

**UNIVERSITY OF HAWAII AT MĀNOA  
DEPARTMENT OF ECONOMICS**

**ECON 434 (001): HEALTH ECONOMICS**

**UHM Focus Course: Writing Intensive (W)**

<http://www.hawaii.edu/gened/focus.htm>

SEMESTER: Spring 2005  
CREDIT HOURS: 3

MEETING TIME: TR 1:30-2:45 PM  
MEETING ROOM: Kuykendall Hall, 307

INSTRUCTOR: Gerard Russo  
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University of Hawaii at Manoa  
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OFFICE HOURS: TR 10:30-11:30 AM or by appointment, Saunders 515B

**OBJECTIVES:** The course objectives are fourfold: first, to describe the institutional structure and present the stylized facts of the medical care sector of the U.S. economy; second, to discuss the public policy issues which surround the production and distribution of health services; third, to train students to think like economists and analyze health care problems from an economic perspective; and fourth, to train students to critically analyze the vast array of literature produced by health economists and related researchers.

**COURSE DESCRIPTION:** This course will survey the basic economic issues surrounding the Health Care Sector of the U.S. economy and act as an introduction to the field of Health Economics. The focus will be on the application of economic principles of scarcity and choice to the use and provision of medical care. Society must decide how much medical care to produce, what kind to produce, and for whom to produce. This course will examine efficiency and equity in allocation of resources. Economic analysis is important to our discussion of

medical care because it can provide valuable insight into the problem of optimal social choice. Economic analysis also provides insight into the behavior of consumers, health care providers and health insurers, and their interactions in the overall health care system. Traditional economic theory will be applied as well as analysis peculiar to health economics. The main topics to be discussed include; the institutional and economic structure of the health care industry; the value of human life; the demand for health, health care and health insurance; private and public health finance; and, models of physician and hospital behavior. Since uncertainty surrounds the use of medical care, a study of the economics of insurance will be essential. This will require sophisticated analytical tools, but the majority of the economic analysis used in this course will be of the descriptive and intuitive sort requiring only prose and graphics. Additional topics will include the insurance problems of moral hazard and adverse selection, the problem of escalating health care costs and the debate over cost-containment policies such as competition and regulation. In addition the prospects of national health insurance will be discussed as well as the practical issue of financing our increasing health care expenditures.

**PREREQUISITES:** Econ 301 Intermediate Economics: Price Theory or consent of instructor.

**TEACHING METHODOLOGY:** Lecture with discussion and class participation; student research papers; individual student-faculty meetings; student presentations.

**TEXTS:** Folland, Sherman, Allen C. Goodman, Miron Stano, *The Economics of Health and Health Care*, (Upper Saddle River, NJ: Pearson/Prentice Hall) 4th ed., 2004. ISBN 0-13-100067-5. Required.

Fuchs, Victor R. *Who Shall Live? Health, Economics and Social Choice* (Expanded Edition), (River Ridge, NJ: World Scientific), 1999. ISBN 981-02-4183-6. Required.

<b>GRADE DETERMINATION:</b>	Research Paper	50%
	Mid-Term Exam	30%
	Attendance & Participation	10%
	Peer Assessment	<u>10%</u>
	Total	100%

The mid-term examination will be essay style. The questions will be based on readings and class lectures.

**EXAMINATION DATE:** Mid-Term Examination Thursday, March 10, 2005 1:30-2:45 pm  
**NO FINAL EXAM:** Research Paper Substitutes for Final Exam

**RESEARCH PAPERS:** Students may choose their research topic. However, the topic

must be approved by the instructor. Research papers are expected to be approximately twenty to thirty (20-30) double-spaced typed pages in length. All research reports must include a title page, abstract, outline, introduction, body, conclusion, and bibliography. All footnotes, citations, references must be accurate and consistent throughout the paper. Plagiarism will not be tolerated. Evidence of plagiarism may result in a failing grade. Students are expected to periodically meet with the instructor on an individual basis to discuss content, form, grammar and writing style. All research papers must be word-processed on a personal computer. Students must strictly adhere to the deadlines listed below. No papers will be accepted late. However, students may continue to revise their research paper until 12:00 Noon, Thursday May 12, 2005 if they deem it necessary. A list of suggested research topics follows the class schedule.

## CLASS SCHEDULE:

Tuesday, January 11, 2005	Lecture #1	
Thursday, January 13, 2005	Lecture #2	
Tuesday, January 18, 2005	Lecture #3	
Thursday, January 20, 2005	Lecture #4	
Tuesday, January 25, 2005	Lecture #5	
Thursday, January 27, 2005	Lecture #6	
Tuesday, February 1, 2005	Lecture #7	Paper: Draft Abstract Due
Thursday, February 3, 2005	Lecture #8	
Tuesday, February 8, 2005	Lecture #9	Paper: Draft Outline Due
Thursday, February 10, 2005	Lecture #10	
Tuesday, February 15, 2005	Lecture #11	Paper: Draft Bibliography Due
Thursday, February 17, 2005	Lecture #12	
Tuesday, February 22, 2005	Lecture #13	

Thursday, February 24, 2005	Lecture #14	
Tuesday, March 1, 2005	Lecture #15	
Thursday, March 3, 2005	Lecture #16	
Tuesday, March 8, 2005	Lecture #17	
Thursday, March 10, 2005	Lecture #18	Mid-Term Examination
Tuesday, March 15, 2005	Lecture #19	
Thursday, March 17, 2005	Lecture #20	Paper: Draft #1 Due
Tuesday, March 29, 2005	Lecture #21	
Thursday, March 31, 2005	Lecture #22	
Tuesday, April 5, 2005	Lecture #23	Paper: Draft #2 Due
Thursday, April 7, 2005	Lecture #24	
Tuesday, April 12, 2005	Lecture #25	Course Conference: Student Presentations Paper: Draft #3 Due
Thursday, April 14, 2005	Lecture #26	Course Conference: Student Presentations
Tuesday, April 19, 2005	Lecture #27	Course Conference: Student Presentations
Thursday, April 21, 2005	Lecture #28	Course Conference: Student Presentations
Tuesday, April 26, 2005	Lecture #29	Course Conference: Student Presentations
Thursday, April 28, 2005	Lecture #30	Course Conference: Student Presentations
Tuesday, May 3, 2005	Lecture #31	Course Conference: Student Presentations Paper: Final Draft Due

**Thursday, May 12, 2005, 12:00 Noon: Last Day to Submit Research Paper**

SUGGESTED RESEARCH TOPICS:

- (1) Medical Malpractice: A Review of the Economic Literature.
- (2) Medical Malpractice: An Economic Analysis of Policy Initiatives From State Legislatures.
- (3) Medical Malpractice: Does Tort Law Induce Defensive Medicine and Should We Limit Cash Awards?
- (4) Treatment v. Prevention: Are preventive services more efficient than curative services?
- (5) The Cost-Efficiency of Health Maintenance Organizations (HMOs) and other types of Provider Organizations.
- (6) The Socio-Economic Determinants of Health: With Special Emphasis on Income (Micro-Analysis within USA or International Comparisons).
- (7) For-Profit v. Non-Profit Health Care Providers: What are the Behavioral Differences?
- (8) The Growth of Home Health Care.
- (9) The Impact of Prospective Payment on Health Care Expenditures and Health Care Quality: A Critical Review of the Literature.
- (10) The Impact of Diagnostic Related Groups (DRGs) on Technological Change.
- (11) The Nursing Shortage/Surplus in Hawaii: Is There One? Why?
- (12) Health Care Expenditures in Hawaii: Why are expenditures in Hawaii lower than expenditures in Mainland states.
- (13) The Uninsured and Under-Insured in Hawaii and USA: An Analysis Policy Options to Expand Coverage.
- (14) Physician Induced Demand: How Significant Is this Phenomenon?
- (15) The Demand for Medical Care in Developing Nations: A Review of The Economic Literature
- (16) Blood Policy: An Economic Analysis
- (17) The Economics of Acquired Immunodeficiency Syndrome (AIDS)

- (18) Financing Long-Term Care: A Critique of Proposals for Hawaii
- (19) An Analysis of a Specific Country's Health Care System or an International Comparison: Japan, United Kingdom, Korea, The Netherlands, Germany, Canada, Sweden, New Zealand, Taiwan.
- (20) National Health Insurance and Health Care Reform: A Review and Critique of Current Proposals.
- (21) Does Prospective Payment Result in Cost-Shifting?
- (22) Health Care Reform for Developing Countries
- (23) The Economics of HIV\AIDS Prevention and Treatment
- (24) Aging in Japan, Italy and USA and its implications for Health Care Financing
- (25) An Economic Analysis and Critique of the Medicare Drug Plan.

PLEASE NOTE: Course grades will be assigned on the University of Hawaii plus/minus grading system.

SOME USEFUL WEB SITES:

[www.jstor.org](http://www.jstor.org)

[www.nber.org](http://www.nber.org)

[www.cms.gov](http://www.cms.gov)

[www.urban.org](http://www.urban.org)

## TENTATIVE LECTURE TOPICS AND READING LIST

## 1 Introduction: The Medical Economy

1.1 The relative importance of the health care sector in the US economy; national health expenditures.

\* Levit, Katharine, Cynthia Smith, Cathy Cowan, Art Sensenig, Aaron Catlin, and the Health Accounts Team (2004), "Health Spending Rebound Continues In 2002," *Health Affairs*, Vol. 23, No. 1 (January/February), pp.147-159.

\* Folland, Sherman, Allen C. Goodman, and Miron Stano (2004), *The Economics of Health and Health Care*, (Upper Saddle River, New Jersey: Pearson Prentice-Hall) 4<sup>th</sup> edition, Chapter 1, pp. 1-19 and Chapters 2-3, pp. 20-52.

1.2 An international comparison of health expenditures.

Phelps, Charles E. (2003), *Health Economics*, 3<sup>rd</sup> edition (Boston: Addison Wesley), chapter 16, pp. 547-510.

Schieber, George J. and Jean-Pierre Poullier (1990), "An Overview of International Comparisons of Health Expenditures," in: *Health Care Systems in Transition: The Search for Efficiency*, (Paris: Organization for Economic Cooperation and Development), pp. 9-15.

Schieber, George J., Jean-Pierre Poullier, and Leslie M. Greenwald (1992), "U.S. Health Expenditure Performance: An International Comparison and Data Update," *Health Care Financing Review*, Vol. 13, No. 4, pp. 1-87.

Schieber, George J., Jean-Pierre Poullier, and Leslie M. Greenwald (1991), "Health Care Systems in Twenty-Four Countries," *Health Affairs*, Vol. 10, No. 3, pp. 22-38.

Gerdtham, Ulf-G., Jes Sjøgaard, Fredrik Andersson, and Bengt Jönsson (1992), "An Econometric Analysis of Health Care Expenditure: A Cross-Section Study of the OECD Countries," *Journal of Health Economics*, Vol. 11, No. 1, pp. 63-84.

\* indicates required reading.

Griffin, Charles C. (1992) *Health Care in Asia: A Contemporary Study of Cost and Financing* (Washington, DC: The World Bank), Chapter 4, pp.46-93.

1.3 An overview and description of the medical sector and its institutional structure.

Phelps, Charles E. (2003), *Health Economics*, 3<sup>rd</sup> edition (Boston: Addison Wesley), chapter 2, pp. 28-58.

Enthoven, Alain (1987), "The Health Care Economy in the USA," in: George Teeling Smith, editor, *Health Economics: Prospects for the Future*, (New York: Croom Helm), pp. 57-70.

- \* Folland, Sherman, Allen C. Goodman, and Miron Stano (2004), *The Economics of Health and Health Care*, (Upper Saddle River, New Jersey: Pearson Prentice-Hall) 4<sup>th</sup> ed., Chapter 21, pp. 481-516.

1.4 The development of health economics as a research field and the policy issues it attempts to address.

Zeckhauser, Richard (1988), "Forward," in: H.E. Frech III, ed., *Health Care in America: The Political Economy of Hospitals and Health Insurance*, (San Francisco, CA: Pacific Research Institute for Public Policy), pp. xvii-xxiii.

Feldstein, Paul J. (1999), *Health Care Economics*, 5th. ed., (Albany, New York: Delmar), chapter 1, pp. 1-17, and chapter 3, pp. 37-51.

- \* Fuchs, Victor R. (1999), *Who Shall Live?: Health, Economics, and Social Choice* (Expanded Edition), (River Ridge, NJ: World Scientific), introduction, pp. 3-8.

Intriligator, Michael D. (1981), "Major Policy Issues in the Economics of Health Care in the United States," in: J. van der Gaag and M. Perlman, editors, *Health, Economics, and Health Economics*, (Amsterdam: North-Holland), pp. 355-368.

2 The Relevancy of Economic Analysis to Health Care Policy

- 2.1 The fundamental principles of scarcity and choice, the economic goals of society, and the production and distribution of medical services: technical efficiency v. allocative efficiency, and efficiency v. equity.
- \* Fuchs, Victor R. (1999), *Who Shall Live?: Health, Economics and Social Choice*, (Expanded Edition), (River Ridge, NJ: World Scientific), chapter 1, pp. 9-29.
  - \* Folland, Sherman, Allen C. Goodman, and Miron Stano (2004), *The Economics of Health and Health Care*, (Upper Saddle River, New Jersey: Pearson Prentice-Hall) 4<sup>th</sup> ed., Chapter 18-19, pp. 377-424.
- 2.2 What are the characteristics of medical care and the medical care market which distinguish it from other commodities and commodity markets?
- Phelps, Charles E. (2003), *Health Economics*, 3<sup>rd</sup> edition (Boston: Addison Wesley)(1992), *Health Economics*, (New York: Harper Collins), chapter 1, pp. 1-27.
- \* Arrow, Kenneth J. (1963), "Uncertainty and the Welfare Economics of Medical Care," *American Economic Review*, Vol. 53, No. 5, pp. 941-973.
- 2.3 A critique of economic theory and the response of economists: the case of blood banks.
- Titmuss, Richard M. (1971), *The Gift Relationship: From Human Blood to Social Policy*, (New York: Pantheon Books).
- Kessel, Reuben A. (1974), "Transfused Blood, Serum Hepatitis, and The Coase Theorem," *Journal of Law and Economics*, Vol. 17, No. 2, pp. 265-289.
- Arrow, Kenneth J. (1974), "Gifts and Exchanges," *Philosophy and Public Affairs*, Vol. 1, No. 4, pp. 343-362. Reprinted in: E. Phelps, editor, *Altruism, Morality, and Economic Theory*, (New York: Russell Sage Foundation, 1975), pp. 13-28.
- Culyer, A. J. (1977), "Blood and Altruism: An Economic Review," in: David B. Johnson, editor, *Blood Policy: Issues and Alternatives*, (Washington, DC: American Enterprise Institute for Public Policy Research), pp. 39-58.

### 3 The Demand for Health

#### 3.1 The measurement of health.

Rosser, Rachel (1983), "Issues of Measurement in the Design of Health Indicators: A Review," in: A. J. Culyer, editor, *Health Indicators*, (Oxford: Martin Robertson), pp. 34-81.

Erickson, Pennifer, Klaus-Dirk Henke, and Roger Dean Brittain (1983), "A Health Statistics Framework: US Data Systems as a Model for European Health Information?," in: A. J. Culyer, editor, *Health Indicators*, (Oxford: Martin Robertson), pp. 117-138.

Torrance, George W. (1986), "Measurement of Health State Utilities for Economic Appraisal: A Review," *Journal of Health Economics*, Vol. 5, No. 1, pp. 1-30.

Van Vliet, Rene' C.J.A. and Bernard M.S. van Praag (1987), "Health Status Estimation on the Basis of MIMIC-Health Care Models," *Journal of Health Economics*, Vol. 6, No. 1, pp. 27-42.

#### 3.2 The determinants of health and the health production function.

\* Folland, Sherman, Allen C. Goodman, and Miron Stano (2004), *The Economics of Health and Health Care*, (Upper Saddle River, New Jersey: Pearson Prentice-Hall) 4<sup>th</sup> ed., Chapter 4, pp. 73-95.

Phelps, Charles E. (2003), *Health Economics*, 3<sup>rd</sup> edition (Boston: Addison Wesley)(1992), *Health Economics*, (New York: Harper Collins), chapter 3, pp. 55-84.

\* Fuchs, Victor R. (1999), *Who Shall Live?: Health, Economics, and Social Choice*, (Expanded Edition), (River Ridge, NJ: World Scientific), chapter 2, pp. 30-55.

Feldstein, Paul J. (1999), *Health Care Economics*, 5<sup>th</sup> edition, (Albany, New York: Delmar), chapter 2, pp. 18-36.

Corman, Hope, Theodore J. Joyce, and Michael Grossman (1987), "Birth

Outcome Production Function in the United States,” *Journal of Human Resources*, Vol. 22, No. 3, pp. 339-360.

Wolfe, Barbara and Robert Haveman (1983), “Time Allocation, Market Work, and Changes in Female Health,” *American Economic Review*, Vol. 73, No. 2, pp. 134-139.

### 3.3 Health as Capital.

\* Folland, Sherman, Allen C. Goodman, and Miron Stano (2004), *The Economics of Health and Health Care*, (Upper Saddle River, New Jersey: Pearson Prentice-Hall) 4<sup>th</sup> ed., Chapter 6, pp. 125-140.

Grossman, Michael (2000), “The Human Capital Model,” in: A. J. Culyer and J. P. Newhouse, editors, *Handbook of Health Economics*, (Amsterdam: Elsevier), Chapter 7, pp. 347-408

Grossman, Michael (1972a), “On the Concept of Health Capital and the Demand for Health,” *Journal of Political Economy*, Vol. 80, No. 2, pp. 223-255.

Grossman, Michael (1972b), *The Demand for Health: A Theoretical and Empirical Investigation*, (New York: Columbia University Press for NBER).

Cropper, M. L. (1981), “Measuring the Benefits from Reduced Morbidity,” *American Economic Review*, Vol. 71, No. 1, pp. 235-240.

Grossman, Michael (1982), “The Demand for Health After a Decade,” *Journal of Health Economics*, Vol. 1, No. 1, pp. 1-3.

Muurinen, Jaana-Marja (1982), “The Demand for Health: A Generalized Grossman Model,” *Journal of Health Economics*, Vol. 1, No. 1, pp. 5-28

Wagstaff, Adam (1986), “The Demand for Health: Some New Empirical Evidence,” *Journal of Health Economics*, Vol. 5, No. 3, pp. 195-233.

Ehrlich, Isaac and Hiroyuki Chuma (1990), “A Model of the Demand for Longevity and the Value of Life Extension,” *Journal of Political Economy*, Vol. 98, No. 4, pp. 761-782.

## 4 The Demand for Medical Care

## 4.1 Economic and non-economic factors in the demand for health services.

- \* Folland, Sherman, Allen C. Goodman, and Miron Stano (2004), *The Economics of Health and Health Care*, (Upper Saddle River, New Jersey: Pearson Prentice-Hall) 4th ed., Chapter 8, pp. 163-186.

Phelps, Charles E.(2003), *Health Economics*, 3<sup>rd</sup> edition (Boston: Addison Wesley), chapter 4, pp. 100-135.

Feldstein, Paul J. (1999), *Health Care Economics*, 5<sup>th</sup> edition, (Albany, New York: Delmar), chapter 5, pp. 82-116.

Pauly, Mark V. (1974), "Economic Aspects of Consumer Use," in: Selma J. Mushkin, editor, *Consumer Incentives for Health Care*, (New York: Prodist for the Milbank Memorial Fund), pp. 219-250.

## 4.2 Empirical estimates of the demand for medical care.

Phelps, Charles E.(2003), *Health Economics*, 3<sup>rd</sup> edition (Boston: Addison Wesley), chapter 5, pp. 136-177.

van der Gaag, Jacques and Barbara L. Wolfe (1991), "Estimating Demand for Medical Care: Health as a Critical Factor for Adults and Children," in: G. Duru and J. H. P. Paelinck, editors, *Econometrics of Health Care*, (Dordrecht, The Netherlands: Kluwer), pp. 31-58.

## 4.3 Allocative efficiency and the public demand for medical care.

Phelps, Charles E.(2003), *Health Economics*, 3<sup>rd</sup> edition (Boston: Addison Wesley), chapter 12, pp. 397-431.

Feldstein, Paul J. (1999), *Health Care Economics*, 5<sup>th</sup> edition, (Albany, New York: Delmar), chapter 18, pp. 514-561.

Aaron, Henry (1981), "Economic Aspects of the Role of Government in Health Care," in: J. van der Gaag and M. Perlman, editors, *Health, Economics, and Health Economics*, (Amsterdam: North-Holland), pp. 15-32.

## 5 The Demand for Health Insurance: Theory

## 5.1 Expected utility theory

- \* Folland, Sherman, Allen C. Goodman, and Miron Stano (2004), *The Economics of Health and Health Care*, (Upper Saddle River, New Jersey: Pearson Prentice-Hall) 4<sup>th</sup> ed., Chapter 11, pp. 225-250.

Phelps, Charles E.(2003), *Health Economics*, 3<sup>rd</sup> edition (Boston: Addison Wesley), chapter 10, pp. 318-365.

Feldstein, Paul J. (1999), *Health Care Economics*, 5<sup>th</sup> edition, (Albany, New York: Delmar), chapter 6, pp. 117-162.

Von Neumann, John and Oskar Morgenstern (1944), *Theory of Games and Economic Behavior*, (Princeton: Princeton University Press), chapter 1, section 3, pp. 15-31.

## 5.2 Risk aversion

Pratt, John W. (1964), "Risk Aversion in the Small and in the Large," *Econometrica*, Vol. 32, No. 1-2, pp. 122-136.

Arrow, Kenneth J. (1971), *Essays in the Theory of Risk Bearing*, (Chicago: Markham).

## 5.3 Other factors affecting the demand for health insurance and some additional institutional background.

Short, Pamela K. (1990), *Estimates of the Uninsured Population, Calendar Year 1987* (DHHS Pub. No. (PHS) 90-3469), National Medical Expenditure Survey Data Summary 2, Agency for Health Care Policy and Research, (Rockville, MD: Public Health Service).

Levit, Katherine R., Gary L. Olin, and Suzanne W. Letsch (1992), "Americans' Health Insurance Coverage, 1980-91," *Health Care Financing Review*, Vol. 14, No. 1, pp. 31-57.

## 6 Health Insurance Theory: Problems of Imperfect Information

## 6.1 Moral hazard and reimbursement insurance.

- \* Pauly, Mark V. (1968), "The Economics of Moral Hazard," *American Economic Review*, Vol. 58, No. 3, Pt. 1, pp. 531-537.

Zeckhauser, Richard (1970), "Medical Insurance: A Case Study of the Tradeoff Between Risk Spreading and Appropriate Incentives," *Journal of Economic Theory*, Vol. 2, No. 1, pp. 10-26.

McGuire, Thomas G. (1991), "Paralyzing Medicare's Demand-Side Policies," in: H. E. Frech III, editor, *Regulating Doctors' Fees: Competition, Benefits, and Controls under Medicare*, (Washington, DC: American Enterprise Institute), pp. 174-192.

## 6.2 Moral hazard and indemnity insurance.

- \* Pauly, Mark V. (1974), "Overinsurance and Public Provision of Insurance: The Roles of Moral Hazard and Adverse Selection," *Quarterly Journal of Economics*, Vol. 88, No. 1, pp. 44-62.

Ehrlich, Isaac and Gary S. Becker (1972), "Market Insurance, Self-Insurance, and Self-Protection," *Journal of Political Economy*, Vol. 80, No. 4, pp. 623-648.

Shavell, Steven (1979), "On Moral Hazard and Insurance," *Quarterly Journal of Economics*, Vol. 93, No. 4, pp. 541-562.

Arnott, Richard J. and Joseph E. Stiglitz (1986), "Moral Hazard and Optimal Commodity Taxation," *Journal of Public Economics*, Vol. 29, No. 1, pp. 1-24.

Arnott, Richard J. and Joseph E. Stiglitz (1988), "The Basic Analytics of Moral Hazard," *Scandinavian Journal of Economics*, Vol. 90, No. 3, pp. 383-413.

Arnott, Richard J. and Joseph E. Stiglitz (1990), "The Welfare Economics of Moral Hazard," in: Henri Loubergé, editor, *Risk, Information and Insurance*, (Norwell, Massachusetts: Kluwer), pp. 91-121.

Russo, Gerard (2003), "Optimal Commodity Taxation with Moral Hazard and Unobservable Outcomes," *International Journal of Health Care Finance and Economics*, Vol. 3, No.1, pp 53-71.

### 6.3 Adverse selection

\* Rothschild, Michael and Joseph Stiglitz (1976), "Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information," *Quarterly Journal of Economics*, Vol. 90, pp. 629-650.

\* Folland, Sherman, Allen C. Goodman, and Miron Stano (2004), *The Economics of Health and Health Care*, (Upper Saddle River, New Jersey: Pearson Prentice-Hall) 4<sup>th</sup> ed., Chapter 9, pp. 187-201.

Akerlof, George A. (1970), "The Market for `Lemons': Qualitative Uncertainty and the Price Mechanism," *Quarterly Journal of Economics*, Vol. 80, pp. 488-500.

Crocker, Keith J. and Arthur Snow (1986), "The Efficiency Effects of Categorical Discrimination in the Insurance Industry," *Journal of Political Economy*, Vol. 94, No. 2, pp. 321-344.

Borenstein, Severin (1989), "The Economics of Costly Risk Sorting in Competitive Insurance Markets," *International Review of Law and Economics*, Vol. 9, No. 1, pp. 25-39.

Beauregard, K. (1991), *Persons Denied Private Health Insurance Due to Poor Health* (AHCPR Pub. No. 92-0016), National Medical Expenditure Survey Data Summary 4, Agency for Health Care Policy and Research, (Rockville, MD: Public Health Service).

## 7 Empirical Evidence of the Impact of Health Insurance on the Demand for Medical Care and Health: Results from the Rand Health Insurance Experiment.

### 7.1 Health insurance and medical care demand.

\* Manning, Willard G. et al., (1987), "Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment," *American Economic Review*, Vol. 77, No. 3, pp. 251-277.

Newhouse, Joseph P. et al., (1981), "Some Interim Results from a Controlled Trial of Cost Sharing in Health Insurance," *New England Journal of Medicine*, Vol. 305, No. 25, (Dec. 17), pp. 1501-1507.

Manning, Willard G. et al., (1988), *Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment*, (Rand Pub. No. R-3476-HHS), (Santa Monica, CA: The Rand Corporation).

Keeler, Emmett B. and John E. Rolph (1988), "The Demand for Episodes of Treatment in the Health Insurance Experiment," *Journal of Health Economics*, Vol. 7, No. 4, pp. 337-367.

Keeler, Emmett B., Willard G. Manning and Kenneth B. Wells (1988), "The Demand for Episodes of Mental Health Treatment," *Journal of Health Economics*, Vol. 7, No. 4, pp. 369-392.

## 7.2 The impact of health insurance on health.

Brook, Robert H. et al., (1983), "Does Free Care Improve Adults' Health?: Results from a Randomized Controlled Trial," *New England Journal of Medicine*, Vol. 309, No. 23, (Dec. 8), pp. 1426-1434.

Brook, Robert H. et al., (1984), *The Effect of Coinsurance on the Health of Adults: Results from the Rand Health Insurance Experiment*, (Rand Publ. No. R-3055-HHS), (Santa Monica, CA: The Rand Corporation).

Rogers, William H. et al., (1991), "Effects of Cost Sharing in Health Insurance on Disability Days," *Health Policy*, Vol. 18, No. 2, pp. 131-139.

## 7.3 Are the results of the Rand HIE valid?

Welch, Bruce L. et al., (1987), "The Rand Health Insurance Study: A Summary Critique," *Medical Care*, Vol. 25, No. 2, pp. 148-156.

Newhouse, Joseph P. et al., (1987), "The Findings of the Rand Health Insurance Experiment-A Response to Welch et al.," *Medical Care*, Vol. 25, No. 2, pp. 157-179.

Dowd, Bryan et al., (1991), "Health Plan Choice and the Utilization of Health

Care Services," *Review of Economics and Statistics*, Vol. 73, No. 1, pp. 85-93.

Wedig, Gerard J. (1988), "Health Status and the Demand for Health: Results on Price Elasticities," *Journal of Health Economics*, Vol. 7, No. 2, pp. 151-163.

8 Are Consumers Undertaxed, Overinsured, and Overutilizing Medical Services?: Taxation, The Demand for Health Insurance, and the Demand for Medical Care.

8.1 The tax treatment of health insurance premiums.

- \* Vogel, Ronald J. (1980), "The Tax Treatment of Health Insurance Premiums As a Cause of Overinsurance," in: Mark V. Pauly, editor, *National Health Insurance: What Now, What Later, What Never?* (Washington, D.C.: American Enterprise Institute for Public Policy Research), pp. 220-249.

Vogel, Ronald J., and Nancy T. Greenspan (1980), "Taxation and Its Effect Upon Public and Private Health Insurance and Medical Demand," *Health Care Financing Review*, Vol. 1, No. 4, pp. 39-45.

8.2 The tax/subsidy to health insurance and the misallocation of resources.

Gruber, Jonathan (December 2002), "Taxes and Health Insurance," National Bureau of Economic Research, Working Paper No. 8657, [www.nber.org/papers/w8657](http://www.nber.org/papers/w8657).

- \* Pauly, Mark V. (1986), "Taxation, Health Insurance, and Market Failure in the Medical Economy," *Journal of Economic Literature*, Vol. 24, No. 2, pp. 629-675.

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