

Review questions for EC782 midterm. Prof. Ellis

Midterm exam is scheduled for **Wednesday March 20 2013 in class 10:30-12:00** Room 546

The midterm will be for 1.5 hours and will have five problems from which you will be asked to do **three**. The actual wording and information requested may differ slightly from those shown here, or simplified. Short, well organized answers will be preferred to long, disorganized ones.

1. The Rand Health Insurance Experiment (HIE), conducted in the mid 1970's, remains the classic and largest controlled experiment done in the health services field. Key literatures we have examined in this course include Will Manning et al (1987) Newhouse's book "Free for All" (1993) and various mentions of it in the subsequent literature.
 - a. Give three primary research questions that motivated the HIE.
 - b. Describe briefly why a controlled experiment may be superior to using a natural experiment for answering these three questions.
 - c. Explain carefully at least one criticism of the HIE study design that made it less than an ideal controlled experiment.
 - d. For ONE of the primary research questions you listed, summarize the main findings of the HIE analysis.
 - e. For this same research question, describe one subsequent research paper briefly that has built upon or refined the findings from the HIE. Give the authorship and brief citation, and describe one result from this more recent paper.
2.
 - a) Why might supply side cost sharing be superior to demand side cost sharing?
 - b) From the perspective of Ellis and McGuire (EM) (1986) what is a perfect agent? What payment system can achieve the first best if hospitals are perfect agents? Explain.
 - c) In the EM terminology, what happens if hospitals become imperfect agents? How should the hospital payment system be modified in response to imperfect agency?
 - d) Assume providers are perfect agents, so that $\alpha=1$. Examine the implications of average cost pricing where there are fixed costs. Suppose that the one good q has a fixed cost of F and a marginal cost of $c=1$ per unit, and that the provider payment is based on the average cost at some average amount q^0 . The provider can choose q that may differ from q^0 .
 - e) Using insights from the literature on nonprofit firms, suggest one refinement to the hospital payment policy or hospital regulations that might be appropriate in response to this heterogeneity in order to improve efficiency. You need not consider any market equilibrium effects on the nature of the equilibrium if you do not wish to.
3. Managed care is pervasive in US health care markets, although relatively rare in other countries still.
 - a) What is managed care?
 - b) Speculate on why managed care is more common in the USA. What problem or problems is it designed to fix? Describe an alternative approach used in at least one other country to solve these same problem(s).
 - c) Explain carefully how selection complicates the assessment of the impact of managed care on total health care spending. Give an empirical example.
 - d) We have studied several papers on managed care in this course. (Manning et al, 1987; Burgess, Carey and Young, 2005; Shen and Melnick, 2005; and Glied, 2000, more in health seminars) Summarize briefly what this literature says about the effectiveness of managed care in controlling costs or improving quality.

4. Health care reform is a huge issue in the US.
 - a) Briefly summarize the three key fundamental components of the 2010 Affordable Care Act (ACA) that Gruber describes in his book Health Care Reform that are the essential features of the 2010 US Health Care reform.
 - b) Using a unit square with the horizontal dimension capturing percentiles of income from lowest to highest, and the vertical axis measuring percentiles of expected health care spending from lowest to highest, shade in the region of people most likely to benefit from the ACA, and label the region least likely to benefit from the ACA. (This is not in any readings)
 - c) More broadly than in (b), summarize the characteristics of Americans who benefit from the ACA (“the winners”).
 - d) More broadly than in (b), summarize the characteristics of Americans who are made worse off by the ACA (“the losers”).
 - e) If altruism is not included as a consideration, which side of the US population is larger: winners or losers?
 - f) Now give some examples of altruism that might broaden the set of winners from the ACA.
 - g) Explain how using an *ex ante* rather than an *ex post* approach might change the calculation of winners and losers.

5. Leemore Dafny, Kate Ho and Mauricio Varela. (2013) in “Let Them Have Choice: Gains from Shifting Away from Employer-Sponsored Health Insurance and toward an Individual Exchange. *AEJ: Economic Policy*, calculate the gains from individual rather than employer sponsored health insurance.
 - a) What gains from allowing greater choice do they quantify? Briefly summarize their methodology.
 - b) How big numerically do they find the gains to be from expanding the choices available to employees to have further options that allow more choice?
 - c) Their models do not use risk adjustment to explain variations in choice due to variations in health status rather than variations in taste. What does this imply about their results?
 - d) What other possible gains from moving from employer sponsored insurance to individual insurance is neglected in their article?

6. Please include relevant citations for all parts of this problem.
 - a) List five (or more) properties of health care expenditure models make OLS less than ideal for estimating models of health care spending.
 - b) Explain the estimation algorithm of the classic two-part log linear model used in the RAND health experiment (Manning et al 1987 uses a four part model that is an extension.
 - c) Describe briefly one alternative estimator for individual level spending that has been used more recently.
 - d) What models of individual health care costs are preferred by Andrew Jones (2010) and other econometricians?

7.
 - a) Why is market concentration increasing in health care markets the US? In which market(s) is this happening in?
 - b) Dunn and Shapiro (2012) develop a market level model of insurance and physician decisions about pricing and quantity. What are the three stages or periods in their model and what decisions are made in each?

- c) What is the physician's entry decision model? Describe one change or extension you would make to this model.
 - d) How do they model the market determination of price and quantity? Describe one change or extension you would make to this model.
 - e) Summarize briefly the empirical findings of their paper.
8. We have reviewed several articles that discuss weaknesses in the quality of the US health care system. Some of those weaknesses are addressed by the 2010 Affordable Care Act (ACA).
- a) Describe one quality problem in the US relative to other countries that will be addressed by the ACA.
 - b) Describe the features of the ACA that address this quality problem.
 - c) Describe how a conservative who does not support the ACA might criticize the ACA as not solving this quality problem.
 - d) Describe a result from the behavioral economics literature that might suggest that the ACA fixing of that problem may be imperfect or wrong.
 - e) Describe an alternative approach that could have been used to address this quality problem in the ACA.

9. Daniel Kahneman's book "Thinking, Fast and Slow" is a careful analysis of the insights from behavioral economics, and includes review of the concepts of

- i) Priming
- ii) Framing
- iii) Base rate neglect
- iv) Cognitive ease
- v) Anchors
- vi) Availability bias
- vii) Intuitive prediction
- viii) Optimism bias
- ix) Prospect theory
- x) The Endowment effect
- xi) The possibility effect
- xii) The certainty effect
- xiii) Overestimation and overweighting of rare events
- xiv) Avoiding regret
- xv) WYSIATI

(Even if you have not read the book, you can read about any of these concepts through articles on the web, including Wikipedia).

- a) Choose ONE of these topics and describe it briefly.
- b) Choose one (and only one) article from the course readings (or the BU/Harvard/MIT Health Economics Seminar) and describe the new insights from any one or more of the above topics on that paper. In short, describe the insights of behavioral economics to the article you have chosen.