

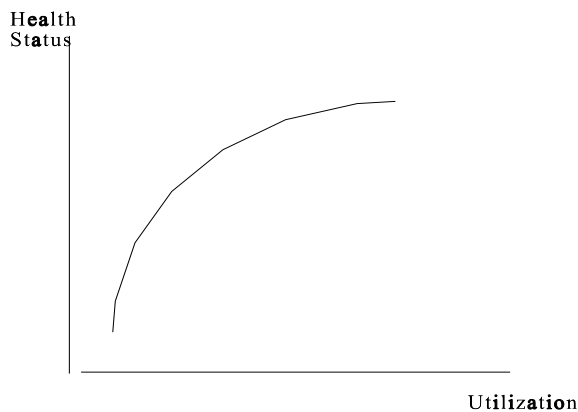
## Mgmt 444

### Rise and Fall of Managed Care

By the late 1970s, academics and policy makers understood that moral hazard, demand inducement, and practice variations had combined to create an inefficient health care system

Alain Enthoven captured the idea best with his description of "flat of the curve medicine"

Figure 2.1 Flat of the Curve Medicine



This simple idea was at the heart of three successive revolutions in the health economy:

- The first was regulatory
- The third and ongoing revolution relies on patients to instill market discipline. We will discuss this in week 9
- The second revolution – the Managed Care revolution – was based on third party intervention.
  - . The principles of managed care dominate the U.S. health economy
  - . Some European nations are adopting the same principles

Sociologist Paul Starr traces the origins of managed care back to the 1890s

I won't detail the early history – it is in the reading for today

Here are a few highlights

- Early managed care emphasized prepayment to physician groups
  - . This represented the first real health insurance in the U.S.
  - . This is very much was the Committee on the Cost of Medical Care had recommended
  - . A 1971 report published by the Henry J. Kaiser Foundation touted "the absence of a fee-for-service incentive to do what, by judicious surgical standards, constitutes unjustified surgery."<sup>1</sup>
  
- Traditional indemnity insurance emerged in the 1930s
  - . Blues plans were created by providers
  - . Providers tried to stymie growth of prepayment but were blocked by the U.S. Supreme Court
  
- Kaiser and the Group Health Cooperative, two of today's largest HMOs, started in the 1940s.
  - . In addition to prepayment, they pioneered outpatient care and vertical integration of insurance, physicians, and hospitals

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<sup>1</sup>Williams, G. 1991 *Kaiser-Permanente Health Plan: Why it Works* Oakland:Kaiser Foundation

## Economics of Managed Care

Managed care is a catchall expression

- Includes a variety of practices
  - . Innovative ways of paying providers (e.g. capitation)
  - . Selective contracting with preferred providers
  - . Utilization review and case management
  
- Payers adopted these practices to correct the perceived shortcomings of the traditional “Marcus Welby” marketplace
  - . Moral hazard
  - . Demand inducement
  - . To a lesser extent, practice variations
  - . Limited incentives for patients to shop for the best price
  - . Limited ability of patients to shop for the best quality

Managed care organizations (MCOs) use various strategies to address these problems:

- 1) Changing MD *incentives* – cease rewarding excessive utilization
- 2) Generating and using information about cost effectiveness and quality (*utilization review*)
- 3) Limiting sovereignty of consumer choice so as to gain buyer power (*selective contracting*)

We will assess the performance of MCOs in two ways

- 1) Assess MCO strategies
- 2) Assess overall HMO/MCO success

## *Changing MD incentives*

The inducement literature convinced everyone that incentives matter

- Organizations can gain an advantage in the market by changing MD incentives and oversight
- We will discuss several related issues:
  - . Forms of compensation and evaluation
  - . Effects on MD effort
  - . Evidence of selection
- Later this quarter, we will discuss pay for performance

Let us now consider two rules about MD compensation

*Rule 1: If you can imagine the form of compensation, someone has tried it!*

Here is how basic *capitation* works:

- Once a year, patients select a primary care MD or group
- The payer (or some other parent organization) pays each primary care physician or group a fixed monthly fee based on:
  - . (a) the number of patients who selected that MD
  - . (b) the range of covered services (e.g., general office care, drugs, specialists referrals)
  - . (c) some kind of risk adjustment (often based solely on sex and age, though there has been a revolution of sorts in risk adjustment methods in just the past few years)
- For a plan that covers office care, drugs, and specialist referrals, this fee is typically \$50-\$100 per member per month.

- The PCP is then responsible for all covered services. If the payment exceeds expenses, the PCP prospers

- . The arrangement usually includes “stop loss” features either at the level of the patient (e.g. the MD is responsible for up to \$200 per month per patient) or the panel of patients (e.g., the MD is responsible for up to \$100N per month, where N is the number of patients)
- . The arrangement may also include a per patient or per panel profit ceiling (e.g., the PCP can make no more than \$20N profit per month)

Q: What behaviors do you expect to see from capitated MDs?

According to AMA surveys in the 1990s, most PCPs reported receiving capitation for at least some of their patients. The AMA no longer administers this survey, but it is widely believed that capitation is much less widespread today

Capitation has been replaced by more “traditional” fee-for-service (FFS) payments with a variety of carrots and sticks such as the RBRVS

*Rule 2: You can almost always predict the direction of the response to incentives, but it is a lot harder to predict the magnitude*

Rule 2.1: If you pay physicians on a “fee for X” basis, they will do more X

Rule 2.2: The doctors who were already doing a lot of X will be the first to sign up for “fee for X” payments

Rule 2.3: Doctors are much more cooperative when someone is looking over their shoulders

Several research papers provide empirical evidence of the effects of incentives on MD behavior.

Q: Is it sufficient to compare the behavior of MDs who take salary or capitation with MDs who mostly take FFS?

Let's review the findings of two papers that are immune from concerns about bias.

Jason Barro and Nancy Beaulieu study what happened to physicians who worked for hospitals belonging to the HCA chain after it instituted an incentive system.

Here is the background:

- During 1990s, HCA acquired MD practices. It paid them an upfront acquisition fee and a guaranteed salary to continue working for HCA
- HCA grew concerned that its MD practices were losing money and implemented a new compensation system in 1998. The system was called the "Pre-Comp Earnings (PCE) system.
- Under PCE, HCA managed each practice and paid for practice expenses. Physicians received 85-95% of practice profits (billings less office expenses) and paid a \$3000 monthly management fee.
- Monthly MD Income  $\approx [0.90 \cdot (\text{Revenues} - \text{Office expenses})] - \$3000$

Barro and Beaulieu ask three questions:

- Did the switch cause MDs to increase income and revenues (presumably by working harder) or decrease expenses?
- Did physicians choose to leave HCA in response to the switch?
- Who were the departing MDs? What were their characteristics?

Thanks to the natural experiment, BB have a before/after study design whose results are likely to be unbiased.

Q: What do you expect they found?

Here are some of the findings:

- Physicians under the PCE generate about \$10,700 in additional practice revenues (monthly) and \$13,600 in additional profits for themselves. These represent increases of about 30-35% in revenue
- These effects grew over time – each additional month after the PCE was implemented led to higher revenues and profits
- Physicians who quit had rapidly declining performance in the months before leaving. In general, the quitters were the poorest performers
- Thus, the PCE system had both *incentive* effects and *participation* effects. (The former is intuitive; the latter should be clear to students who have taken Mgmt 452)

Martin Gaynor and Paul Gertler studied what happened when an HMO instilled a unique incentive system

- An HMO divided its PCPs into contracting “PODs” of *varying sizes*.
  - . PODs received 20% of their overall compensation based on whether they kept under a global team budget
  - . In 1997, after two years under the new scheme, regulatory changes forced them to reduce this to 10%
  - . This was a typical compensation scheme for many HMOs

Gaynor et al study the impact of the system on expenses

- These are the key results regarding incentives
  - . Larger groups are associated with higher spending.
  - . Each 20% increase in the number of MDs in the pod was associated with about 7% higher spending per member per month (PMPM)
  - . I.e., A 20-member pod had about 30% higher PMPM spending than a 10-member pod.
  - . The effect in 1997 is much smaller
  
- They also found participation effects
  - . MDs who exited PODs in the first two years tended to have slightly higher utilization than those who stayed
  - . Entrants also seem to have slightly higher expenses; that is harder to explain

### *Utilization Review*

The idea of third party oversight of medical decision making is not new

- Hospitals have had their own peer review boards (under various names) for decades
  
- In 1992, Medicare set up Professional Standards Review Organizations to establish treatment guidelines and to discipline MDs whose practice patterns depart from norms

Utilization review differed because it was imposed by insurers

- Regardless of who is performing UR, the methods are similar
  
- Use historical data to identify appropriate treatment norms and use them to advise/incentivize individual MDs improve their medical decision-making

UR supporters and detractors have ideological differences

- Supporters believe that MDs and their patients do not accurately assess the value of care, ignore costs, and that it is possible to establish norms for treatment based on research
- Detractors believe that insurers systematically under assess value and ignore the idiosyncrasies of patients in favor of established norms

Research on actual performance of UR is remarkably thin

- Most systematic studies examine only IPT care
  - . Find 10% reductions in total IPT costs that could be offset by higher costs elsewhere
  - . Savings may be more due to "sentinel effect" (providers think twice before requesting service) than due to denials
- More recent studies examine procedures and LOS
  - . One study found reductions in LOS, but this could be due to a "sentinel effect"
  - . Another study compared actual UR with "sham" UR, thereby controlling for the sentinel effect. It found 10% fewer procedures in the actual UR
- UR was a major focus of the recent managed care backlash.
  - . We will discuss the backlash shortly

## Studies of MCO Costs

Numerous studies compare costs in MCOs versus indemnity insurance

- Most focus on HMO versus indemnity
- Some drill even deeper to focus on Medicare or Medicaid HMOs

Early studies examined differences between Kaiser/GHC and indemnity insurance

Famous article by Hal Luft in 1980 summarized this research

- Luft concludes that enrollees in Kaiser had 10-40 percent lower expenses than enrollees in other plans.
- He could not rule out that Kaiser had healthier enrollees or lower quality

The RAND study documented the effectiveness of the GHC

- RAND *randomly* assigned individuals to the GHC.
- GHC assignees consumed considerably less resources (about 25 percent less) than the comparable fee for service enrollees.
- A follow-up study revealed that the GHC enrollees scored at least as high as the fee for service enrollees on a battery of 20 measures of health status.

Since Luft's initial review article, numerous additional studies were published, examining many types of HMOs

Luft and Miller (1994) review the evidence from over 50 studies and reach similar conclusions as did Luft (1980) conclude that compared with indemnity plans, HMOs had:

- Less hospital care
- Less use of expensive procedures and tests and greater prevention
- Mixed results on outcomes
- Lower enrollee satisfaction with services but higher satisfaction with costs.

Luft and Miller offer several explanations

- Could be genuine differences between HMOs and other plans
- Could be *self-selection* by patients (healthier patients enroll in MCOs). There is considerable independent evidence of this
- Could be *sorting* by physicians – MDs with less aggressive styles may be first to sign up with HMOs
- A 1993 report by the GAO reaches a similar conclusion as Luft and Miller

Recent studies avoid some of the ambiguities by comparing the performance of health care markets with various levels of managed care penetration.

One of the best is by Hill and Wolfe (1997), who examine trends in Madison, WI subsequent to a 1984 law that shifted most state employees into HMOs

- They compare cost and utilization trends in Madison with national trends and trends in similar metropolitan areas in other states.
- This comparison might understate the cost savings because HMO growth nationwide has affected trends in other states.

They find that from 1983 to 1993, regression adjusted premia in Madison rose by 8.4 percent annually, versus 10.4 percent nationwide.

- Almost all the difference is attributable to 1983-1985.
- This appears to be a *one time savings of 20 percent*, due to a jump in HMO enrollment from 7% in 1982 to 80% in 1984.
- After that, the rate of growth of premia mirrors the national trend.
- Q: Does this mean that HMOs were a failure?

Other studies find that states with high rates of HMO penetration experienced lower rates of growth of health care costs and lower rates of technology adoption

Researchers have raised the following fascinating question:

If MCOs do save money, is the savings due to lower P or lower Q?

- Altman et al. examine individuals who work at one large Massachusetts employer. Some are enrolled in an HMO and others in a traditional plan
- Per enrollee medical costs are much higher for indemnity insurance, but why?
- To control for selection, they examine what happens to patients who have the same diagnosis (e.g., heart attack)
- Assume that average severity of HMO patients with a given condition is the same as the average severity of indemnity patients with that severity
- Take a particular disease, say AMI. Here is what they find
  - . For AMI, 57.6% of the difference in per enrollee costs is due to the higher incidence of AMI in the indemnity plans
  - . 4.5% is due to *observable* patient demographic differences
  - . Only 0.9% is due to differences in treatment intensity
  - . The remaining 37% difference in cost is due either to *lower prices* or unobserved patient differences
  - . Given that the patients' conditions are controlled for reasonably well, they conclude that all of the HMO savings is due to price differences
- The same pattern holds, more or less, for the other conditions
- Other authors find that price always matters, but quantities sometimes matter as well

## Studies of managed care and quality

The mid-1990s studies of the effects of MCOs on quality are being replaced by ongoing studies of the effects of MCOs on quality

- The conventional wisdom, of course, is not favorable
- But published research is decidedly ambiguous

Miller and Luft have produced a series of studies summarize research on HMO quality. You have the most recent such paper in your readings.

Q: What do they find?

Here are some examples of studies favorable to MCOs:

- 1998 Johns Hopkins University review of the research on cardiovascular care, which concluded that "the HMOs studied provided as good, and in some cases better, quality than the non-HMO settings studied.
- Wennberg found substantial evidence that MCOs do better in diagnostic screening for mammography and colon cancer

Many ambiguous studies

- Gazmararian and Koplan (1996) examine post delivery lengths of stay
- "HMOs consistently had the highest frequency of one-day lengths of stay."
- But "newborn and maternal readmissions do not appear to be associated with type of plan."

Some studies that find evidence of poorer care in MCOs

- E.g., Both Hellinger and Miller and Luft find some evidence that low income and Medicare patients with chronic conditions fared worse in HMOs.
- Several studies question quality at Medicaid and Medicare HMOs

## The Backlash

Enrollments in HMOs peaked in the mid-1990s

- In early 1996, over half of the HMO executives responding to a survey foresaw a significant backlash looming

- By the fall of 1996, most of the nation's major newspapers began to run stories about the HMO backlash

- A group of 2000 Massachusetts physicians and nurses published an editorial in the 1997 *Journal of the American Medical Association*:

“Canons of commerce are displacing dictates of healing, trampling our profession's most sacred values...Physicians and nurses are being prodded by threats and bribes to abdicate allegiance to patients.”

- The *Boston Globe* wrote “The managed care industry has a problem. People hate its guts.”

Hostility towards HMOs derived, at least in part, from a lack of trust

- There were lots of surveys showing America's lack of trust in managed care. Here is one. Harris asks respondents how well different industries served their consumers. In 1997, 51 percent of respondents said that managed care companies were doing a “good job.” By 2000, only 29 percent felt the same way.

Table 4.3 How Well are Industries Serving their Customers?

Industry	Percent saying industry doing a “good job”	
	1997	2000
Banks	75	73
Car Manufacturers	70	67
Drugs	79	59
Managed Care	51	29
Tobacco	34	28

Most HMO enrollees reported that they were satisfied with their own plans.

- In a 1997 ABC News survey, 88 percent of HMO enrollees reported that they were satisfied with the quality of care, compared with 92 percent of enrollees in traditional plans.

Surveys also revealed that the vast majority of Americans were satisfied with the care they received from their physicians

- In 2000, 67 percent stated they were confident they could pay for a serious illness, an all time high for this question.

Q: Can you reconcile the backlash with these survey findings?

A study by James Reschevsky, J. Lee Hargraves, and Albert Smith sheds a somewhat different light on the backlash

- They asked individuals to rate their health plans on several dimensions of satisfaction, such as satisfaction with family health care and their ability to obtain a specialist referral.
- Those who reported belonging to an HMO were generally less satisfied than those in indemnity plans.
- But...one fourth of all respondents misidentified their plan type!
- Q: What do you think happened when Reschevsky et al. reexamined the data based on the types of plans the respondents actually belonged to, rather than the plans they thought they belonged to?