



The Hebrew University of Jerusalem

Syllabus

Health Economics - 95248

Last update 21-11-2024

HU Credits: 2

Degree/Cycle: 2nd degree (Master)

Responsible Department: Public Health - International Prog.

Academic year: 0

Semester: 1st Semester

Teaching Languages: English

Campus: Ein Karem

Course/Module Coordinator: Dr Gary Ginsberg, ex-Israeli ministry of health, WHO HQ and New York state Health Department.

Coordinator Email: gmginsberg@gmail.com

Coordinator Office Hours: By appointment

Teaching Staff:

Dr. Gary Ginsberg

Course/Module description:

The course is a basic course in health economics and is included in most curriculums in health management and economics programs. The course is intended for non-economists, and is based on a quantitative (and ethical) approach integrating the disciplines of economics and epidemiology an intuitive understanding. The reading materials are largely taken from medical and health services research journals.

Course/Module aims:

This course will provide an overview of the economics of health care systems. It will focus first on microeconomic analysis of the behavior of providers and consumers of health care. Secondly, the role of planning versus markets in health will be discussed. Finally, economic and epidemiological tools to prioritise potential health service interventions will be taught, based on measuring benefits that are monetarisable and those that improve quality of life.

Learning outcomes - On successful completion of this module, students should be able to:

- i) Understand the fundamentals of Health Economics, of how economic incentives affect the demand and the supply of health services as well as their impact on the health status of individuals and society.
- ii) Integrate Health Economics with applied aspects of health services evaluation and planning.
- iii) Apply Health Economics as a decision- making tool and as a promoter of efficiency in Health Services.

Attendance requirements(%):

100%

Teaching arrangement and method of instruction: Live or Zoom Lectures

Course/Module Content:

Need and Demand for Health services. Grossmans Model of Demand For Health.

Classical Economic consumer theory, Marginal Utility theory. Elasticity of Demand with respect to prices, income and time. Planning vs the Free Market. Cost-Effectiveness Analysis. Discounting. Net Present Value. Introduction to Cost-utility analysis. Cost-Benefit Analysis. Valuation of Human Life. Health Status Measurement. Resource Allocation Between Regions. Utilization of Health Services. Alternative Methods of Remunerating Physicians and Hospitals.

Required Reading:

*** Ginsberg GM.. *Assessing Evidence- The strengths and weakness of various ways of assessing outcomes, Cost-Effectiveness Analysis. In Assessing Evidence to improve population health and well-being (ed Aceljas C), Learning Matters , Exeter, UK, Chapter 7. 91-111, 2011.*

Recommended (non essential) Optional Reading:

*** Drummond M et al. (1987) *Health economics: An introduction for clinicians. Annals of Internal medicine, 107, 1, 88-92.*

*** Cullis J. & West P. (1979) *The Economics of Health, Martin Robertson.*

*** Drummond M et al. (1987) *Health economics: An introduction for clinicians. Annals of Internal medicine, 107, 1, 88-92.*

*** Ginsberg G.M. *Cost Effectiveness Analysis, Cost Benefit Analysis and the Value of life in Health Care and Prevention; in Costs and Benefits in Health Care and Prevention (eds: U.Laaser et al.), pp 6-19, Springer-Verlag Berlin, 1990.*

** Chisholm D, Baltussen R, Evans DB, Ginsberg G, Lauer JA, Lim S, Ortegón M, Salomon J, Stanciole A, Tan-Torres Edejer T. *What are the priorities for prevention and control of non-communicable diseases and injuries in sub-Saharan Africa and South East Asia? BMJ2012;344:e586*

** Ginsberg GM, Lauer J, Zelle S, Baeten S, Balthussen R. *Cost effectiveness of strategies to combat breast, cervical, and colorectal cancer in sub-Saharan Africa and South East Asia: mathematical modeling study. BMJ 2012;344:e614*

Additional Reading Material:

GENERAL TEXTS:

** *Web Reference for WHO Choice: www.who.int/evidence/cea*

*** Mills Anne (1985). Economic Evaluation of Health Programmes. Application of the Principles in developing Countries. World Health Statistics Quarterly, 38, 368-382.*

*** Fuchs Victor, Who shall Live ?, Basic Books. OR*

*** Abel Smith Brian (1979). Value for Money in the Health Services, Heinemann.*

*** Drummond M.F. and Stoddart, G.L. (1985) Principles of Economic Evaluation of Health Programmes. World Health Statistics Quarterly, 38, 355-367.*

HEALTH ECONOMICS LESSON I:

Grossmans Model of demand For Health

A macro -overview as to how environment, individual behaviour and use of health services can effect the health of a population.

Introduction to course --- What is economics?, what is health?, what is health economics? Can we measure health?

SUBSEQUENT LESSONS: (Order might change slightly)

Health Status Measurement.

Health Status indices and their construction, equivalence method, time trade off and standard gamble techniques.

Elasticities of Demand.

How utilization of health services varies with respect to income, prices and time taken for visit from both theoretical and empirical aspects.

Need for Health services.

Identifies various types of needs for health services - including normative, felt, comparative and expressed needs.

Demand for Health Services.

Description of the classical economic model of demand as applied to decisions to purchase or utilize health services.

Classical Economic Theory.

Classical Economic consumer theory, Marginal utility, Marginal Costs and Benefits.

Planning vs the Free Market

The pro's and con's of allocating health resources through the free market as opposed via a planned system, with special emphasis on the agency relationship and externalities.

Discounting / Net Present Value.

Methods of taking into account time differences of costs and benefits in project appraisal.

Cost Effectiveness Analysis.

Theory and Applied examples of Cost Effectiveness Analysis -including Renal Dialysis, Day Surgery vs Overnight Surgery, HIB vaccinations in Albania.

Cost Benefit Analysis.

Theory and Applied examples of Cost-Benefit Analysis - including vaccinations against hepatitis A.

Introduction to Cost-Utility Analysis

Theory and examples, including for reducing the burden from cervical and colorectal cancer. Actual detailed instructions of how to carry out such analyses form the basis of next terms optional course in □Epidemiological-Economic evaluations of Health Service Interventions.

Value of Human Life.

An exploration of the various ways of valuing human life in health studies including Human Capital and Willingness to Pay methods.

Resource Allocation Between Regions.

Different methods of allocating budgets to health regions, per-diem, fee-for service, by need, RAWP method.

Alternative Methods of Remunerating Physicians and Hospitals.

The advantages and disadvantages of fee-for service, per capita, per capita at risk and salaries are discussed with empirical evidence.

NOTE: IT IS ESSENTIAL TO UNDERSTAND THE POWERPOINT PRESENTATIONS.

□ BIBLIOGRAPHY

Health Status Measurement.

***** Culyer A.J. Need and the N.H.S. Martin Robertson, 1976. Chapter 4, 30-48.**

***** Sackett D.L. & Torrance G.W. (1978) The utility of different health states as perceived by the general public. Journal of Chronic Diseases, 31, 11, 697-704.**

***** Rosser R. and Watts (1972), The measurement of hospital output. International Journal of epidemiology, 1,4,361 367.**

Kaplan R.M., Bush J.W. and Berry C.C. (1976). Health status: types of Validity and the index of well-being. Health Care Services Research, 11,478-507.

Fanshel S. and Bush J. (1970). A health status index and its application to health service outcomes. *Operations Research*, 18,6,1021 1066.

Gudex C and Kind P. 1988. *The QALY Toolkit. Discussion Paper No.38. Centre For Health Economics, University of York.*

Need for Health services.

*** Bradshaw, J. (1972). *A Taxonomy of Social Need*, in McLachlan G. (ed.). *Problems and Progress in Medical Care*. London: Oxford University Press, pp. 69 82.

*** Culyer A.J. *Need and the N.H.S.* Martin Robertson, 1976. Chapters 2 and 3 (part), 11-22.
Cullis and West, Chapter. 2, 24 49.

Grossmans Model of demand For Health

Grossman, M. (1972). *The demand for health: a theoretical and empirical investigation*. New York and London.
Columbia University Press.1972. (INTRODUCTION ONLY)

Grossman M. (1972), *On the concept of health capital and the demand for health*. *Journal of Political Economy*, 80,2, 223 255.

Demand for Health Services.

*** Culyer A.J. *Need and the N.H.S.* Martin Robertson, 1976. Chapter 3 (part), 22-29.

** Cullis and West, Chapter. 4, 75 95.

** Ginsberg G., Israeli A., Cohen A. and Stessman J. *Determinants of Emergency Room Utilization in Jerusalems 70 year old population*. *Israel Journal of Medical Sciences* 1996; 32; 649-64.

Wilensky, G.R. and Rossiter, L.F. (1983). *The relative importance of physician induced demand in the demand for medical care*. *Milbank Memorial Fund Quarterly*, 61, 2, 252 277.

Elasticities of Demand.

*** Newhouse, J.P., Manning, W.G., Morris, C.N. et al (1981). Some interim results from a controlled trial of cost sharing in health insurance. *New England Journal of Medicine* 305, 25, 1501-1507.

*** Cullis and West, Chapter. 5, 96-111.

Wynand P.M.M. van de Ven. (1983) *Effects of Cost-Sharing in Health care. Effective Health Care*, 1, 1, 47-56.

Classical Economic Theory.

*** Cullis and West, Chapter 2, 24-49.

Culyer A. (1974) *The Economics of Social Policy*, Robertson, Chapter 2, 17-41.

7. Planning vs the Free Market

*** Maynard, A. (1979). *Pricing, Demanders and the Supply of Health Care. International Journal of Health Services*, 9, 1, 121-133.

*** Maynard A. (1979) *Pricing, Insurance and the N.H.S. Journal of Social Policy*. April, 8, 2, 157-176.

*** Vayda E. (1989) *Private Practice in the United Kingdom: A Growing Concern. Journal of Public Health Policy*, 10, 3, 359-376.

*** Cullis and West, Pages 60-61.

** Abel Smith Brian, *opus cit* Chapter 3, 32-44.

** Culyer A. *opus cit* Chapter 7, 81-95.

Arrow, K.J. (1963). *Uncertainty and the Welfare Economics of Medical Care. American Economic Review* 53, 5, 941-973.

Vayda E. (1973). *A Comparison of Surgical Rates in Canada and in England and Wales. New England Journal of Medicine*, 289, 1224-1229.

Culyer A. *The NHS and the market: Images and realities*, 23-57. in *The Public/Private Mix for Health* (1982), McLachlan G. & Maynard A. (eds.). Nuffield Provincial Hospitals Trust.

McLachlan G. and Maynard A. *The Public/Private Mix in health care; The emerging lessons*, 513 558. in *The Public/Private Mix for Health* (1982), McLachlan G. & Maynard A. (eds.). Nuffield Provincial Hospitals Trust.

Cost Effectiveness Analysis.

*** Piachaud D. and Weddell, J.M. (1972) *The Economics of Treating Varicose Veins*. *International Journal of Epidemiology*, *** 1,3:287 294.

*** Russell, I.T., Devlin, H.B., Fell, M., Glass, N.J. and Newell, D.J. (1977). *Day case surgery for hernias and hemorrhoids: a clinical, social and economic evaluation*. *Lancet* i:844 847.

*** Ginsberg, G.M. (1985) *Balance of Care in Services to the Elderly in Israel*. *Israel Journal of Medical Sciences*, 21, 230 237.

*** Klareman, H.E., Francis, J.O. and Rosenthal, G.D. (1968) *CEA applied to the treatment of chronic renal disease*. *Medical Care*, 6; 44 54.

*** Robinson R (1993) *Cost-Utility Analysis*. *BMJ*, 307 2 Oct 1993, 859-862.

** Drummond M.F. (1985) *Survey of Cost-effectiveness and Cost-Benefit Analyses in Industrialized countries*. *World Health Statistics Quarterly*, 38, 383-401.

** Weinstein M.C. and Statson W.B. (1977). *Foundations of cost-effectiveness analysis for health and medical practice*. *New England Journal of Medicine*, 296, 716-721.

* Ginsberg G.M., Viskoper R.J., Oren S., Bregman L., Mishal Y. and Shraff S (1980). *Resource savings from non pharmacological control of hypertension*. *Journal of Human Hypertension* 4, 375-378.

Drummond M.F. *Cost effective analysis in health care*. Nuffield/York Portfolio No. 6. Nuffield provincial Hospitals Trust.

Mills, A. & Drummond M.F, (1985). *Economic Evaluation of Health Programmes: Glossary of Terms*. *World Health Statistical Quarterly*, 38: 432 434.

Culyer, A.J. and Maynard, A.K. (1981). *Cost effectiveness of duodenal ulcer treatment*. *Social Science and Medicine*, 15C:3 11.

Campbell and Campbell (1978), *The social and economic Costs of end stage renal Disease*, *New England Journal of Medicine*, August 24, 386-392.

Fenton, F.R., Tessier, L. Contandriopoulous, A.P. Nguyer, H. and Struening, E.L. (1982). A comparative trial of home and hospital psychiatric treatment: financial costs. *Canadian Journal of Psychiatry*, 27, 3, 177 187.

Mooney, G. (1978). Planning for Balance of Care of the Elderly, *Scottish J. Polit. Econ.* 25:149 164.

Stessman J., Ginsberg G., Hammerman-Rozenberg R. et al. Decreased hospital utilization by the elderly due to a Home Hospitalization program. *Journal of American Geriatrics Society* 1996; 44; 591-8.

Discounting / Net Present Value.

*** Drummond M.F. (1980). *Principles of economic appraisal in health care*, Oxford University Press, 1980. Chapters 5 and 6, pp 47-65 and appendices pp 121-123.

*** Cullis and West, Pages 167 176.

Cost Benefit and Cost-Utility Analysis. (2.5)

*** WHO Guide to Cost-Effectiveness Analysis. Ed Tan-Torres Edejer et al. WHO Geneva 2003.

*** Web Reference for WHO Choice: www.who.int/evidence/cea

*** Williams, A. The cost-benefit approach. *British Medical Bulletin*, (1974),252-256.

*** Williams, A.H. (1985). Economics of coronary artery bypass grafting. *British Medical Journal*; 291;326 329.

*** Ginsberg G.M. Cost Effectiveness Analysis, Cost Benefit Analysis and the Value of life in Health Care and Prevention; in *Costs and Benefits in Health Care and Prevention* (eds: U.Laaser et al.), pp 6-19, Springer-Verlag Berlin, 1990.

*** Ginsberg G.M. Blau H. Kerem E, Springer C, Kerem B-S, Eckstein E. Greenberg A, Kolumbus A, Abeliovich D, Gazit E and Yahav J. Cost-benefit analysis of a nationwide genetic screening programme for preventing cystic fibrosis in an Israel Ashkenazi population. *Health Economics*, 1994;3;5-23.

*** . Ginsberg G, Fisher M, Ben-Shahar I, Bornstein J. Cost Utility Analysis of Vaccination against HPV in Israel, *Vaccine*, 2007;25;6677-91

OR

*** Ginsberg G. *Cost Utility Analysis of Interventions to Reduce the Burden of Cervical Cancer in Israel Vaccine* 2013, 31S,146-152.

** Obiajunwa, Obichi G, Ginsberg G.M. *Cost-Utility Analysis Of Vaccinating Children Against Rota Virus In Nigeria. Researchjournal* □ *s Journal of Public Health* 2017;3;9:1-19

** Ginsberg GM, Chemtob D. *Cost Utility Analysis of HIV Pre Exposure Prophylaxis among Men who have Sex with Men in Israel. BMC Public Health.* (2020) 20:271 <https://doi.org/10.1186/s12889-020-8334-4>

** Ginsberg GM, *Generalizability of Cost-Utility analyses across countries and settings, Best Practice & Research Clinical Gastroenterology* 2013; 27; 845-852.

** Ginsberg GM. *HPV vaccinations - possibly necessary but not sufficient. Lancet Global Health* 2014. E367-8. [http://dx.doi.org/10.1016/S2214-109X\(14\)70249-9](http://dx.doi.org/10.1016/S2214-109X(14)70249-9)

*** Ginsberg G, Block C, Stein-Zamir C. *Cost-Utility analysis of a Nationwide Vaccination Program against Serogroup B Meningococcal disease in Israel. International Journal of Public Health,* 2016;61;6;683-692. DOI 1-10 10.1007/s00038-016-0821-0

*** Ginsberg GM, Cuckle H. *Cost-Utility Analysis of cfDNA Screening for Down's Syndrome in Israel. Current Progress in Obstetrics and Gynecology volume 4.* Nov 2016; 19; 1-17.

*** Ginsberg GM, Somekh E, Shlesinger Y. *Cost-Utility Analysis vaccination against RSV in Israeli Infants.. IJHPR Forthcoming December 2017.*

** Ginsberg G, Kark J, Einav S. *Is out-of-hospital resuscitation worthwhile? Cost-Utility Analysis of Cardiac Resuscitation Services in Jerusalem. Resuscitation* 2015; 86;54-61.

*** Ginsberg G.M. and Silverberg D.S. *Cost-benefit analysis of the use of crash helmets by bicyclists in Israel. American Journal of Public Health,* 1994;84;653-656.

*** Ginsberg G.M. and Dagan R. *Cost-Benefit analysis of Haeomophilus Influenza type b Vaciination programme. Journal of Epidemiology and Community Health,* 1993;47;485-490.

*** Buxton, M.J. and West R.R. (1975). *Cost Benefit Analysis of a long Term Hemodialyses for chronic renal failure. Birth. Med.J., ii,* 376 379.

*** Hagard, S. and Carter, F.A. (1976). *Preventing the Birth of Infants with Down's Syndrome: A Cost Benefit Analysis; British Medical Journal, Vol 1, No. 6012,* 753

756.

**** Ginsberg GM and Lowe S. Cost-Effectiveness of Treatments for ALS: A Review of the Literature. *Pharmacoeconomics* 2002;20;367-387.**

**** Ginsberg G.M., Slater P and Shouval D. A Cost-Benefit analysis of Hepatitis A vaccinations in Israel. *Journal of Hepatology* 2001; 34; 92-9.**

*** Ginsberg G.M., and Shouval D. Cost-Benefit Analysis of a Nationwide Neonatal inoculation Programme against Hepatitis B in an area of Intermediate Endemicity. *Journal of Epidemiology and Community Health*, 1992;46;587-594.**

OR

*** Ginsberg G.M., Berger S. and Shouval D. Cost-Benefit Analysis of a Nationwide inoculation Programme against Hepatitis B in an area of Intermediate Endemicity. *Forthcoming, Bulletin of the World Health Organisation*, 1992;70;6;757-767.**

*** Ginsberg G.M. and Tulchinsky T.H. Costs and Benefits of a second Measles Innoculation of Children in Israel, the West Bank and Gaza. *Journal of Epidemiology and Community Health*, 1990, 44; 274-280**

*** Ginsberg G.M., Viskoper R.J., Fuchs Z., Drexler I., Lubin F., Berlin S., Nitzan H.,**

Zulty L., Chitrit A., Bregman L. and Modan M. A partial cost-benefit analysis of two different modes of non pharmacological control of hypertension in the community. *Journal of Human Hypertension*,1993;7;593-597.

Haiquan X., Yanping L., Songming D. et al. Cost□utility and cost□benefit analyses of school-based obesity prevention program. *BMC Public Health* 2020; 20: 1608. Published online 2020 Oct 23. doi: 10.1186/s12889-020-09718-x

**** Hagard, S. Carter F. and Milne R.G. (1976). Screening for open spina bifida cystica: a cost-benefit analysis; *British Journal of Preventive & Social Medicine*, 30, 40-53.**

*** Cohn E.J. (1972). Assessment of Malaria Eradication. Costs and Benefits. *American Journal of Tropical Medicine and Hygeine*, 21,5, 663-667.**

Creese, A. and Henderson R.H. (1980). Cost-benefit analysis and immunization programmes in developing countries. *Bulletin of the W.H.O.* 58,3, 491-198.

Cullis J. & West P. (1979) *The Economics of Health*, Martin Robertson. Chapter 8, 167-196.

Drummond M.F. (1980). *Principles of economic appraisal in health care*, Oxford University Press, 1980. Chapter 7 pp 66-106.

Ginsberg G.M., Shani S. Lev B. Cost benefit analyses of Resperidone and Clozapine in the treatment of Schizophrenia in Israel. *Pharmacoeconomics* 1998;13;231-41.

Weisbrod, B.A., Test, M.A., and Stein, L.I. (1980), Alternative to mental hospital treatment: economic cost benefit analysis; *Arch. Gen. Psych.* 37, 400 5.

Weisbrod B.D. (1982), A guide to benefit cost analysis as seen through a controlled experiment in treating the mentally ill. *Journal of Health Politics, Policy and Law*, 7, 808 845.

Bunker J. et al (1977). *The Costs, Risks and Benefits of Surgery*. Oxford University Press (New York).

Creese, A. (1983). *The economic evaluation of immunization programmes*. In: Lee K. and Mills A. (eds). *The economics of health in developing countries*, Oxford, Oxford University Press, 1983.

Cretin S (1977) *CBA of Treatment and prevention of Myocardial Infarction*, Health Services Research, Summer 1977, 174-179.

Steiner and Smith (1973). Application of CBA to a P.K.U. Screening Program. *Inquiry* 10, 34 40.

Value of Human Life.

*** Neuhauser, D. and Lewiki. A.M. (1975). What do we gain from the sixth stool guaiac ? *New England Journal of Medicine*, 293, 226-228.

*** Thompson M.S. (1986) Willingness to pay and accept risks to cure chronic disease. *American Journal of Public Health*, 74, 392-396.

*** Cullis and West, Chapter 9, 197 215.

** Thompson M.S. Read J.L. Liang M. (1984) Feasibility of willingness-to-pay measurement in chronic arthritis. *Medical Decision Making* 4, 195-215.

Card, W.I. and Mooney, G.H. (1978). What is the monetary value of human life? *British Medical Journal*, 2, 1627

Jones Lee M.V. (1976) *The Value of Life. An Economic Analysis*. London, Martin Robertson 1976.

Mooney Gavin. *Valuing Human Life in health service policy*. Nuffield/York Portfolio No. 3. Nuffield Provincial Hospitals Trust.

Muller A. and Reutzel T.J. (1984) Willingness to pay for reduction in fatality risk: an exploratory survey. *American Journal of Public Health*, 74, 808-812.

Williams A. (1984), *Medical Ethics*. Nuffield/York Portfolio No.2, pp 1 8. Nuffield/York Portfolio No.2, pp 1 8.

Cooper B and Rice D. (1976) The economic Cost of Illness revisited. *Social Security Bulletin*, February 1976 21-36.

Landenfeld and Seskin (1985) The Economic Value of Life: Linking theory to Practice, *American journal of Public Health*, 72, 6, 555-556.

Graham J. and Vaupel J (1990) Value of Life: What Difference does it make. *Risk Analysis*, 1,1,89-95.

Roberts C.J. Farrow S.C. and Charny M.C. (1985) How much can the NHS afford to spend to save a life or avoid a severe disability ? *The Lancet*, January 12, 1985, 89-91.

Mooney G. *Values in Health Care*. in *Economics and Health Planning*, Ken Lee (ed), Croom Helm, 1979, Chapter 1, 23 44.

Mooney G. *The valuation of Human Life*. Macmillan 1977.

Resource Allocation Between Regions.

*** Ginsberg GM. Budgetary Influences on Psychiatric Care. *Israel Journal of Psychiatry and Related Sciences*, 1981; 18, 4, 327 330.

*** *Sharing Resources for Health in England*. HMSO. 1976, 14-21.

*** Ginsberg GM. Standardized Mortality Ratios for Israel, 1969 78. *Israel Journal of Medical Sciences*, 1983, 19, 638 643.

** Carr-Hill R.A. (1989) Allocating resources to health care: RAWP is dead-long live RAWP. *Health Policy*, 13, 135-144.

** Carr-Hill R.A. and Sheldon T. (1992) Rationality and the use of formulae in the allocation of resources to health care. *Journal of Public Health Medicine*, 14,2, 117-126.

Schrijvers G. (1984) Regional health budgeting in Western Europe. *Effective Health Care*, 2, 2, 57-64.

Culyer A.J. *Need and the N.H.S.* Martin Robertson, 1976. Chapter 9, 113-124.

Ginsberg G. Lerner J. Mark M. and Popper M. *Prior Hospitalization and age as predictors of mental health resource utilization in Israel.* *Social Science and Medicine* 1997; 44; 5; 623-33.

Alternative Methods of Remunerating Physicians and Hospitals.

*** Ware, J.E., Brook, R.H., Rogers, W.H., Keeler, E.B., Davies, A.R., Sherbourne, C.D. Goldberg, G.A., Camp P. and Newhouse, J.P. (1986). *Comparison of Health Outcomes at a Health Maintenance Organization with Those of Fee for Service Care.* *The Lancet*, May 3, 1017 1022.

*** Ginsberg G.M., Penchas S. and Israeli A. *Alternative Methods of Hospital Remuneration in Israel.* *Israel Journal of Medical Sciences*, 1991, 27, 583-589.

*** Manning W.G., Leibowitz A., Goldberg G.A., Rogers W.H. and Newhouse J.P. (1984). *A controlled trial of the effect of a Prepaid Group Practice on Use of Services.* *New England Journal of Medicine*, 310, 23, 1505 1510.

*** Abel-Smith Brian. (1991). *Financing Health for All.* *World Health Forum*, 12, 191-200.

*** Johnson, R.E. and Azevedo, D.J. (1979). *Comparing the Medical Utilization and Expenditures of Low Income Health Plan Erollees with Medicaid Recipients and with Low Income Enrollees Having Medicaid Eligibility.* *Medical Care*, 17. 9, 953 966.

** Luft H.S. (1978). *How do health maintenance organizations achieve their "savings?" Rhetoric and Evidence.* *New England Journal of Medicine*, 298, 1336 1343.

Freund Deborah A. (1987) *Competitive health plans and alternative payment arrangements for physicians in the United States: public sector examples.* *Health Policy*, 7, 163-173.

Simborg, D. (1981). *DRG "creep": A new hospital acquired disease.* *New England Journal of Medicine*, 304, 26, 1602 1604.

Abel Smith Brian, *opus cit* Chapters 4 & 5, 45 75.

Donabedian, A. (1969). *An Evaluation of Prepaid Group Practice*. *Inquiry* 6(3):3 27.

Marcus A.C. (1981). *Mode of Payment as a Predictor of Health Status, Use of Health Services and Preventive Health Behavior: A Report from the Los Angeles Health Survey*. *Medical Care*, 19, 10, 995 1010

Fetter, R.B., Chin, Y., Freeman, J.L., et al. (1980). *Case Mix definition by diagnosis related groups*. *Medical Care (Supplement)*. 18, 2. 1 53.

Francis A.M. Polissar L. and Browder L.A., (1984). *Care of Patients with Colo-rectal Cancer. A Comparison of a Health Maintenance Organization and Fee for Service Practice*. *Medical Care*, 22, 5, 418 429.

Dutton, D.B. (1979). *Patterns of Ambulatory Health Care in Five Different Delivery Systems*. *Medical Care*, 17, 221 243.

Fuller, N.A., Patera M.W. and Kosiol, K. (1977). "Medicaid Utilization of Services in a Prepaid Group Practice Health Plan." *Medical-Care*, 15, 9, 705 737.

Holahan, J. (1977). "Foundations for Medical Care: An Empirical Investigation of the Delivery of Health Services to a Medicaid Population" *Inquiry*, 14, 352 367.

Hurley, R.E. (1986). *Toward a Behavioral Model of the Physician as Case Manager*. *Social Science And Medicine*, 23, 1, 75 82.

Luft, H.S. (1982). *Health Maintenance Organization and the Rationing of Medical Care*. *Milbank Memorial Fund Quarterly* 60, 2, 268 306.

Luft H.S. (1980). *Assessing the evidence of HMO performance* *Milbank Memorial Fund Quarterly*, 58, 501

Mitchell J.B. (1985) *Physician DRG's* *New England Journal of Medicine*, September 12, 1985.

Grading Scheme:

Written / Oral / Practical Exam 100 %

Additional information:

The first part of the exam will consist of approximately 10 multiple choice compulsory qualitative and quantitative questions of 6 points each, followed by a choice of 4 quantitative questions from 6 worth 10 points each. Hand calculators will be allowed.

Around the fifth lecture, I will distribute a mock exam paper, so that you can practice answering the questions. During the last lecture, as part of the revision process I will provide model answers.