

Practice Midterm

A. [30 points] True/False Explain. Indicate whether each of the following statements is true or false and then explain why you think this. Include in your explanation any pertinent institutional details and economic reasoning.

- (1) The proportion of children without health insurance increased substantially in the population between 1980 and 2000.
- (2) In the U.S, nearly half of all expenditures on health care are by the government.
- (3) While life expectancies have been rising in the developed world over the past century, life expectancies have not risen in developing countries over the same period.
- (4) People with health insurance coverage do not face the full marginal costs of the health care they receive.
- (5) Regardless of the share of health insurance premiums paid by employers, in the long run workers pay the cost of more generous health insurance packages.
- (6) The average length of hospital stays has remained flat after a sharp decline in the 1980s.
- (7) Medicare pays hospitals mostly based upon how many days patients stay in the hospital and on how many procedures are performed during the stay.
- (8) Consider the model of testing for drug safety that we discussed in class. Consider two different tests, say A and B. If the distributions of test scores for good and bad drugs overlap more for test A than for test B, then test A is better at distinguishing good drugs from bad drugs.
- (9) Among people with full-time long-term jobs, the main proximate reason for the increase in uninsurance is that fewer employers are offering health insurance.
- (10) A futures market in organ transplants involves paying the families of the recently deceased some payment in exchange for the use of the deceased person's organs.

B. [30 points] Short answer

HMOs and other health insurance providers routinely maintain lists of prescription drugs that are covered under their insurance plan. The insurance providers will only reimburse patients for a prescription drug if it is covered. Often, insurance companies will change

these for lists new plan enrollees, with some new drugs added and other drugs deleted. In 1999, the California Department of Corporations forbade California HMOs from deleting some drugs from their coverage lists. [LA Times, April 20, 1999, p. A8]

- (1) Other than the price of the drug, on what basis do insurers decide whether or not to cover a drug?
 - (a) What are the costs to the insurer of deleting a drug from the list?
 - (b) What are the benefits to the insurer of deleting a drug?
 - (c) Will the elasticity of patient demand affect the insurer's decision of which drugs to delete? Will insurers be more likely to delete drugs with elastic or inelastic demand (or does it not matter)?

- (2) Remember the Law of Unintended Consequences.
 - (a) List some potential side effects of this government action.
 - (b) In response to this action, California Assemblyman Mark Gallegos (D-Baldwin Park) said, "This administration is clearly interested in protecting the consumer." Was he right?

C. [40 points] Analytical Problem

Suppose that your utility function over health care (h) and other goods (c) is given by $U(h,c)$ and that you have a fixed income of \$100. (Assume that the indifference curves of your utility function bear the usual convex shape). Each year, you choose h and c to maximize your utility subject to a budget constraint:

$$p_c c + p_h h = Y$$

where, p_h is the price of health care,
 p_c is the price of other goods, and
 Y is your income.

In year 1, the price of health care is \$1, while the price of other goods is \$2. At these prices, you demand 30 units of health care and 35 units of other goods.

In year 2, your utility function and your income do not change, but prices do. Health care becomes more expensive at \$1.50, while other goods become cheaper at \$1.50. At these prices, you demand 20 units of health care.

- (1) Assuming you spend all your income in year 2, how many units of other goods do you buy?

- (2) Draw a graph with your demand for health care on the x-axis and your demand for other goods on the y-axis. On this graph, draw your budget constraints in year 1 and in year 2. On these budget lines, indicate your demand points for h and c in year 1 and

year 2. Also draw indifference curves tangent the points in year 1 and year 2 that represent your demand.

- (3) In your drawing, do the price changes leave you better off, worse off, or the same as before?
- (4) Calculate a Laspeyres price index for the price changes.
- (5) Calculate a Paasche price index for the price changes.
- (6) Draw another graph showing a base utility weighted price index (where year 1 is taken as the base period). On the same graph, show the Laspeyres price index.
- (7) Draw yet another graph showing a current utility weighted price index (where year 2 is taken as the current year). On the same graph, show the Paasche price index.
- (8) Which of these price indexes come closest to reflecting whether you were made better or worse off as a result of the price change?