intervention of members and physicians.

36

By encouraging diabetics to get eye exams, we are able to detect problems early.

Detection and Initiation of Laser Treatment for Diabetic Retinopathy

Measure	Results
Previously Screened Members	15,670
Previously Unscreened Members	24,353
Prompted Members	2,674
Prompted Rate	11.00%
Prompted Laser Therapy Members	48
Prompted Laser Therapy Rate	1.80%

37

Early detection leads to early treatment. For example, 48 of our patients in Southeastern Pennsylvania who were encouraged to get eye exams later had laser therapy that helps to prevent blindness.

Diabetes Report Family Practice Associates of Anytown

Practice Type: Family Practice Reporting Time Period: 07/01/93-06/30/94
Office Address: Anytown, PA 19422

Number of current USHC members identified with diabetes: 185

1. Estimated overall prevalence of diabetes**	3.2%	3.1%
1a. Estimated overall prevalence of diabetes age 0-19*	0.6%	0.2%
1b. Estimated overall prevalence of diabetes age 20+	3.8%	4.4%
2. Diabetes with pharmacy plan on insulin**	30.1%	25.1%
3. Average number of annual primary care visits per diabetic**	7.1	4
4. Diabetes who visited their physician at least once during reporting period**	9	
5. Diabetes with at least 2 glycosyl hemoglobin tests during reporting period**	10.6%	10.6%
6. Diabetes receiving retinal eye exams during reporting period**	10.6%	10.6%
7. Diabetes receiving cholesterol screening during reporting period**	10.6%	10.6%
8. Diabetes receiving intravenous treatment during reporting period**	10.6%	10.6%
9. Annual incidence of lower extremity amputation in diabetes**	0.0%	0.2%
10. Emergency Room visits specifically for diabetes/HbA1c**	8.2	
11. Total admissions (acute) specifically for diabetes/HbA1c**	36.4	34.8
12. Admissions for ketoacidosis, hyperosmolar coma, or other complications/HbA1c**	19.2	8.5
13. Admissions for hypoglycemia/HbA1c**	0.0	0.0
14. Admissions for retinopathy/HbA1c**	0.0	0.0
15. Prevalence of ischemic heart disease in diabetes**	10.6%	11.2%
16. Prevalence of peripheral vascular disease in diabetes**	0.6%	0.6%
17. Prevalence of neuropathy in diabetes**	0.6%	0.6%
18. Prevalence of retinopathy in diabetes**	0.6%	12.7%
19. Annual incidence of lower extremity amputation in diabetes**	0.0%	0.2%

20. Pharmacy \$/diabetic/month	\$54.11	\$60.21
21. Inpatient days (acute) /1000 diabetic/year	\$1,551	\$1,452
22. Inpatient acute and nonacute \$/diabetic/month	\$173,088	\$175,10
23. Emergency Room \$/diabetic/month	\$1.97	\$3.14
24. Short Procedure Unit \$/diabetic/month	\$11.92	\$12.3
25. Outpatient Fee-For-Service \$/diabetic/month	\$65.10	\$71.00
26. Total Fee-For-Service \$/diabetic/month including pharmacy**	\$257	\$264.58

* Based on members who were in the health plan for the full 12 months.
** Results should be interpreted with caution because of small numbers.

38

An example of a physician's report card compares care given and medical outcomes. Feedback of information on performance is critical to improving care.

Asthma Prevalence by Age Group

39

Information about the prevalence of asthma in certain age groups helps Aetna U.S. Healthcare manage care of asthma patients more effectively.

Primary Care Office Report	
1. Member Survey Results:	
Ability to schedule routine appointments	★★★★
Ability to schedule appointments for illness	★★★★
Ability to contact the doctor when the office is closed	★★★★
Office's ability to keep appointments on schedule	★★
Personal concern of the doctor(s)	★★
Courtesy of the office staff	★★
Ability to get test results	★★★★
Overall evaluation of medical care provided by this office	★★★★
Would recommend this practice to others	87%
2. Results of Medical Chart Review	Qualified ★
	Very Good ★★
3. Participate in Aetna U.S. Healthcare Medical Education Programs	Excellent ★★★
YES	Distinguished ★★★★★

43

The primary care practice report card, which documents performance on issues important to members, can help them choose their primary physicians.

3. Conclusion

Managed care was and has evolved into a system that was initially designed to control runaway costs without sacrificing quality, a system that has vast power to promote and ensure quality.

Our experience in the U.S. was that radical changes to the financing and delivery of health care were not only necessary, they were inevitable. Further changes are inevitable as well.

What can we expect from managed care in the next millennium?

The most important aspect of managed care going forward will be advanced technology systems that improve the flow of quality, performance and outcomes-related data throughout the system.

Development of outcomes-measurement tools will continue to accelerate, primarily as it becomes increasingly clear that all parties involved will benefit from solid evidence that the cost and effectiveness of treatments can be documented. This, in turn, will ensure that resources are used appropriately to produce the best possible health outcomes.

Programs that empower and educate consumers will become even more important. They include a range of preventive health, health promotion, self-care, patient education and consumer information programs.

Managed care is a model that has many irrefutable benefits. But, that does not mean managed care is a panacea. Although managed care has already achieved many of the desired goals, there is more to be done in the areas of cost containment, quality assurance and access to care for all citizens. The pressure of rising costs, aging population and technological advances will continue. That means the health care system — and health insurers — must continue to evolve to address these and other issues.