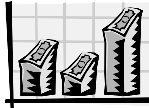
The Health Care Market

- Who are the buyers and sellers?
- Everyone is a potential buyer (consumer) of health care
- At any moment a buyer would be anybody who is ill or wanted preventive treatment such as a vaccination or wanted guidance about their health



The Free Market Approach

- One way in which the problem of scarcity can be overcome is to let people buy the health care they want.
  - This is what happens with most cosmetic procedures (no insurance coverage)

The Free Market Approach

- All treatments and more are available if you want to buy them and have the money to pay for them. Health care is sold just like any consumer good.
  - People buy the treatment because they gain satisfaction from it, in just the same way that they would gain satisfaction from a car or a new dress.
  - The market for cosmetic procedures shows that it is possible to buy and sell health care.
- What are the factors involved in a free market?

Click on the above before and after to enlarge

Sellers of Health Care

- Those people who could provide medical and health services
  - doctors, nurses, dentists

What Will Influence How Much Dentistry People Are Prepared to Buy at a Particular Time?

- The most important factor is price, the more expensive it is to buy dentistry all other factors remaining constant the less we will buy.
  - If price rises then the relative price changes, dentistry is now more expensive compared to other goods and services.
- Economists assume that people are **satisfaction maximizers.** This means that we all try to gain as much satisfaction as possible from our consumption of goods and services. So we react to the fact that dentistry is now relatively more expensive by choosing to buy less of it and more of something else instead (substitution effect).

Real Income

- The increase in the price of dental services has also reduced our real income - we can now buy less than before with our money income.
  - The way which we react to this change in real income depends on the kind of good or service.
  - Is dentistry a normal good ?(an increase in income leads to an increase in demand and vice versa. So a fall in real income will further reduce the amount of treatment bought (income effect).

The Demand Curve

- The predictable relationship between price and quantity demanded allows us to define demand formally as the quantity of a good or service that buyers are willing and able to buy at every conceivable price.

The Demand Curve

- DD shows the quantity of treatments that consumers are prepared to buy at every conceivable price. A change in price leads to a movement along the demand curve.When the price is P consumers will buy Q.
- What will influence services we buy?

The answer is our income, our preferences and the prices of other goods.

The Demand Curve

- If dentistry is a **normal good** then if a consumers' income rises they will buy more treatment at each price, and if it falls they will buy less.
- Demand for goods and services is also affected by changes in prices of **complementary goods**. These are goods and services which tend to be bought together. For instance, if the price of eye tests rose significantly, then many people would not bother to get their eyes checked regularly. This would lead to a fall in the demand for spectacles.
- Whenever income, preferences or the price of a related good or service changes, the demand curve shifts

Supply (Dentists)

- The sellers in this market are dentists.
  - dentists want to maximize their profits.
- What are profits and how can they be maximized?
  - Dentists earn money (**revenue**) by selling their services e.g. by placing crowns, etc.
  - Out of this revenue they need to pay for the factors they use to produce the treatment (costs)
    - » e.g. pay their receptionist, pay the rent or pay for a new x-ray processor. Profit is the excess of revenue over costs.

Maximizing Profits

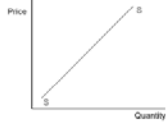
- Seeking to maximize profits leads each dentist to want to sell more care at higher prices.
- There is a reliable and predictable positive relationship between price and quantity supplied.
- Supply is defined as the quantity of a good or service that a population of sellers is willing and able to sell at every conceivable price.

Supply

- This positive relationship is shown graphically by the supply curve on the left - SS. If the price changes there is a **movement** along the supply curve
- At price P the dentists are prepared to sell **Q treatments**.
- When the price rises to P' dentists are prepared to sell **Q' treatments** - this might be because more people become dentists when it becomes a more lucrative job.

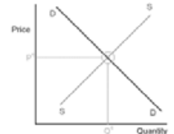
Change in Costs

- Imagine that rents fall. The profit of dentists will increase for each treatment.
- The dentist population will react by being prepared to supply more treatments at each price.
  - The supply curve shifts outwards.



The Market

- We can now put the **demand** and **supply** curves together. This will give us a picture of the market for **dentistry**.
- There is only **one price** at which the quantity of treatments people want to buy is the same as the quantity the dentists want to sell. This is called the **equilibrium price** Pe. The corresponding quantity is the **equilibrium quantity** - Qe. The **equilibrium** is a state of rest where there is no pressure for change.
- At any other price either buyers or sellers are dissatisfied and act to change the quantity demanded or supplied.



- The free interaction of buyers and sellers in the market automatically leads to a single price at which the quantity traded 'clears' the market, i.e. the quantity supplied equals the quantity demanded.

Case Study Cosmetic Dentistry

- How well does the theoretical model of a market explain what has been going on with cosmetic dentistry?

- Clearly there is a demand for cosmetic dentistry - people are willing and able to pay for it.
- Cosmetic treatment is seen as something which give a ‘utility’, i.e.satisfaction
- The market is growing, why is this happening?

Elasticity

- Elasticity provides a way of measuring how sensitive demand or supply is to factors such as a change in price. Take the relationship between price and quantity demanded. We know that if price rises then people will buy less but we do not know how much less. Price elasticity of demand allows us to calculate this.

Price Elasticity of Demand (PED)

- The formula for price elasticity of demand (PED) is % change in quantity demanded/ % change in price of the good
- If the price of dentistry rose by 10% and the quantity bought fell by 5% then the PED would be –5%/+10% = –0.5. This tells us that demand for dentistry is not particularly sensitive to changes in price. It is what economists call **price inelastic**.

PED

- If the price of prophys fell by 20% and the quantity of prophys bought rose by 30% then the value of PED would be +30%/–20% = –1.5. In this case the demand for prophys tests is **price elastic**, i.e. sensitive to changes in price.

PED

- The value of PED is always negative reflecting the inverse relationship between price and quantity demanded. Second, PED is just a number, it is not expressed in terms of any particular units.
- How do we know whether demand is elastic or inelastic?
  - The rule is: Demand is price inelastic whenever the % change in price leads to a smaller % change in quantity demanded. This gives PED values between 0 and –1.

Cost Sharing in Health Care

- Cost sharing is the term used to describe different forms of direct charging for health care services. Direct charging is seen as a way of reducing demand but also as a way of raising revenue. How effective is this policy?
- Many people have to pay prescription charges, that is they have to pay a certain amount every time they want to have a prescription dispensed. What has been the effect of this charging?

Markets as Dynamic systems

- One thing the market is able to do very well is act as a powerful and efficient information system. Changes in consumers' tastes are quickly communicated to producers via market prices. The search for profits drives producers to offer new products or services and make them in more cost effective ways.
- An example of this is the way in which consumers' concern over yellow teeth lead Proctor and Gamble to create an over the counter product like Crest Whitestrips.
- Competition and the need to respond to and, if possible, anticipate consumer demand lead to a system which provides the maximum choice for the lowest possible cost; a system which is flexible, dynamic and efficient.

Real World Markets

- Some economists, argue that in the real world most markets will be in a constant state of flux always adjusting towards equilibrium but rarely actually reaching it.
- It is the market's ability to act as an information system that is important rather than its ability to produce a single equilibrium price.

Real World Markets

- Take our market for cosmetic dental services. If the market were free and competitive, then different dentists would offer different mixes of service, and some dentists would be more skilful than others. The skilful dentists offering the services consumers want would have lots of customers and would be able to charge higher prices than their competitors.
- This would force the other dentists to modify the services they are selling to try to capture back the consumers. This process of competition would be continuous, particularly as other factors influencing demand and supply, such as levels of income or the state of technology, are likely to be changing as well.

Uncertainty and Imperfect Information

- Health care is a market where changes in technology are occurring all the time.
- How can we decide whether a new way of treating a medical condition should be used or how widely it should be used?

Power to Impose Unwanted Treatments

- Clinicians have the ability to “impose” treatment decisions and choices with patients

Doctors’ Monopoly

- Limited supply of dentists in active practice.
- Limits on advertising prevented consumers from gaining the information they needed to make a rational market choice.
  - the US Supreme Court outlawed the ban on advertising.

Doctors Monopoly

- HMO’s have more bargaining power over doctors on behalf of the patients who are insured with them.
  - others have argued that HMOs restrict patients’ access to doctors in order to hold down costs.

Why Might Markets Fail?

- Very acute information problems which make rational purchasing decisions difficult if not impossible.

Perfect Competition

- An efficient free market requires producers to be operating under conditions of perfect competition. This requires a stringent set of conditions - perfect information, many buyers and sellers, a uniform product and freedom of entry and exit.
- If producers do not operate in this way and, in particular, if they have a significant power to influence price or the total quantity being produced, then the market will fail. Dentists and other suppliers of health care often have this power.

Problems of Risk and Uncertainty

- If we are going to buy health care in a free market, then we have to have enough money to pay for it. But health care is expensive and we cannot predict when we are going to be ill.
- What makes this worse is that postponing buying health care is often risky. So we face the problems of risk and uncertainty.
- The market response to this problem was to develop an insurance market to remove the uncertainty and risk from health care spending. We pay an agreed amount of money per year whether we need health care or not. But then, when we need care, the insurer pays the bills, however large they are.

Moral Hazard

- Having insurance can change the way in which we act.
- Moral hazard can affect any insurance market but is a particularly serious problem for health care insurance. Consumers who are insured have an incentive to over-consume health care -to demand operations and treatments which they would not choose if they were directly paying for them.
- They may also not bother to follow a healthy lifestyle or to get preventative checkups.
- As a result when they do fall ill, the cost of treatment is higher than it would otherwise have been.

Moral Hazard

- Dentists too are affected by moral hazard. They know that the costs of treatment are covered by insurance so the temptation is to over-treat and over-prescribe medicines for their patients. Moral hazard thus leads to an inefficiently large quantity of resources being allocated to health care.

Unequal Information

- Moral hazard and adverse selection help to explain why a free market in health insurance is unlikely to be efficient.
- However, health care markets face even more fundamental information problems. We are now going to examine the problems caused by unequal information and the consequent role of doctors as agents for patients.

Rational Choices

- In the health care market information is not equally shared between buyers and seller, instead the seller, the dentist, has far more information than the buyer, the patient.
  - This asymmetry of information undermines the separation of buyers and sellers.

Dentists as Agents
Supplier Induced Demand

- The asymmetry of information makes the relationship between patients and dentists rather different from the usual relationship between buyers and sellers. We rely upon our dentist to act in the patients best interest, to act as their agent. This mean we expect the dentist to divide herself in half - on the one hand to act in the interest of the consumer as the buyer of health care but on the other to act in her own interests as the seller of health care.

Supplier Induced Demand

- In a free market situation where the dentist is primarily motivated by the profit motive, the possibility exists for dentists to exploit patients by advising more treatment to be purchased than is necessary - supplier induced demand. Traditionally, dentist behavior has been controlled by a professional code and a system of licensure.