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Prevention and Health Economics

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PREVENTION AND HEALTH SERVICES ECONOMICS[1]

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The relationship between doctors and patients in the medical and health field is a topic of recurrent discussion today.

The topic is of immense interest because of the questions raised about value received for services purchased and because of the large amount of economic resource consumed.

The size of the stakes are such that the debate will grow in the near future until some solution is found to remedy the value and cost for service dilemma.

If sense is to be made of the resource allocation problem in the medical industry, it must be understood that the demand for medical services is a derived demand. What the consumer ultimately desires is health or wellness. The demand for disease-treatment services only exists because there is some gap between the state of existing health and that which is desired or reasonably expected. Treatment is supposedly designed to close that gap to acceptable levels, given the time and financial resources available.

We discuss below some of the troublesome issues, believing that the industry can be nudged significantly further towards consumer control of the treatment given rather than the current domination of use decisions by the producers.

The Information Problem

The level of desired health is a complex bio-psycho-socio-economic phenomenon. It is axiomatic that no one feels perfectly well all of the time. Further, the level of wellness is essentially subjective; i.e., each person uniquely experiences illness, and the departure of wellness from desired levels that might induce one person to seek curative medical treatment might not do so for another.

Obviously, knowledge about what optimal health is and how it can be achieved by both preventive and curative measures will determine in large measure people's perceptions about their quality of health.

In other words, there is a tradeoff between prevention and treatment as alternative means of achieving the desired level of health. With known costs and

technologies, some diseases, such as many forms of cancer and AIDS, are more economically prevented than treated, while others, such as the common cold and headaches, probably are more economically treated than prevented. In any event, theoretically, personal health will be maximized from a given expenditure of resources when the marginal contributions to wellness from investment in prevention and treatment are equal.

But for individuals desiring this optimal level of health, the knowledge required to estimate these margins is very costly to obtain. Much of the information is highly technical and specialized and thus may be largely inaccessible to those not trained in medical science. Even for those with such training, the relevant knowledge on a wide spectrum of illnesses potentially applicable to any given individual is scattered and constantly changing. This is perhaps the principal reason why consumers have rather passively deferred to those in the medical industry itself for information on disease prevention and treatment. The problem is that such information is likely to be biased for reasons given below and thus may not produce the desired maximization of health.

The Misallocation of Resources Between Prevention and Treatment

There are at least two compelling reasons for believing that the optimal combination of prevention and curative-treatment investment will not be reached in our existing medical system:

1) The institutional system that determines who pays for services (primarily insurance and government programs) discriminates in favor of curative versus preventive alternatives, and

2) The supply side of the medical industry (physicians, nurses, hospitals, etc.) face multi-dimensional incentives that make it more profitable to engage in the curative treatment of disease and illness once it has occurred than preventing the condition from occurring.

On the prevention side, costs are largely privately borne by the individual. Very few of these costs, except for limited technical services, such as screening physical examinations and diagnostic tests, have been incorporated into group health plans or insurance programs where the costs are largely borne by group sponsors or the collective of those who pay the premiums.

Employers have not yet participated to a significant extent in funding prevention programs, particularly the educational aspects where the professional service is largely cognitive.

The information problem in preventing disease is very large, but not because there is little information about what produces good health. Tremendous quantities of resources have been devoted to developing information, both from private and public sources.

The problem is the usefulness of information; not enough information available when and where it is needed. The quality of much health information is poor and there is no systematic filtering of health information for consumers. Indeed, the non-insured private health sector has produced a fantastic array of alleged health-inducing programs, mostly relating to diet and exercise regimes.

Even though we fully accept consumer sovereignty in those decisions, partly because few third-party dollars are involved, there is a general belief that the information associated with all health and medical services is so complex and technical that many consumers find it too costly to adequately evaluate. Thus, much of what is claimed is believed to be misleading, unreliable, and may even be fraudulent.

Consumers are left bewildered, confused and ill-equipped to make informed and rational decisions. In addition, much of the information that is reliable and useful is likely to be disputed by the medical establishment because it produces results that compete with the need for curative treatment.

Insurance Programs and the Incentive Problem

By contrast, payment for curative treatment of disease has largely become collectivized through a variety of insurance programs, both private and governmental. The premiums are paid by both consumers (also taxpayers) who are enrolled and their employers, depending on the specific program. But generally the insurance premium for an individual is not directly related to the quantity and quality of medical resources consumed.

If the consumer of curative treatment services is insured for most of the cost of the service, the bulk of the service price is passed on to the insurer. For the insured individual, the incentive is created to consume medical services up to the point where their value to him is far lower than the true resource costs involved in supplying the service. Deductibles or programs which require the insurer to pay a certain fraction of the price shifts some of the payment burden to the consumer, especially on the first units of service until the deductible is exhausted. A payment limitation for hospital services paid by the patient further masks the true resource costs to those receiving such services.

It is well to remember, however, even if the insurance coverage is one-hundred percent, that not all costs connected with acquiring the service are zero. There are still arrangement-for-service costs, transportation costs, waiting-time costs, and psychic costs associated with treatment that must be borne by the recipient of medical services. It is quite possible for many insured patients that these costs outweigh direct service-payment costs for most illnesses, and it is these non-fee costs that actually determine the quantity of services demanded.

The upshot is that because the marginal price of the service itself to the insured is low or zero, a greater quantity of medical

services is demanded than would be the case if the consumer had to pay the full price and more resources will be devoted to the industry than would be case if there were no co-insurance programs.

There can be little doubt that the incentive problem discussed here is responsible in a major way for the huge escalation of medical costs that we have witnessed in the United States over the past few decades. But we are not about to forego insurance programs in order to correct the distortions in resource allocation they produce. The risks to income and wealth maintenance in the face of serious illness are simply too great to abandon their spreading through the medium of insurance.

But perhaps the "ignorance" problem could be at least mitigated significantly by an information campaign to inform consumers as to the true cost as well as the real health benefit of medical services, even if they don't directly pay for all of them.

Moreover, the resource allocation problem is even more severe than implied by the insurance-pricing argument just made. It is true that because of the "collectivization" of the price of treatment services, it is probable that most consumers are not even aware of what price is being charged, or if they are, it does not affect the treatment decision. Obviously, the price is of minor importance in determining what treatment services are demanded. The service prescribed becomes entirely supply-side determined.

On the supply side of treatment, the price is the full marginal revenue received by the supplier for each unit of service. Thus, it is the price that constitutes much of the incentive for supplying the service. The explosion of costly (and often highly profitable) technologies currently employed in the industry can be better understood given the incentive problems described above. There are simply few effective brakes on these supply-side innovations. Moreover, the evolution of the current state of affairs has probably been encouraged and even accelerated by the emergence of corporate sponsorship of insurance programs within the health, medical and hospital industry.

But it is not the bloated and costly medical treatment industry that is the only problem. Virtually every use of the existing medical treatment system carries risk to personal health as well as potential benefit. The hope is that the benefits outweigh the costs making the risk worth taking.

There is, however, substantial probability that use of the medical treatment system itself will produce net outcomes that will impair rather than produce health. That is to say, the existing structure of services and incentives induces decisions by the supply side of the industry to recommend tests, analyses, monitoring, and treatments that may be deleterious to good health. Complete and thorough information about alternative treatments made available to the demanders would almost certainly reduce the risk of these types of treatment "errors."

Issues of Access

Practitioners working in the treatment end of the medical services industry might deny that there is an information problem. After all, it is frequently argued that relying on the expertise of those who know best (the suppliers of the service) must be optimal because the industry is essentially altruistic rather than commercially motivated. It is argued that it must be that way for it to sustain its terribly important lifesaving function.

We do not deny that there is much altruism in this industry (as there is in many others.) But the point is largely irrelevant. The real question is whether or not better consumer information about health and alternative treatments for illness and what they cost will result in greater health and a leaner, more efficient, and more competitive medical industry.

Changing "who decides" opens the door to more efficient purchasing power by those who ultimately provide it, the consumers of medical services.

However, choice is inherently subverted by gatekeeper functions, particularly those that are purely administrative, like case-management programs. Similarly, the movement toward limiting individual choice by linking the insurance mechanism to a service supplier system, i.e., HMOs and PPOs, actively discourages consumer involvement in decision making as there are no obvious service options to choose from.

The implicit message to the individual is that someone else knows best and that access to any system represents equivalent quality.

Further, an element that has weakened competition within the medical and hospital system, and thus has proved to be deleterious to consumer interests, is the notion that medical services in general, and delivery systems tied to insurance mechanisms in particular, are comprehensive. Consequently, often preventive services are simply assumed to be represented and attached to the treatment services and that the only needed consumer decision is to appear and to be compliant.

There is increasing documentation of serious problems with quality of service as well as queuing in such arrangements and the incentives are stacked against prevention, particularly the educational cognitive elements. As illustrated, the attention given to prevention is notably rhetorical rather than substantive.

New Directions

As a response to the conditions in the medical treatment industry described above, and especially the need for consumer information, Options and Choices was established as a private health services organization specializing in prvention, in contrast to traditional diagnosis- and treatment-oriented medical care organizations.

Our approach to health is singularly through prevention and is operationalized as an education service, not a clinical diagnostic or prescriptive service. The educative prevention service promotes informed choice for individuals about their health and enhances market dynamics in the health services industry. The primary goal of the organization is to achieve a redistribution of economic resources currently consumed by curative-treatment services towards illness prevention and health maintenance.

We are convinced that the health services industry can successfully operate under market dynamics without unusual risk to personal health. But consumers must play a much more active role in their health decisions, both at the prevention as well as the treatment stage. But they are not prepared to do so alone.

Professional support as well as information are critical to the valuation and decision process. Both are reflective of an educational process that permits a person to learn how to make personal health decisions reflecting informed choice.

The Options & Choices philosophy relates health directly to the efficiency of personal health (consumer) decision-making. The pivotal question, therefore, revolves around the issues of who decides and by what criteria are the decisions made. One thing is apparent: at the root of all decisions is the information required to make them efficient in terms of what the consumer wants to achieve. What information is relevant, where is it obtainable, what is it worth, and what does it cost? These are the critical questions for which Options & Choices provides answers.

The professional staff function provided by Options & Choices is designed to assist the individual in this valuation process by facilitating access to needed information and by supplying support to the individuals while they are exercising informed choice. When the decision point shifts from supply-side professionals to the consumer, benefits to personal health and well-being, rather than the service price, serves as the motivation for the decision. The gains to the consumer from better decisions include a higher level of health, a saving of real resource non-price costs that would have been spent in ill-advised treatment, and greater productivity on the job. The gains to employers would include a reduction in health-benefit costs and less absenteeism at work, and thus higher levels of employee productivity.

We emphasize that this emphasis on prevention is organized so as to compete openly with treatment services. Its success will depend ultimately on whether or not better health is achieved and by how much medical costs are reduced.

The program is new but we now have the expenditure results of a two-year demonstration program at a major corporation whose employees work in New York City. In addition, there is much anecdotal evidence that the level of health has improved and that absenteeism has fallen.

The table below shows employee numbers and costs for the baseline year before the program was initiated and for the first two years of program operation. Costs in year 1 and 2 were corrected for inflation so that the cost numbers reflect constant real dollars.

The employees are divided into three groups: column 1 (total group) includes all individual employees eligible to use the Program at any time during the three years, converted to full-time-equivalents. Column 2 (stable group) represents those employees continuously Program eligible for the three years. Column 3 includes those in the stable group who incurred more than $10,000 of medical claims costs per person in any of the three years.

The very impressive results from this demonstration program confirm the findings from two years of pilot testing of the program where a similar 47.4 reduction was achieved in the costs for high-cost individuals, many elderly and of a lower socio-economic status. Per capita medical costs declined in the first year of the program and even more in the second year for all groups. The percentage point decline was even more for the second year than for the first year. Especially significant are the results for the high-cost group that consume a very large percentage of total treatment costs. The second year shows a 53.1 percent pe: case reduction over baseline.

It is apparent that the prevention program had a very significant impact on health decisions of this group and indicates that the program has great potential in reducing medical treatment costs by creating market incentives while protecting individual choice and health.

FOOTNOTE

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TABLE 1

GROUP COST EVALUATION DATA

	TOTAL + GROUP	STABLE + GROUP	STABLE HIGH COST (> $10,000)
BASELINE YEAR			
Number	702	365	9
Costs*	$1,556	$1,537	$29,532
PROGRAM YEAR 1			
Number	658	365	9
Costs	$1,471	$1,407	$23,780
% Change	- 5.5	- 8.5	- 19.5
PROGRAM YEAR 2			
Number	614	365	10
Costs	$1,290	$1,231	$13,852
% Change	-17.1	-19.9	-53.1

* Costs are based on a per employee contract basis with adjustment for inflation and compared to baseline.

+ Total Group includes all individual employees eligible to use the Program at any time during the three years and expressed in FTEs. Stable Group represents those employees continuously Program eligible for the three years.