MACQUARIE UNIVERSITY

FACULTY OF
BUSINESS AND ECONOMICS

ECON312
Health Economics

Semester 2, 2009

Department of Economics

ECON312 Health economics

Year and Semester: 2009, Semester 2

Unit convenor: Glenn Jones

Prerequisites: ECON200

Corequisites: None

You should read this unit outline carefully at the start of semester. It contains important information about the unit. If anything in it is unclear, please consult unit convenor.

ABOUT THIS UNIT

This is a course in applied public economics. It uses microeconomics to analyse the behaviour of agents in the health system. It will use this analysis to examine current health policy, as well as proposed directions for reform. A feature of the course will be an emphasis on data and empirical research.

Topics covered include: the institutions of the Australian system of health care; health statistics and evaluation techniques, moral hazard and adverse selection in health insurance markets; health labour markets, physician-patient interactions; health system reform options: managed care, regulation and payment systems for providers; comparative analysis of international health systems.

ECON200 Microeconomic Analysis is a prerequisite for ECON312 and it would be helpful (but not necessary) for students to be familiar with the material presented in ECON210 Public Economics.

The course places strong emphasis on developing analytical and theoretical skills as a means of encouraging rigorous and logical thinking about the analysis and design of health systems. It does not however require detailed econometrics nor mathematics.

TEACHING STAFF

Convenor:
>   Glenn Jones, Room: E4A429
>   Phone: 98508500, fax: 98508586, email: glenn.jones@mq.edu.au
>   Consultation hours: Tuesday 12.00 – 15.00 or by appointment

Clarification of specific points in lectures should be directed to Glenn Jones at the end of the lecture or in consultation hours. All enquiries concerning the administration of the unit should be addressed to Glenn Jones by email.

At times it may be necessary for the unit convenor to contact you. This contact will be through your student email account. You are assumed to be monitoring this email or to have redirected email from this account to the account you prefer to use. Non receipt of notification through this email address will not be accepted as justification for failure to meet reasonable requests.

CLASSES

- This unit provides face-to-face teaching per week consisting of 1 x 2 hour lecture in addition there will be a 1 x 1 hour tutorial held in 5 weeks of the semester.
- The timetable for lectures and tutorials can be found on the University web site at: http://www.timetables.mq.edu.au/

Lectures

      Tuesday   15.00 - 17.00   W5C220

Tutorial

      Tuesday   17.00 - 18.00   W5C220

Lectures will be recorded using iLecture and will be available on the unit website. Copies of the lecture overheads will be available on the unit web page before the lecture.

Please consult the Course Diary below for precise details of the currently scheduled lecture and tutorial dates for the whole unit. During the semester, unforseen circumstances may require the cancellation of some lectures and/or tutorials. Any changes will be announced as far as possible in advance both in lectures and on the unit website.

REQUIRED AND RECOMMENDED TEXTS

Recommended Text:

Folland, S., A. Goodman and M. Stano, (2007) *The Economics of Health and Health Care,* (5th Ed) Upper Saddle, Prentice Hall

The text is available for purchase at Co-op Bookshop. A small number are available on reserve in the library. Earlier editions are similar but page references may change.

Alternative Texts and selected reading
You may find it useful to see how the same material is treated in other health economics texts. The following is a list of supplementary textbooks that are relevant for this unit.

Intermediate:

Culyer, A. (1991) *The Economics of Health: Readings, vols 1 and 2*
Donaldson, C and K. Gerard, (2004) *Economics of Health Care Financing*, 2nd ed, Edward Elgar.
Getzen, T. (2007) *Health Care Economics*, John Wiley.
Getzen, T. (2007) *Health Economics and Financing,* John Wiley.
Gravelle, H and R. Rees (2004) *Microeconomics 3rd ed* Prentice Hall, Chapters 17 and 19
Jones, A., Rice, N., Bago d'Uva, T and S. Balia (2007) *Applied Health Economics*. Routledge.
McPake, B., L. Kumaranayake and C. Normand, (2002) *Health Economics: An International Perspective*, Routledge.
Morris, S., Devlin, N. and D. Parkin (2007*), Economic Analysis in Health Care*, Wiley
Phelps, C. (2003) *Health Economics (3rd ed)*. Boston, Addison Wesley.
Zweifel, P. and F. Breyer (1997) *Health Economics*, New York, Oxford University Press.

Major Reference Work:

Culyer, A. and J. Newhouse (eds) (2000), *Handbook of Health Economics, vols 1 and 2*, Amsterdam, North Holland, Elsevier Science.

References on the Australian Health System:

Australian Institute of Health and Welfare (2007). Australia's Health 2006 Canberra, AIHW.
Bloom A (ed) (2001) Health Reform in Australia and New Zealand, Melbourne, Oxford University Press.
Butler, J. and D. Doessel (eds) (1989) *Health Economics :Australian readings Sydney,* Australian Professional Publications.
Crichton, A. (1990) *Slowly Taking Control: Australian governments and health care provision 1788-1988*, Sydney, Allen and Unwin.
Drummond, M., M. Sculpher, G. Torrance, B. O'Brien and G. Stoddart, (2005) *Methods for the Economic Evaluation of Health Care Programmes, 3rd ed,* Oxford University Press.
Duckett, Stephen. 2004. The Australian health care system. (2nd ed), Melbourne, Oxford University Press.
Hall. J. (2003) Health in I. McAllister, S. Dowrick, and R. Hassan (eds), *Cambridge Handbook of Social Sciences in Australia*, Cambridge, Cambridge University Press.
Hall, J and E. Savage (2005) Role of the Private Sector in the Australian Health Care System in A. Maynard (ed) *The Private-Public Mix for Health*, Oxford, Radcliffe Press.
Mooney, G and R. Scotton, (1999) *Economics and Australian Health Policy*, Allen and Unwin.

Other References:

Lu, M, and E Jonsson, (2008) *Financing Health Care* Wiley-VCH, Weinheim.
Maguire, A, P. Fenn, and K. Mayhew (1995) *Providing Health Care: The economics of Alternative Systems of Finance Delivery*, New York, Oxford University Press.
Maynard, A, (ed) (2005) *The Private-Public Mix for Health,* Oxford, Radcliffe Press.
Zweifel, P and H. Frech (1991) *Health Economics Worldwide: Developments in Health economics and Public Policy*, Kluwer Academic Press.

UNIT WEB PAGE

Lecture and tutorial material as well as up to date information concerning any aspect of the unit, including any changes to the schedule, will be available to students by logging on to Blackboard at http://learn.mq.edu.au.

LEARNING OBJECTIVES AND OUTCOMES

At the completion of this unit you will familiar with the approach and methods of theoretical and applied microeconomics as applied in health economics.

After completing the unit students should:

- be familiar with the range of health policy interventions used in Australia and other countries.

- be familiar with the empirical magnitudes of important issues in the health literature

- be able to assess the efficiency impacts of policy changes.

- be able to assess the equity impacts of policy changes.

- be familiar with the major sources of data on health.

In addition to the discipline-based learning objectives, all academic programs at Macquarie seek to develop students' generic skills in a range of areas. This unit will contribute to the development of skills in:

Literacy, numeracy
Self-awareness and interpersonal skills
Critical analysis skills
Problem-solving skills
Creative thinking skills

The unit will aim to develop generic skills including:

- literacy, numeracy

- team work and efficient collaboration

- effective presentation of knowledge and thought

- critical analysis involving evaluation, synthesis and judgement

- identification of incentives and constraints as a common framework for apparently unrelated problems.

All of these skills will be enhanced by the lecture and tutorials, which deal specifically with applied economics and which present material central to a contemporary understanding of the socio-economic environment.

ASSESSMENT

The unit assessment has 4 components as follows:

	%
Early semester test (optional)	10
Essay	15
Tutorial presentation	15
Final exam: essays/problems	60
Total	100

1. Early semester test (optional).
A short answer early-semester test will be held on Tuesday August 25. The test will be held during the tutorial hour that week. The material covered in the test will be derived from lectures 1 to 3. The purpose of the test is to provide students with feedback on their performance so that they may assess their progress in order to improve their performance in the total assessment. It is scheduled in time to allow students to make an informed decision concerning withdrawal without penalty due by 31 August.

Students may elect to omit this piece of assessment. Feedback on test performance will be available by Friday August 28.

The submission of requests for special consideration (see below) for the optional test is not required as non attendance will automatically result in a student having the aggregate mark for the remainder of their assessment tasks scaled up by the foregone 10%. Under no circumstances will a supplementary test be available. As a courtesy to the convenor and to prevent unnecessary printing students will be asked to indicate their intention to sit the test the week prior to the test.

2. Essay.

The essay l offers students a choice of three topics. Two of these are topics selected by the convenor for their relevance to the reform of the current Australian health system. Topics and suggested starting references are provided below. **In addition students may formulate their own topic for the essay which will need to be negotiated will the unit convenor.** A starting point for negotiation is that students can demonstrate the importance of the topic through existing literature.

Submission requirements:

The essay length is a **maximum of 3,000 words** and is due on **Friday October 16 at 17.00**.

The submitted essay must clearly indicate **SID, name and topic**. It must begin with a **300 word abstract** (not included in the word limit) that sets out the issues and main conclusions of the essay. The submitted essay is to be in **12pt font with page margins of at least 3 cms** to allow space for feedback on the submitted paper. Any footnotes and appendices are not be included in the word limit. **Referencing style must conform to that required by the Journal of Health Economics**. Submission is by email to the unit convenor by the due date and time. Feedback on student performance will be provided in the final week of the semester (.i.e by Friday November 13).

If granted, special consideration (see below) may result in a student being granted an extension of time but in no circumstances will a student be excused from submission of an essay.

Late submission of the essay without granted special consideration will attract a penalty of 1/20 marks per day (including weekends).

Essay topic 1 Public hospital waiting times

In tax-financed health care systems, where the price is essentially zero and budgets are capped, explicit waiting lists are the most common means of rationing demand. Waiting lists for elective surgery serve as a health care allocation mechanism which equilibrates supply and demand for health care in the absence of prices.

Discuss the theory relating to waiting times and review the empirical evidence of the magnitude of the effects both internationally and in Australia.

Suggested starting references:

Cullis G, Jones PR, Propper C. (2000). Waiting lists and medical treatment: Analysis and policies. In Culyer AJ, Newhouse JP (eds), *Handbook of Health Economics: Vol 1B*. Elsevier Science BV, 1201-1249.

Besley T, Hall J, Preston I. (1999). The Demand for Private Health Insurance: do waiting lists matter? *Journal of Public Economics* 72: 155-181.

Marchand M, Shroyen F. (2004). Can a mixed care system be desirable on equity grounds? *Scandinavian Journal of Economics* 107(1): 1-23.

Martin S, Smith PC. (1999). Rationing by waiting lists: an empirical investigation. *Journal of Public Economics* 71: 141-164.

Essay topic 2 Risk adjustment

Many countries use risk-based predictive modelling (RBPM) to design a system of subsidies for the delivery of health care. The goal of risk-based modeling is to estimate individual risk as accurately as possible in order to provide payments that reflect predicted patient need.

Discuss the potential improvements to the funding of medical services that risk based payment systems offer in terms of equity and efficiency. Contrast RBPM methods with alternative funding methods in use both internationally and in Australia.

Suggested starting references:

Ellis, R. P., (2008) Risk adjustment in health care markets: concepts and applications. In: Lu, M, and E Jonsson, (2008) *Financing Health Care,* Wiley-VCH, Weinheim. 177-222

van de Ven, W., van Vliet, R, Lamers, L (2004) Health-adjusted premium subsidies in the Netherlands, *Health Affairs* 23(3), 45-55.

Glazer, J., McGuire, T.G., (2002) Setting health plan premiums to ensure efficient quality in health care: minimum variance optimal risk adjustment. *Journal of Public Economics* 84, 153–175.

Scotton, RB, (1995). Managed competition: issues for Australia, *Australian Health Review* 18(1), 82-104

3. Tutorial presentation.

There are three levels of involvement expected of all students.

1. Whole class

All students are expected to maintain an active participation in the whole tutorial program. A roll will be taken at tutorials and will be used to inform the 5% class participation mark awarded. Students who attend only their required presentation, as outlined below, will receive a mark of 0/5 for the general tutorial participation component. Students who attend at least 5 of the 8 tutorials and participate by way of active discussion, including of their assigned discussion topic, will receive a mark of 5/5.

In addition, each student is required to work (jointly) in a concentrated way on one tutorial as a presenter and one tutorial as a discussant. These two levels of participation together carry 15% of the total unit assessment.

2. Students presenting a topic.

For each tutorial a group of rostered student will be responsible for presenting a Powerpoint aided presentation of the assigned paper(s).

The presentation should address:

- What is the issue the paper is addressing?
- How does this paper fit with previous literature?
- What is the paper's contribution?
- What empirical techniques and data are used?

As well, presenting students should provide an assessment and present any criticisms of the paper. Criticisms should aim to be constructive suggesting improvements as well as shortcomings. Where criticisms relate to data deficiencies, a discussion of the type of data required to help the argument of the paper would be desirable.

The presentation should be cooperatively prepared. The group may decide on the assignment of the various tasks required for the presentation. For assessment purposes the lecturer will assume that each assigned presenter makes an equal contribution. Where this is not the case, in the view of some members of the group, a proportional assessment will need to be provided by the group and signed by each member.

The group submission document is to be emailed as an attachment to the lecturer for loading onto the unit website for the use of the whole class.

3. Students leading discussion.

An equal number of students will be assigned to lead class discussion of each tutorial paper. The assigned discussants will need to co-operate so that different aspects of the paper are addressed. A discussant's contribution is either to raise points of clarification or to provide comments of a general nature on the presentation or paper.

The 15% of the total grade allocated to the tutorials will be made up of 10% for the group presentation and 5% for each student's participation in the overall tutorial discussion

Tutorial allocation

In the time allocated to the tutorial in the second week, students will be allocated to presenting and discussing groups. The size of the groups is anticipated to be 3 but this may change depending on enrolment in the unit. Before the second tutorial, students are required to select a topic and group for allocation in the second tutorial. The allocation process will be random. However students are free to organise trades. These trades must be completed by the end of the third week of lectures and notified to the lecturer in charge, by an email from each partner to the trade.

Special consideration
Because missing an assigned presentation is inconvenient to your fellow presenters and discussants, only students who submit documentation of misadventure or other valid reason for inability to attend will be granted special consideration. Without such documentation students failing to attend their assigned tutorial presentation will receive 0/10. If granted special consideration students will be required to discuss the group presentation with the lecturer at the earliest convenient time for both but not later than a week after the period covered by the request for special consideration.

Papers available for group tutorial presentations

May be selected for presentation in Tutorial 1, September 1, or in later Tutorials

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

Gerdtham, U and M. Johannesson, (1999) New Estimates of the Demand for Health: Results Based on a Categorical Health Measure and Swedish Micro Data, *Social Science and Medicine*, 49, 1325-1132.

Cutler, D , Edward L. Glaeser, E and J Shapiro (2003) Why Have Americans Become More Obese? *Journal of Economic Perspectives*, 17 (3), pp 93–118

Lakdawalla, D and T Philipson (2002) The growth of obesity and technological change: a theoretical and empirical examination. *NBER Working Paper 8946*, Nation Bureau of Economic Research.

May not be selected for presentation until Tutorial 2, September 15, or in later Tutorials

Buchmueller, T. and J. DiNardo (2002) Did Community Rating Induce an Adverse Selection death Spiral? American Economic Review, 92(1) 280-294

Ellis R, Savage E, 2008, Run for Cover Now or Later? The impact of premiums, threats and deadlines on supplementary private health insurance in Australia, *International Journal of Health Care Finance and Economics*, 8, 257-277

Feldstein, M. (1973) The Welfare Loss of Excess Health Insurance, *Journal of Political Economy*, 81(2), Part 1.251-280;

May not be selected for presentation until Tutorial 3, October 13, or in later Tutorials

Dranove, D., M. Shanley, and C. Simon, (1992) Is Hospital Competition Wasteful?, *Rand Journal of Economics*, 23(2). 247-262.

Ellis, R. and T. McGuire, (1986) Provider Behavior under Prospective Payment: Cost Sharing and Supply. *Journal of Health Economics*, 5(2):129-152.

Miller R. and H. Luft, (2002) HMO Plan Performance Update: An Analysis of the Literature: 1997-2001, *Health Affairs*, 21(4), 63-86.

May not be selected for presentation until Tutorial 4, October 20, or in later Tutorials

Shields, M. and M. Ward (2001), Improving Nurse Retention in the National Health Service in England: The Impact of Job Satisfaction and Intentions to Quit *Journal of Health Economics* 20(5), 677-01.

May not be selected for presentation until Tutorial 5, November 3, or in later Tutorials

Wright, D. (2004) The Drug Bargaining Game: Pharmaceutical regulation in Australia, *Journal of Health Economics*, 23(4), 785-813.

van Doorslaer, E. and A. Wagstaff (1992) Equity in the Delivery of Health Care: Some International Comparisons, *Journal of Health Economics*, 11(4), 389-411.

Cutler. D. (2002) Equality, Efficiency, and Market Fundamentals: The Dynamics of International Medical Care Reform, *Journal of Economic Literature,* 40, 881-906.

PLAGIARISM

The University defines plagiarism in its rules: "Plagiarism involves using the work of another person and presenting it as one's own." Plagiarism is a serious breach of the University's rules and carries significant penalties. You must read the University's practices and procedures on plagiarism. These can be found in the *Handbook of Undergraduate Studies* or on the web at:
http://www.student.mq.edu.au/plagiarism/

The policies and procedures explain what plagiarism is, how to avoid it, the procedures that will be taken in cases of suspected plagiarism, and the penalties if you are found guilty. Penalties may include a deduction of marks, failure in the unit, and/or referral to the University Discipline Committee.

4. Final examination.

A 2 hour final examination for this unit will be held during the University Examination period. The examination will comprise short answer style questions. An example of previous examinations in the unit will be provided on the unit website.

The University Examination period in Second Semester 2009 is from 18/11/2009 to 04/12/2009.

You are expected to present yourself for examination at the time and place designated in the University Examination Timetable. The timetable will be available in draft form approximately eight weeks before the commencement of the examinations and in final form approximately four weeks before the commencement of the examinations.
http://www.timetables.mq.edu.au/exam

The only exception to not sitting an examination at the designated time is because of documented illness or unavoidable disruption. In these circumstances you may wish to consider applying for Special Consideration. Information about unavoidable disruption and the special consideration process and required documentation is available at
http://www.mq.edu.au/policy/docs/s/procedure_specialconsideration.htm

Approval of requests for Special Consideration for the final exam will permit students to sit for a supplementary examination. If you are so unwell at the final examination that you need to request special consideration with documentation from a medical practitioner, you should not sit. If you sit and request special consideration, and it is granted you will be required to sit a supplementary examination.

If a Supplementary Examination is granted as a result of the Special Consideration process the examination will be scheduled after the conclusion of the official examination period.

You are advised that it is Macquarie University policy not to set early examinations (including supplementary examinations) for individuals or groups of students. All students are expected to ensure that they are available until the end of the teaching semester, the final day of the official examination period for final examinations **and** available for any supplementary examination that may be granted.

DETERMINATION OF OVERALL GRADE

The Academic Senate has a set of guidelines on the distribution of grades across a range from fail to high distinction. Your final result will include one of these grades plus a standardised numerical grade (SNG). On occasion, the raw mark that you receive for the unit may not be the same as the SNG that you receive. Under the senate guidelines, results may be scaled to ensure that there is a degree of comparability across the university and that units with the same past performances of their students should achieve similar results.

STUDENT SUPPORT SERVICES

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at http://www.student.mq.edu.au.

WEEK	DATE	LECTURE TOPIC	TUTORIAL
1	August 4	Introduction	
2	August 11	Production of health	
3	August 18	Demand for health care	
4	August 25	Insurance	Test
5	September 1	Asymmetric information and agency	Tutorial 1
6	September 8	Australian health insurance system	
7	September 15	Managed Care	Tutorial 2
		MID-SEMESTER BREAK	
8	October 6	Hospitals	
9	October 13	Labour markets, supplier induced demand	Tutorial 3
10	October 20	The pharmaceutical industry	Tutorial 4
11	October 27	Health policy and regulation 1	
12	November 3	Health policy and regulation 2	Tutorial 5
13	November 10	Comparative health care systems	

LECTURE OUTLINE

Lecture 1. Introduction

Relevance of health economics
Economic analysis applied to health care
Special features of health economics
Revision of assumed microeconomics
Revision of assumed econometrics

Folland, Goodman and Stano: Chapters 1, 2 and 3

Lecture 2. Production of health

Health production function
Medicine and health care
Other factors affecting health
Substitution
Health cost functions
Technical efficiency
Technological change

Folland, Goodman and Stano: Chapters 5 and 6

Lecture 3. Demand for health care

Determinants of demand for health care
Issues in measurement
Empirical magnitudes
Other factors

Folland, Goodman and Stano: Chapter 9

Lecture 4. Insurance

Risk and insurance
Demand for insurance
Supply of insurance
Moral hazard
Coinsurance and efficiency

Folland, Goodman and Stano: Chapter 8

Lecture 5. Asymmetric information and agency

Asymmetric information
Adverse selection
Experience rating
Agency
Consumer information quality and prices

Folland, Goodman and Stano: Chapters 8 and 10

Lecture 6. Australian Health insurance system: private and public

Evolution of Australian health policy
Hospitals
General Practitioners
Pharmaceuticals
Public coverage
Private health insurance
PBS

Folland, Goodman and Stano: Chapter 11

Lecture 7. Managed care

Managed care plans
Modelling managed care
Does manged care matter?
Growth in spending
Comparative effects.

Folland, Goodman and Stano: Chapter 12

Lecture 8. Hospitals

Overview
Hospital utilisation and costs
Nursing homes
Hospices and home care.

Folland, Goodman and Stano: Chapters 13 and 14

Lecture 9. Labour markets and supplier induced demand

Demand for health care labour
Supply of health care labour
Productivity and substitution
Medical education and control
Licensing
Supplier induced demand
Small area variations.

Folland, Goodman and Stano: Chapters 15 and 16

Lecture 10. The pharmaceutical industry

Structure and regulation
Substitutability
Drug pricing and profits
Research and development
Cost containment and copayments

Folland, Goodman and Stano: Chapter 17

Lecture 11. Health policy and regulation 1

Principal regulatory mechanisms
Prospective payment
DRGs and competition
Regulation of physician payment
Social insurance

Folland, Goodman and Stano: Chapters 4, 20 and 21

Lecture 12. Health policy and regulation 2

Competition in health care
Externalities
Horizontal equity and need
Social justice
Rationales for government intervention
Forms of intervention
Government failure

Folland, Goodman and Stano: Chapter 18 and 19

Lecture 13. Comparative health care systems

International Health Systems
Spending
Insurance
Access
Costs

Folland, Goodman and Stano: Chapter 22