

The Economics of Health Care

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Introduction

- ◆ The economics of health care is fundamentally different from the economics of other services, say, housing services, restaurant services, and tourism services.
- ◆ There are potential failures of the market, in both the supply and demand sides of health care, so that the best outcome cannot be attained by relying on the market alone.
- ◆ Information asymmetry and ex post inelasticity of demand
- ◆ Public good versus private good
- ◆ Moral hazard
- ◆ Equitability or fairness

Asymmetric Information

- ◆ There is asymmetric information when the supplier of the service and the demander of the service have access to different information.
- ◆ In the health care situation, there are at least two types of information asymmetries:
 - ◆ (1) whether the service is needed—we have in this case the seller telling the buyer what he or she should be buying, and in what quantity. The buyer thus relies on the seller's information. The supplier can, in principle, create its own demand. There is also, in general, no competition among suppliers.
 - ◆ (2) how much the service is worth—the buyer's ex post demand, once informed that the service is needed, is almost completely inelastic. The buyer thus has little choice or bargaining power. The supplier can, in principle, name its own price.

Asymmetric Information

- ◆ Under these circumstances, it is possible that the buyer may be induced to either buy too much service or the wrong service and/or to overpay. A purely market solution is therefore unlikely to be efficient for health care.
- ◆ In addition, there can also be information asymmetry with regard to the quality of the service provider.

Asymmetric Information

Self-Selection Bias

- ◆ There is another manifestation of asymmetric information that arises in the context of health insurance—those who are more prone to be sick know that themselves and therefore are more likely to buy health insurance than healthier individuals. But the insurance company does not have this information. Thus, the probability of those who buy insurance becoming sick is likely to be higher than the probability in the general population. This is known as “self-selection” bias.
- ◆ “Self-section” bias, if not taken into account in the pricing and the formulation of the terms of the insurance, will eventually result in the insurance company going bankrupt.

Public versus Private Good

- ◆ Public health is a public good—every government has the responsibility of promoting and ensuring public health.
- ◆ Some services are obviously public goods and should be publicly provided: e.g., the safety of the water supply; the cleanliness of the air; vaccination and inoculation; quarantine of infected individuals.
- ◆ A good case can be made that vaccination and inoculation against certain infectious diseases should be made free and compulsory. A sick individual may infect other otherwise healthy individuals, creating negative externalities. It is on this basis that free and compulsory vaccination and inoculation and compulsory quarantine can be justified. (For example, smallpox has been virtually eliminated; hepatitis B is in the process of being eliminated in many Chinese provinces and regions.)
- ◆ Sometimes vaccination can be used as a preventive measure for certain populations, e.g., influenza vaccination for the aged population at the onset of every influenza season.
- ◆ Education on health care is also a public good—all citizens should be encouraged and given the opportunities to become informed patients.

Public versus Private Good

- ◆ What is critical for every society to decide is the boundary between public and private responsibility. Which medical treatments, procedures, and drugs should be made available to everyone, at public expense if necessary, and which should be considered elective and optional and the private responsibility of individuals?
- ◆ The answers to these questions depend on the history, culture, social organization and of course the level of GNP (Gross National Product) per capita and the nature and condition of the fiscal system of the particular society.
- ◆ The United States of America has, thus far, taken the position that any treatment that has any benefit whatsoever to the aged (defined as those aged 65 and over) should be financed publicly through Medicare. It cannot afford to do so indefinitely and will eventually have to shift to considering what treatments can be afforded within the limits of public finance.

Public versus Private Good

- ◆ The problem comes down to what health care services should be considered “entitlements” that every citizen and permanent resident should have access, and what are “enhancements” that should be the private responsibility of the individual.
- ◆ These questions include: Should the public or private insurance finance (1) single room versus double room in hospitals; (2) round-the-clock private nursing care; (3) stay in the hospital beyond the normative period for the treatment or procedure; (4) elective cosmetic surgery (as opposed to restorative surgery to repair injuries due to burns, for example); (5) infertility; (6) provision of Viagra and other life-style drugs; and (7) experimental treatments; etc.

Public versus Private Good

- ◆ What is clear is that no society can afford to guarantee to each individual access to the best health care that money can buy. A boundary must be drawn between public and private responsibility. (Here public includes the private health insurance companies offering private health insurance.) What must be decided is what treatments, procedures and drugs are “allowable.” However, what is “allowable” will be different across different societies as well as over time.

Public versus Private Good

- ◆ However, topping up can be allowed. For example, if a patient wishes to pay the extra cost of a single room (assuming that the allowable standard is a double room) he or she should be allowed to do so, provided that he or she is not indigent (see below). The same applies to individualized nursing care, etc.
- ◆ There should be a balance between private choice and public responsibility for the financing of health care.

Moral Hazard

- ◆ There is moral hazard when there is the possibility of “hidden action” that benefits one party at the expense of the others.
- ◆ The most common example of moral hazard is that of fire insurance. A person purchases fire insurance on his goods in a warehouse, sets fire to it himself, and collects the insurance payoff.
- ◆ How does an insurance company deal with this problem ex ante?
- ◆ (1) Limiting the insured amount to less than full value, as appraised by the insurance company; (2) Imposing a deductible or requiring a co-payment or co-insurance. The idea is so that the individual purchasing the insurance will suffer a real net loss even after the payoff from the insurance company.

Moral Hazard

- ◆ We have already discussed the possibility of moral hazard on the part of the service provider in over-prescribing the treatment or over-charging for the treatment, or both.
- ◆ However, there is another kind of moral hazard, which roughly speaking translates into the following: “Since I already paid for the insurance, I should use it to the fullest extent possible, otherwise I lose out.”
- ◆ However, this is the kind of sentiment that leads to over-use of health care services. What the speaker does not realize is that he or she actually winds up paying for the over-use through a higher insurance premium in the next period.
- ◆ This is known as the moral hazard of third party payments.

Moral Hazard

- ◆ Moral hazard of third-party payments can be illustrated in the first instance by the following example. Let us suppose that I broke my wrist, and that either an X-ray or an MRI will do the job. The X-ray costs \$100 and the MRI costs \$2,000. If I have to pay myself, I would be more likely to choose the X-ray. But if someone else is paying, for example, the health insurance carrier, I do not care because for me there is no cost in either case. Now, the service provider may have an incentive to use the MRI because it is a very expensive piece of equipment and must justify itself by generating sufficient revenue from its usage. Thus, we may wind out spending much more than necessary. Once again, third-party payments result in over-use.
- ◆ Of course the health insurance company pays for it. But the next year our insurance premium will go up so that the health insurance company can recover the cost of my over-use.

Moral Hazard

- ◆ Moral hazard of third-party payments can also be further illustrated by the following example. Let us suppose that the three of us go to a restaurant for a meal. And it is agreed before hand that we shall split the bill equally, that is, one third each.
- ◆ I start by ordering a hamburger. But you order caviar, and the third person orders lobster. Since we were going to split the bill equally, I feel that I am disadvantaged and must order an additional dish, white truffle. The net result is that we shall all be ordering more than what we want or need.
- ◆ Health insurance is like splitting the bill equally—eventually the entire cost of health care is shared and paid by everyone who is insured. The health insurance company cannot and will not subsidize anyone's health care.
- ◆ How can this problem be eliminated? The problem of moral hazard of third party payments can be eliminated through using first-party payments, that is, for the three of us to go Dutch, to ask for separate checks for our meal.

Moral Hazard

- ◆ However, there is yet another kind of moral hazard, which also arises in the case of third-party payments, and relies on collusion between the service provider and the patient.
- ◆ Typically the service-provider bills the health insurance carrier of the patient (it can be national health insurance) and kicks back to the patient part of what he receives. There may be a co-payment required, but the service provider receives sufficient reimbursement from the insurer to not only reimburse the patient fully for the co-payment but also a net payment in addition.
- ◆ For example, the fee for the service may be \$100, with a 20% co-payment. The service provider receives \$80 from the health insurance carrier, and \$20 from the patient. He or she can then reimburse the patient \$30 (so that the patient is better off net), and netting \$70 without providing any real service at all.

Equitability or Fairness

- ◆ Considerations of equitability or fairness suggest that some basic level of health care should be accessible to all, regardless of the economic circumstances of the individuals. (Recall the discussion above on public versus private responsibility.)
- ◆ Thus, any health care financing system must also provide for those who are indigent, who cannot afford health care or the payment of health insurance.
- ◆ However, in order for such a system to work in a sustainable way, each society must decide what is available by right and what is available as an option, to be financed by the individual himself or herself.

Efficient and Equitable Health Care

Pricing and Service

- ◆ In order to reduce the information asymmetry, the government or credible non-governmental non-profit organizations can provide quality assurance through licensing and the maintenance of a database on health care practitioners.
- ◆ The financing of regular physical examinations (the importance of early detection) as well as second opinions should be made available at standardized costs either publicly and/or through health insurance carriers. (For the indigent meeting a means test, these regular physical examinations and second opinions can be made free.)
- ◆ The government, perhaps together with the health insurance industry, can set standard fees for standard procedures and treatment (e.g., how much for a normal delivery of a baby; how many days should be permitted in hospital under normal circumstances).
- ◆ The government can collate and disseminate health care information and distribute it through the world wide web as well as other means.
- ◆ Through these measures, the information asymmetry is narrowed and the probability of moral hazard on the part of the service provider can be significantly reduced.

Efficient and Equitable Health Care

Pricing and Service

- ◆ This does not mean that a specific service provider cannot charge more or a specific patient cannot offer to pay more; it simply means that the standard fee is what is permitted under public financing, insurance reimbursement, and government-sanctioned medical savings accounts (to be discussed below).
- ◆ The government and other non-governmental organizations can also promote a healthy lifestyle (diet, exercise).

A Efficient and Equitable Health Care Financing Scheme

- ◆ It should be realized that no matter what happens--socialized medicine, private insurance, public insurance--the middle class winds up paying for themselves as a group, either directly or indirectly—there is no free lunch.
- ◆ The health insurance company has to at least break even, so that the total amount paid out to service providers must be less or equal to the premia received less any income generated by the premia in the interim plus the costs of handling and overhead.
- ◆ The government must balance revenue and expenditure in the long run, so that an increase in health care expenditure will need to be financed through a corresponding increase in revenue, through direct or indirect taxes (land sale revenue is also a form of indirect taxes). These taxes are mostly borne by the middle class.

A Efficient and Equitable Health Care Financing Scheme

- ◆ There are three groups of people: the indigent, the middle class (which is most everybody), and the wealthy. The wealthy people can take care of themselves, so that we shall focus only on the financing of the health care for the indigent and the middle class.
- ◆ For the indigent, the government should simply provide completely free care at publicly financed clinics and hospitals with salaried physicians and surgeons (they can also be operated by non-governmental organizations using non-governmental funds), subject to means tests.
- ◆ Little purpose is served by having the indigent purchase private or public health insurance, since they do not have the money anyway.
- ◆ The indigent will be able to receive all the necessary treatments that are mandated as public responsibilities but will have no choice on the physician or surgeon or on the hospital.
- ◆ There will be no limits to the coverage as long as it is within the publicly mandated responsibilities.

A Efficient and Equitable Health Care Financing Scheme

- ◆ For all citizens and permanent residents, including the indigent and the wealthy, there is free automatic universal catastrophic health insurance, which will be activated as soon as annual allowable health care expenditures exceed a certain (reasonably high) threshold.
- ◆ The catastrophic health insurance will be financed through general government revenue so that no premia need to be paid or collected. This has the virtue of minimizing the transactions costs since everyone is automatically insured anyway. In addition, it is actually more progressive to finance the catastrophic health insurance through general revenue because to the extent the taxes are progressive with respect to income, the higher income individuals will bear proportionately a greater part of the burden of catastrophic health insurance.
- ◆ Payment of fees under catastrophic health insurance will continue to be in accordance with established standards.
- ◆ With catastrophic health insurance in place, no one will be driven into bankruptcy because of health care problems.

A Efficient and Equitable Health Care Financing Scheme

- ◆ For the middle class, which does not meet the means test, there is a variety of options. They will be responsible for their own health care expenditures each year up to the annual threshold for catastrophic health insurance.
- ◆ First party payment—they can simply finance their health care expenditures out of their own resources—income, savings, wealth-- and decide directly what choices of services they wish to pay for (e.g., X-ray versus MRI). They can also finance their health care expenditures out of income-tax deductible medical savings accounts (if available). Once their annual allowable health care expenditures, including amounts paid out of the medical savings account, reach the threshold amount, catastrophic health insurance will kick in.

A Efficient and Equitable Health Care Financing Scheme

- ◆ Second party payment—they can join a health maintenance organization (HMO), where in return for a fixed, predetermined annual fee, all their health care expenditures are covered, at least until the catastrophic health insurance kicks in. The existence of automatic universal catastrophic health insurance helps to lower the fixed annual fee for those choosing to join an HMO.
- ◆ Third party payment—they can purchase health care insurance from private health care insurance carriers, which will pay for their allowable health care expenditures, possibly with deductible and co-payments, up to the threshold for catastrophic health insurance.

Concluding Remarks

- ◆ A good system of health care should aim at reducing the information asymmetry between the service provider and the patient. The patient should be made as well-informed as possible.
- ◆ A good system of health care should also aim at reducing the possibility of moral hazard which results in over-use. Reliance on first-party payment as opposed to third-party payments helps to reduce over-use.
- ◆ Determination of the boundary between public and private responsibility is essential for the long-term sustainability of any health care financing system. No country or region can afford to finance publicly all treatments that marginally benefit those treated. The public system can only finance what it can afford in the long run.
- ◆ With the worldwide increase in life-expectancy, the demand for health care can only increase over time. Given the long gestation period in the training of health care professionals, including physicians and surgeons, now is the time to consider increasing their supply.