Asymmetric Information: Application to Health Insurance

EE 474 Health Economics

Semester 1/2012

Topics

- Asymmetric Information: Adverse Selection
- Asymmetric Information in the Used-Car Market: The Lemons Principle
- Application of the Lemons Principle in Health Insurance Markets
  - Inefficiencies
  - Experience Rating and Adverse Selection

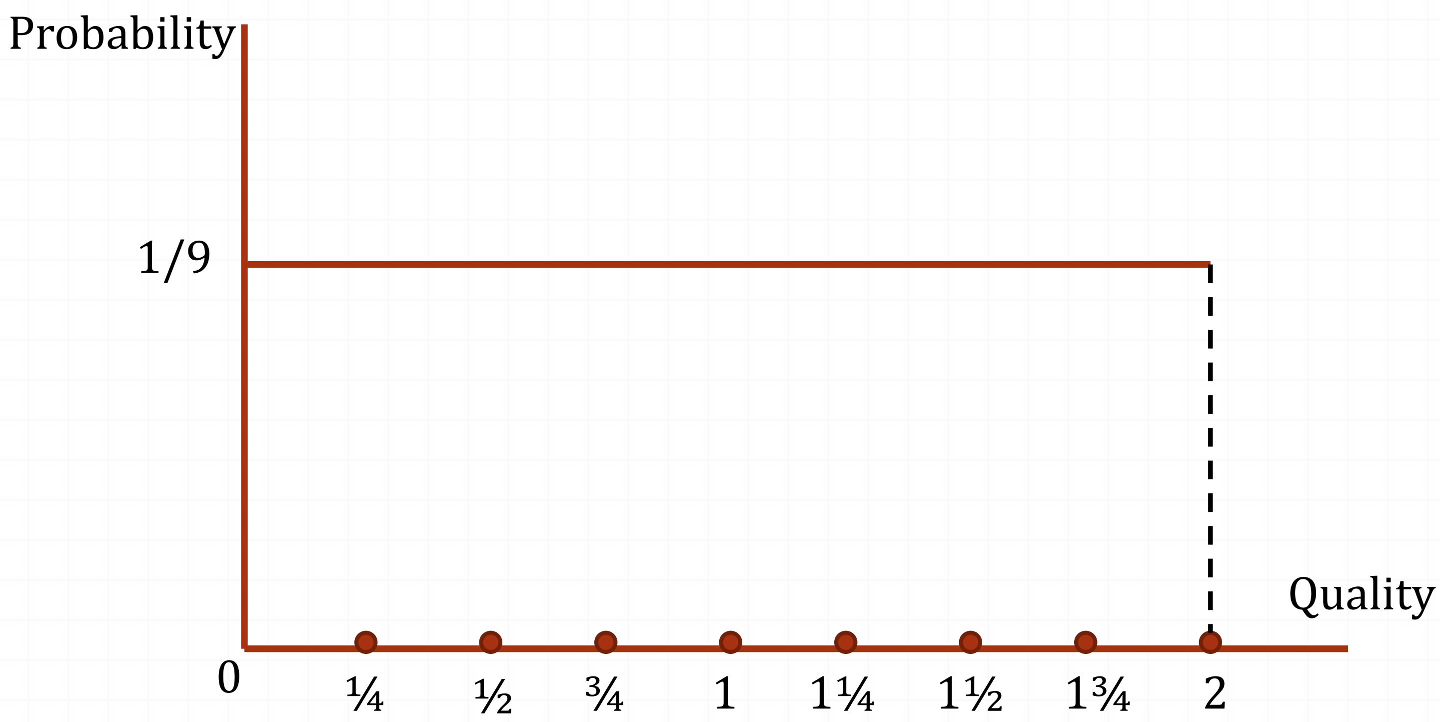
Overview of Information Issues

- Asymmetric information involves situations where two parties (buyers and sellers) have different levels of information.
- Two forms of asymmetric information:
  - Moral hazard: A person who takes no risk may behave differently from when they are fully exposed to risk.
  - Adverse selection: Buyers and sellers have access to different information.
- Adverse selection is a phenomenon in which insurance attracts patients who are likely to use services at a higher than average rate.
  - Results from asymmetric information because potential beneficiaries have better information than the insurer about their health.

Asymmetric Information in the Used-Car Market: The Lemons Principle

- George Akerlof (1970) introduced the idea of asymmetric information through an analysis of the used-car market.
  - Used cars available for sale vary in quality ("lemons" or "mint").
  - Car owners know exactly the quality levels of their cars, but car buyers know only the distribution of quality.
- <u>Example</u>:
  - 9 cars are to be sold, and their quality levels (Q) are 0, ¼, ½, ¾, 1, 1¼, 1½ , 1¾ , and 2
  - Reserve value to car owner = \$5000 x Q
  - Value to buyer = \$7500 x Q

The Availability of Products of Different Quality
(Uniform Probability of Picking Each Car)



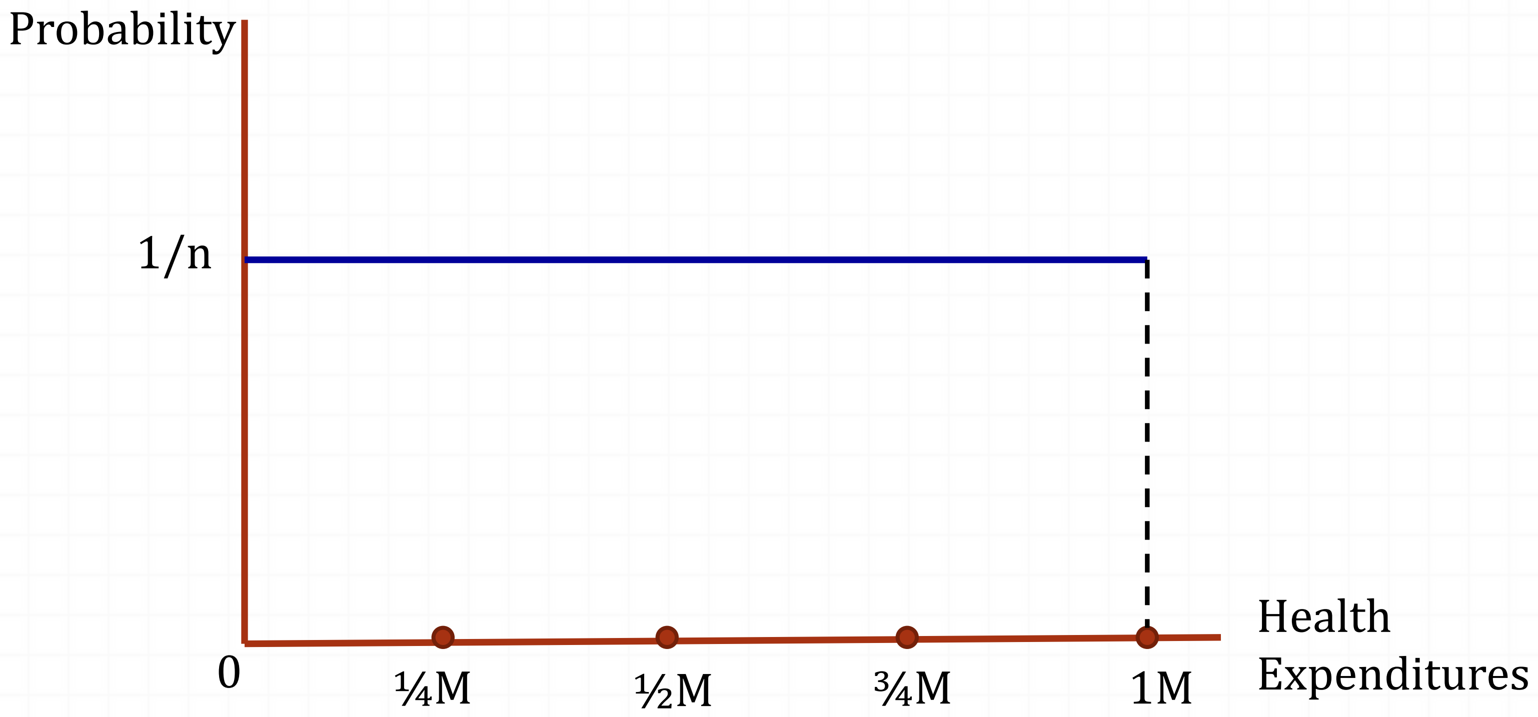
The Lemons Principle

- When potential buyers know only the average quality of used cars, then market prices will tend to be lower than the true value of the top-quality cars.
- Owners of the top-quality cars will tend to withhold their cars from sale.
  - Thus, the good cars are driven out of the market by the lemons. ➔ "The Lemons Principle"
- Information asymmetry could lead the elimination of functioning markets.

Application of the Lemons Principle: Health Insurance

- Adverse selection applies to markets involving health insurance.
- Information asymmetry will likely occur because the potential insured know more about their expected health expenditures in the coming period than does the insurance company.
- The higher health risks tend to drive out the lower health risk people, and a functioning market may even fail to appear at all for some otherwise-insurable health care risks.

Uniform Probability of Expenditure
(Expected Health Expenditure Levels)



Inefficiencies of Adverse Selection

- If the lower risks are grouped with higher risks and all pay the same premium,
  - The lower risks face an unfavorable rate and will tend to underinsure. They sustain a welfare loss by not being able to purchase insurance at rates appropriate to their risk.
  - The higher risks will face a favorable premium and therefore over-insure; i.e., they will insure against risks that they would not otherwise insure against. This, too, is inefficient.

Experience Rating & Adverse Selection

- Group insurance can be a more useful mechanism to reduce adverse selection.
- Experience rating is a practice where premiums are based on the past experience of the group, or other risk-rating systems to project expenditures.
  - However, this practice can lead to "cream skimming" or "cherry picking" (especially under managed care plans).
  - Address this concern by using *community rating*.
- Community rating is a practice in which an insurer charges all groups within an area the same premium.