

Abstracts for AHES 2005

Selma Audi : The cost-effectiveness and budget impact of the TAXUS paclitaxel drug eluting stent in the UK

Objective: To analyse the cost-effectiveness of Taxus compared to a bare-metal stent in a model of patients with coronary artery disease in the UK healthcare setting.

Design: A decision-analytic model combining clinical data on revascularization rates with UK unit costs for medical resources and utility data from the clinical literature. Special consideration is given to patients at high risk of restenosis including diabetics, small vessel (<2.5mm) and long lesions (>20mm). Budget impact scenarios model various Taxus uptake rates in the UK.

Results: The incremental cost per quality adjusted life year gained for Taxus in the average population is £29,581 and £12,602 at 12 and 24-months respectively. The initial higher procedure cost with a Taxus stent is almost completely outweighed by savings from fewer repeat procedures. In high risk patients, Taxus is dominant at both 12- and 24-months. In other words, Taxus provides an improved clinical outcome at decreased cost compared to BMS. Budget impact scenarios at 12-months are cost-neutral. Conclusion: The Taxus stent is cost-effective versus BMS in CAD patients in the UK healthcare setting, particularly in high risk patients. The results improve at 24-months due to continued savings from fewer repeat procedures. A mixed uptake strategy of Taxus use in high risk and moderate risk patients can be budget-neutral.

Aarthi Ayyar: The accuracy of self-assessed body mass: Analysis of the 1995 and 2001 National Health Surveys

Overweight and obesity continue to pose a major risk for chronic diseases in Australia, contributing to increased lifetime health expenditures. While many studies have examined the factors associated with the propensity for being overweight or obese, few have compared individuals' perceptions of their body mass with measures such as Body Mass Index (BMI). This study uses unit record data from the 1995 and 2001 ABS National Health Surveys to identify factors associated with the accuracy of adults' perceived body mass, and whether those factors changed over time. Descriptive methods and logistic models are used to quantify the effects of a number of demographic, socio-economic, behavioural and health-related variables on the accuracy of self-assessed body mass.

Nicholas Biddle : Some evidence on the education-income-health relationship for Indigenous Australians

Indigenous Australians have: lower attendance and completion of education; lower average individual and household (equivalised) income; and lower life expectancy and higher incidence of a number of conditions than the non-Indigenous population. It is likely that all three types of outcomes are related. This paper uses two recent Australia-wide surveys to look at the three way relationship between the three. Using the 2001 National Health Survey (NHS), the paper begins by estimating and plotting the association between high-school completion and a set of health outcomes, taking into account the effect of income and health behaviour. A stronger relationship is found between education and self assessed health than

between education and the reporting of a set of chronic conditions, with some differences between the Indigenous and non-Indigenous populations.

The second section of the paper uses the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) to look at how health outcomes may interact with the incentives to undertake education in the first place. Income returns to various types of education are estimated and are allowed to vary by a person's predicted health outcomes. Certain health outcomes were found to have a possible effect on the economic incentives to undertake education although the estimated relationship varied by education type and across population sub-groups. Implications of the two sets of results for health and education policy are considered.

Stephen Birch : Health human resources planning and the production of health: Development of an extended analytical framework for needs-based health human resources planning.

Traditional approaches to health human resources planning emphasize the role of demographic change on the supply of and requirements for health human resources. Conceptual frameworks have been presented that recognize the limited role of demographic change and the broader determinants of health human resource requirements. Nevertheless, practical applications of health human resources planning continue to base plans on the size and demographic mix of the population applied to simple population-provider or population-utilization ratios. In this paper an analytical framework is developed based on the production of health care services and the multiple determinants of health human resource requirements. The requirements for human resources in the future is shown to depend on four elements: the size and demographic mix of the population (demography), the levels of risks to health and morbidity in the population (epidemiology), the services deemed appropriate to address the levels of risks to health and morbidity (standards of care), and the rate of service delivery by providers (productivity). Application of the framework is illustrated using provincial level data for registered nurses.

Laurie Brown : Distributional Impacts of the Australian PBS Safety Net

About 80% of prescriptions dispensed in Australia are subsidised under the Pharmaceutical Benefits Scheme (PBS). The aim of the PBS safety net (SN) is to assist families who have high use of PBS medicines within a calendar year with the cost of these drugs. From 1 January 2005, the SN threshold for concessional patients is \$239.20 (equivalent to 52 scripts per year), and for general patients \$874.90. Once concessional patients reach the SN, they are no longer required to pay the patient copayment for PBS subsidised items for the rest of the year while the copayment for general patients reaching the SN is reduced to the concessional rate of \$4.60 per script. The aim of this paper is to identify the distributional impacts of the SN on government and consumer outlays on PBS medicines for different types of families. The paper analyses, for the 2005-06 financial year, the estimated proportion of scripts for concessional and general patients that will reach the safety net; examines the average out-of-pocket contribution made by both groups; and shows the estimated total government subsidy spent on each group. Using the microsimulation

model 'MediSim', it is estimated that for 2005-06, some 172m (144m for concessional and 28m for general patients) scripts will be subsidised under the PBS at a total cost of \$6.6bn, 82% of these costs being met by Government. The modelling indicates that the SN will reduce consumer spending by \$165m for concessional patients (equivalent to 32% of expected concessional patient contributions) and \$135m for general patients (equivalent to 20% of expected general patient contributions). Consumer contributions, government outlays and the impact of the SN were found to vary significantly by family type, income quintile and life-cycle group. The results indicate that the PBS is highly progressive with the Safety Net representing a significant cash transfer from government to many Australian families.

Paul Brown : Economic evaluations of genetic tests: Are the outcomes different from non-genetic tests?

Already commonplace in many health systems, genetic tests will become more readily available in the future. When deciding which tests to purchase, purchasers will need to consider evidence on costs and consequences. Previous studies have highlighted a number of methodological issues regarding the evaluation of genetic tests. This paper examines whether the outcomes from genetic tests are likely to be similar to outcomes from non-genetic tests or whether the outcomes are fundamentally different. An overview of the types (diagnostic, prenatal, pre-implantation, carrier and pre-symptomatic) and features (penetrance, accuracy, immediacy, therapies and impact on family members) of genetic tests is provided. Each type of genetic test is then discussed, focusing upon whether the test will result in different types of outcomes and/or impact a wider range of parties (e.g., family members). We conclude that the outcomes from diagnostic genetic tests are not qualitatively different from non-genetic alternatives, although genetic tests may have implications for family members. However, the outcomes from pre-symptomatic tests may differ because genetic tests provide information to individuals long before the condition is expressed. The importance of this factor (immediacy) and the impact of genetic tests on risk perceptions for economic evaluations are discussed.

Giuseppina Cefalo : 'Use of, and 'Willingness-To-Pay' for, complementary and alternative treatments in patients with chronic disease'

Background: Out-of-pocket spending on Complementary and Alternative Medicines and other therapies (CAM), particularly by persons with chronic conditions, is known to be substantial in Australia (MacLennan et al., 1996) and, by extrapolation, New Zealand. In this paper I review the New Zealand evidence for utilisation of, and expenditure on, CAM in New Zealand. This draws on the work of Liu (2004) and Chrystal et al. (2003) for cardiology and cancer out-patients respectively.

Patients with chronic diseases are known to make extensive use of alternative therapies. Little is known, however, about the full extent of such use (and possible mis-use), nor about patients' perceptions of such treatments and the value they attach to them. This paper goes on to discuss a planned research project to estimate 'willingness-to-pay' for alternative therapies, and how such estimates might then be useful for policy-making.

Methods: An economic cross-sectional study design will be employed with a convenience sample (n=150) of patients with chronic diseases will be selected and will be asked to complete a mail-back questionnaire. In addition there will be a control group sample, up to the same size, of those not using CAM.

Results: The project hopes to examine the disparities that exist around ability to pay and willingness to pay for Complementary and Alternative Medicines and other therapies (CAM) in New Zealand.

Conclusions: An economic study in terms of 'willingness-to-pay' will be an innovative method of applying a monetary value to CAM. This Study may encourage the development of an integrated care model for patients suffering with chronic illness, which could result in better patient management and better health promotion campaigns

Philip Clarke : MODELLING LIFETIME HEALTH CARE COSTS: INSIGHTS FROM AUSTRALIAN INDIVIDUAL HEALTH EXPENDITURE DATA.

Health economists have long considered it important to quantify savings in health care costs due to prevention and alleviation of diseases. To date most studies have simply quantified the health care costs associated with a particular type of morbidity and assumed that these costs would be saved if it was prevented. This approach ignores the role competing risks and event-related dependence (i.e. the change in the risk of future disease following an event) is likely to play in determining lifetime health care costs. For example, when an episode of cardiovascular disease is prevented it may also reduce the risk of future vascular events, but people will have more opportunity to develop cancer over their (potentially longer) remaining lifetime. Hence it is important to assess the degree to which the cost associated with treating cancer will reduce any savings that may accrue from prevention.

Objectives: To develop a simulation model to examine the degree to which event-related dependence and competing risk of other diseases influence lifetime health care costs. The simulation model will be used to estimate a profile of health care costs for people with diabetes.

Methodology: We develop a computer simulation model based on a four equations system to estimate the life-time costs of: (i) vascular disease; (ii) cancer, (iii) other disease; and (iv) all cause mortality. This model has two components: a model that captures both competing risks and event-related dependence in order to estimate the lifetime incidence of these diseases and an equation to cost diseases and death. These equations are estimated using administrative hospital and primary care use data on 54,868 males with diagnosed diabetes in Western Australia. We use the model to simulate lifetime costs for several representative individuals. To estimate the potential savings from preventing disease, we compare the lifetime costs for an individual of having an event at a given age with a matched control person who does not. We will explore several currently unresolved methodological econometric issues including: sample selection; unobserved heterogeneity and censoring issues associated with this type of ministrative data. Results: The estimated average lifetime health care cost (1999 Australian \$) of a person who has any type of vascular disease at age 40 is \$159,458 and for cancer it is \$155,458.

Conclusions: Competing risks and event-related dependence are likely to influence lifetime health care costs of both vascular disease and cancer. It is therefore important to determine

their impact on estimates of health care costs when quantifying both the burden of disease and when evaluating preventative interventions.

Luke Connelly : General Practice and Medicare: An Economic Analysis of Recent Subsidy Changes

Over the past two years, Commonwealth Government has instituted several important changes to the subsidisation arrangements for general practitioner (GP) services in Australia. In January 2004 it introduced the "Medicare Plus" package, which provides a bonus of \$5 per service for each bulk-billed GP service provided to individuals aged 16 years or less and to holders of Health Care Cards. In January 2005, it introduced an across-the-board increase in the subsidy: the subsidy was raised from 85% of the Schedule Fee to 100% of the Schedule Fee for most GP services. In this paper we analyse the effects of these changes on market outcomes under different assumptions about the market structure and the pre-intervention market outcomes. We present a conceptual analysis of these changes, concentrating on the 2005 reforms, and then produce empirical measures of the changes that have been associated with the reforms, including the effects on gross prices, bulk-billing rates and quantities. The results bear out the majority of our predictions based on the empirical analyses. In particular, the reforms increased gross prices and the bulk-billing rates but appeared to have had little short-run influence on the total quantities of GP services supplied

Henry G. Cutler : The demand for private health insurance allowing for substitution between alternative private health insurance types.

The demand for health insurance in Australia has primarily been modelled as a binary choice, treating any insurance bundle that covers private hospital as private health insurance. However there are four private health insurance choices available to consumers, including 'none', 'ancillary only', 'hospital only', and 'hospital and ancillary'. Treating these types of insurance as the same or similar as in the binary choice framework is problematic as individual characteristics may impact on the demand for alternative insurance bundles in different ways.

This paper takes a new look at demand for health insurance in Australia for each type of insurance bundle using an unstructured multinomial probit model and the latest NHS data for 2001. It first establishes the need for a MNP model by testing the Independence of Irrelevant Alternatives Assumption (IIA) implicit in the multinomial logit model (MNL), and then highlights the importance of socioeconomic variables, attitudes towards risk, and perceived and actual health conditions on the decision to purchase alternative health insurance bundles. In addition, it extends previous work that utilizes MNL by allowing arbitrary patterns of correlation and hence substitution between alternative private health insurance types, thereby providing a framework for gaining greater insights into the policy implications of various demand side drivers for each type of private health insurance bundle. The paper also investigates the impact of changes in disposable income and self assessed health status of an individual on the probability of purchasing alternative types of health insurance.

Darrel Doessel : Has the National Mental Health Strategy Improved Geographical Access to Mental Health Services?"

In 1992 the Australian Government, in conjunction with the governments of the six states and two territories, adopted the National Mental Health Strategy in an attempt to improve the treatment of people subject to mental illness. One of the components of this strategy was to locate mental health services, provided in hospitals, in wards of, or co-located with, general hospitals, thus providing services closer to where people live. In other words an objective was to improve geographical access to hospital-based mental health services. This paper is concerned with determining if this objective has been achieved. Time-series data on days of hospital treatment for patients with mental illness in the State of Queensland are available for the years from 1968-69 to 2002-03. These data are available at a regional level, thus enabling analysis on a disaggregated geographical basis through time. Unfortunately during the period for which data are available, the Australian Bureau of Statistics changed from a 14-region system of classification to an 11-region classification. This change complicates the analysis in that there is non-comparability in the data, thus precluding certain empirical tests such as converging utilisation rates by region. To overcome this problem, it was decided to apply (to regional data) concepts of concentration and equality that are commonly employed in industrial economics, more specifically, the one-firm (or one-region) and the four-firm (or four-region) concentration ratios, the Hirschman-Herfindahl Index (applied to regions) and the Gini Index of equality. All of these measures of concentration/equality are applied to both data on mental illness services provided in hospitals and population. The empirical results show no evidence of improving regional access following the National Mental Health Strategy: in fact the statistical results show the opposite, i.e. declining regional access.

Janet Dzator: Technical efficiency in the use of health care resources: Does a mixed public-private system of providing health care improve technical efficiency?

The question of whether a mixed public-private system of financing health care improves performance is an area of interest for health policy makers and health service researchers. In this study we analyse the impact of mixed public-private system of financing health care on technical efficiency by comparing health outputs achieved, the levels of health resources consumed and the health environment using Organisation for Economic Cooperation and Development health data. Efficiency indicators are estimated by means of data envelopment analysis (DEA) with multiple inputs and multiple outputs. The findings reveal that some countries achieve relative efficiency advantage in the allocation of their healthcare resources through a mixed public-private financing system.

Michael Dzator: The applications of emergency location models in the review of effectiveness emergency facilities

The rapid growth of population in cities, shorter length of stays in hospitals, ageing (and the desire of the elderly to stay longer in their homes), and traffic poses a challenge to emergency departments in meeting the demand for emergency services such as fire health, ambulance, police services. Although changes in such factors as urbanization, demography and the rate of service utilization may affect the optimal distances between services there is limited information about the impact of such changes on the effectiveness of the existing facilities. We examined the location of ambulance stations in Perth, Western Australia by applying known facility location models including a new and improved method for locating emergency facilities. The objective is to determine whether the existing travel distance is still optimal. Our results reveal that the distances between existing services are suboptimal. The

models used show significant savings in terms of shorter travel distance compared to the distance between existing facilities.

Hsiu-Ying Fang : The Effects of Global Budget System of primary care on the Distribution of Health Resources in Kao-Ping Areas of Taiwan

Objectives: The distribution of health resources influences the equity and accessibility of healthcare for patients. Especially after the implementation of the National Health Insurance program, theoretically, all the population should have the same access to health resources. Previous studies did not conclude consistent findings in whether global budget (GB) system could enhance the distributions of health resources. The present study attempts to evaluate the effects of global budget system of primary care on the equality of health resource distribution in Kao-Ping areas. **Methods:** The study design was retrospective secondary data analysis. Gini coefficient and Kuznets' indicators were used to measure distribution equality of primary physicians, clinic visits and expenditures among villages and townships in Kao-Ping areas before and after the GB system. **Results:** As a whole, the declining values of Gini coefficients indicated that the distributions of health resources in Kao-Ping areas become more equal after the GB system. The average value of Gini for primary physician was 0.184 before the GB system, and changed to 0.179 after GB system, which reached the significant level of declining to 0.005. The values of Gini coefficients for clinic visits and health expenditures also dropped. In terms of Kuznets' indicator, however, significant disparities of health resource distributions were found between the over-served and under-served areas. **Conclusions:** The GB system improved the equality of health resources in Kao-Ping areas. However, it was not extended to the areas where health resources are relatively least sufficient. Possible reasons could be the number of population or population density cannot provide strong incentives for primary physicians to practice in remote areas.

Denzil G. Fiebig : Optimal recall length in survey design*

Self-reported data collected via surveys are a key input into a wide range of research conducted by economists and other social scientists. Despite being an important source of information, there is considerable evidence to indicate that such data are far from being perfectly reliable and econometricians have devoted considerable effort to developing ex post procedures to accommodate these data problems. One such problem is measurement error that occurs when respondents are asked to recall past consumption or utilisation. As longer periods of recall are likely to be associated with a greater likelihood of error there are strong incentives for survey designers to choose a narrow recall window. Thus, it might be argued that even though the variable of interest is say annual consumption, errors induced by having a long recall window equal to the period of interest imply one should opt for a shorter window or sub-period as the basis of the survey question. While such a strategy provides a less error ridden measure we stress that this may be an overly narrow objective as it ignores the

Amiram Gafni : Are health economics critiques of welfarism 'non-Sen's' approaches? An exploration of compatibility with Sen's capabilities approach.

Several alternative approaches to the traditional welfare economics approach have been proposed in the health economics literature as normative bases for comparing different states of the world. These include the extra-welfarism, communitarianism and empirical ethics. Sen's concern with 'functionings' and 'capabilities' as opposed to utilities is used as a central theme to the rationale for each approach. In this paper we consider the consistency of the alternative approaches with Sen's concern with capabilities. We present the key elements of Sen's 'Capabilities approach'. We then analyse the extent to which the different approaches in the health economics literature incorporate these key elements. We show that while each approach draws on Sen's work in identifying problems with the welfare economic approach, the methods used to address these problems represent departures from the Capabilities approach (i.e., they are 'non-Sen's approaches'). Hence their applications cannot be justified by reference to Sen.

Susan Gargett : A time series analysis of the demand for nursing home/high-level residential aged care in Australia: 1960-61 to 2002-03

Typically, only a small proportion of all aged people in Australia reside permanently in a nursing home facility at any point in time. However, there is a relatively high probability that an aged person (particularly a female) will enter a nursing home for permanent care at some stage prior to their death. The utilisation of nursing homes in Australia is both controlled and influenced by the Commonwealth Government in a number of ways. Firstly, the supply of places has been determined by the Government in reference to population planning ratios since the 1970s; secondly, the enforcement of entry criteria regarding an applicant's level of functioning and/or medical condition determine one's eligibility to receive nursing home care; and lastly, the net price to users has been subsidised by the Government (to varying degrees) since 1963. Within this context, this study will attempt to determine empirically, the significance of variables hypothesised to have influenced the utilisation of nursing home care since 1960-61.

Time series multiple regression techniques will be used to evaluate a single linear equation model of the aggregate demand for nursing home care in Australia, from 1960-61 to 2002-03. The number of days of care consumed per year (referred to as 'occupied-care days') will be employed as the measure of demand. It shall be analysed in terms of the following explanatory variables; the net price to the consumer, income per capita, the supply of substitutes (both formal and informal-care options), and the size of the population potentially demanding such care. Both missing and inconsistent data have necessitated that various proxies for the hypothesised determinants be developed and utilised. Following the determination of the time series properties of the data, the model shall be analysed empirically to determine the statistical relevance of the hypothesised determinants. At a time when the predicted ageing of populations is shaping government policies around the world, evidence on factors which influence the demand for care-services by aged people, may be useful for further policy development.

Lisa Gold : Sensitivity of community values to cost information: evidence and explanations

Objective: To assess the sensitivity of contingent valuation results to question phrasing and to the explicit provision of cost information.

Methods: Representative general population postal survey of 2200 households in 16 local government areas of Victoria, Australia, including willingness-to-pay questions for three

proposed changes to local government services (extended maternal health service, school-community program, extended local road repair). Follow-up semi-structured telephone interviews with 271 respondents.

Results: 35% of contacted households participated. Between 39% and 56% of participating households were willing to pay extra in annual local rates for the service improvement and mean willingness-to-pay was \$29, \$29 and \$20 for the maternal, schools and road service changes respectively. Results were not sensitive to the suggestion of additional expense in question phrasing but were sensitive to the explicit provision of cost information.

Discussion: Contingent valuation data should theoretically be unaffected by the cost of the marginal changes valued. In this study, community values are not significantly increased by the mere mention of additional expense but are significantly affected by the explicit provision of cost information. Qualitative data collected from the surveys and from in-depth interviews with 271 survey respondents provide insights into why theoretically irrelevant factors such as cost information remain relevant in contingent valuation studies.

Terri Green : Costs, effectiveness, and cost-effectiveness in colorectal cancer screening

In this paper Drummond's ten elements of a sound economic evaluation are used as a framework to assess published cost-effectiveness analyses of colorectal cancer screening. This is combined with the World Health Organisation's principles of screening to discuss how different countries are making decisions about national screening programmes. The paper concludes with some reflections on the interface between economic considerations and other aspects of the decision and on how well the cost effectiveness analyses inform the decision.

James Harris : Changing priorities: Stents in cardiovascular care'

Background Angioplasties and stents have been enthusiastically taken up by interventional cardiologists in Australia and New Zealand. In the absence of national technology assessments, and with weak controls over hospital spending, New Zealand effectively delegates decisions on devices and procedures to clinicians. If clinicians are not choosing the most cost-effective options within a budget constraint, what are the limiting factors on the introduction of stents and other percutaneous coronary interventions?

Methods Survival analysis of New Zealand hospitalisation and mortality data from 1988 to 2000 was used to determine trends in post-intervention mortality rates by age and sex.

Results Survival after insertion of stents has declined while the number of procedures increased rapidly. In contrast, survival after coronary artery bypass surgery improved.

Conclusions The data support a hypothesis that clinicians use a 'target mortality' figure to determine when to use stents, a very different maximand from economists' measures of cost-benefit. A brief economic analysis compares and contrasts the outcomes at the population level of the economic and clinical approaches to deciding how many and which surgical procedures should be offered.

Abu Hena Reza Hasan : Medical Care in a Foreign Country: Is foreign health system substitute of or complimentary to national health system?

Every year thousand of Bangladeshi patients visit neighbouring country for medical treatments and increasing significantly. It has raised the question whether a foreign health services can substitute national health services. This paper analysed this question based on nature of health services uses by Bangladeshi patients in India and in Bangladesh. It also

analyses health outcomes and economic benefits of receiving health care abroad and in home country. Health outcomes are measured in QALY gains calculated using EuroQol procedure. Findings of the paper suggest that foreign health services are complimentary to national health services. Bangladeshi patients use health services in Kolkata of India for comparatively better treatments. Patients gain more QALY when they get treatments abroad. Relative price of medical treatments is also lower in case of treatments abroad. The paper concludes with the opinion that cooperation between countries for trade in health services may reduce cost, may make available necessary health more equitable.

Bruce Hollingsworth : Translational research in the area of inequalities in health in Australia: are health economists and policy makers speaking the same language?

Health inequalities are a fundamental policy issue. However despite many policy initiatives in this area inequality persists, and in fact may be on the increase. Effective policy requires an understanding of the causes of inequalities. Health economics has developed tools which are useful in measuring and identifying inequalities. This paper will summarise these methods, but will concentrate on identifying methods that can be used to identify the effects of policy changes, especially over time.

We aim to identify areas of policy where the measurement of social inequalities would help effective targeting. For example, what are policy makers looking for in terms of useful information in this area, what do health economists think are the areas of inequality where policy can be most effective, and how do we know this?

We use the example of obesity to question what we, as health economists, should be concentrating on. Is it refining measurement techniques, or should we be honing in on areas of inequalities research which may have a real policy impact, if so how? This paper asks as many questions as it answers, aiming to set a framework for a dialogue which will help translate cutting edge research findings into useable evidence for policy makers.

Sandra Hopkins : Relationship between insurance status and utilisation of dental services in Australia

Dental services in Australia are available both privately and publicly. Access to public dental services, however, is subject to a considerable waiting period and is restricted to certain categories of social security beneficiaries. The restricted access creates a problem of dental health for those on low incomes and as a result there are differences in the oral health status of high income and low income groups in Australia. Access to private dental services on the other hand is available to all but is effectively restricted to those who can afford to pay for the full costs of treatment out-of-pocket or those who have private ancillary health insurance. National health funding changes in Australia have exacerbated the income inequality of access to dental services. First, the government abolished the national public dental program in 1996. Then, in the late 1990s, it introduced three policies designed to improve the uptake of private health insurance. The policies resulted in many Australians – those who could afford to – committing to private health insurance, and benefiting from the 30 percent public subsidy of private insurance cover.

Objectives: The objective of this research is to examine utilisation of dental services in Australia by private insurance status and other indicators of socioeconomic status. The data we use is taken from the ABS National Health Survey 2001. We will also compare the

results from the 2001 survey with the 1996 survey data. In 1996, a lower proportion of the Australian population had private health insurance than in 2001.

Methodology and results: Insurance status where purchase is voluntary may be correlated with unobserved differences in health status, or in this case dental status. Therefore, our modelling of the relationship between insurance status and utilisation of dental services takes account of the possible endogeneity of insurance choices. Preliminary results indicate that the determinants of dental care utilisation are insurance status and socioeconomic factors of age, gender and overall health status. The socioeconomic factors are highly likely to be correlated with insurance status and our sophisticated modelling of the relationships (using aML Multilevel Multiprocess Statistical Software) will untangle the simultaneity and endogeneity in the model.

Conclusions: The determinants of the utilisation of dental services are a relatively neglected issue in health economics. Inadequate treatment and poor oral health now may lead to higher treatment costs in the future and the associated pain and discomfort impacts on overall quality of life. An examination of the factors that impact on utilisation of dental services and therefore on dental health has important policy implications.

Ishrat Hossain : Patient preferences for managing asthma: Results from a discrete choice experiment.

Effective control of asthma requires regular preventive medication. Poor medication adherence suggests that patient preferences for medications may differ from the concerns of the prescribing clinicians. This study investigated patient preferences for preventive medications across symptom control, daily activities, medication side-effects, convenience and costs, using a discrete choice experiment embedded in a randomized clinical trial involving patients with mild-moderate persistent asthma. The data reported here were collected after patients had received 6 weeks' treatment with one of two drugs. Each patient was given 16 scenarios and asked to choose from three options in each scenario: continue with the current drug; change to the hypothetical drug described in the scenario; take no preventive medication. Analysis used mixed logit, multinomial logit (MNL) with random coefficients, to account for the panel nature of our data and possible heterogeneity of respondents. Mixed logit improved the fit dramatically over the simple MNL model. Most respondents chose to continue with their current drug in most choice situations but this tendency differed depending on which medication they had been allocated. Respondents valued their ability to participate in usual daily activities and sport, preferred minimal symptoms, and were less likely to choose drugs with side-effects. Cost was also significant, but other convenience attributes were not. Demographic characteristics did not improve the model fit. This study illustrates how discrete choice experiments may be embedded in a clinical trial to provide insights into patient preferences.

Bronwyn Howell : From Welfare Benefits to Insurance Markets: Changing the Basis for New Zealand Primary Health Care Subsidies

New Zealand's Primary Health Care Strategy was introduced in 2002. The strategy introduces a managed care model of primary health care delivery. The key features of the strategy are substantial increases in government funding, and partial capitation funding of managed care providers who can set patient co-payments. The objective of the strategy is to reduce health disparities and to improve health outcomes.

New Zealand's publicly-funded primary health care system has moved from a welfare benefit system to an insurance system, invoking the tensions associated with subsidies and risk-sharing with providers that attend managed care schemes. The New Zealand scheme is complex, as the premium share not paid by the government is recovered from patients who consume care at rates set by service providers. The consequence is that the additional costs of moral hazard, adverse selection and financial risk management normally shared with providers via capitation contracts in managed care schemes, can be shifted onto patients via the co-payment, effectively removing many of the provider incentive effects of capitation contracts. The consequences are compounded by a governance structure that grants providers significant power in decisions around the contracts that determine how risks will be allocated. Initial evidence suggests that to date, the contracts that have emerged see patients are bearing all of these additional costs.

Although costs to the patient will decrease from higher subsidies, the total cost for any reduction in disparities would appear to be substantially larger than in typical managed care schemes, where the risk-sharing contract is managed in total by a third party. The scheme also raises equity issues for the scheme relative to community-rated social insurance, as the patient payment is equivalent to a fully risk-rated insurance premium.

Sardar, M Islam : The Role of the Quality of Life Measures in the Evaluation of Health Programs

Health program economic evaluation increasingly takes into consideration the importance of health related quality of life (HRQOL) issue. In this respect, with the existing technological advancement and innovation, the ultimate output of healthcare systems has produced health programs that cure, prevent or alleviate diseases and thus improve the health status and the quality of patients' lives. To value the benefits of health programs as medical treatments aim at improving the quantity as well as the quality of life, measures such as quality adjusted life years (QALYs) have been used.

This paper integrates the issues of quality of life to develop a new cost benefit analysis, named New3 Cost Benefit Analysis, to show how the possibility theory perspective in the social choice theory under a welfare economics framework can be applied to estimate HRQOL in health economics and policy evaluation, with the ultimate aim to propose a modification to the existing economic analysis of the health sector. In this context, social choice theory explains that individual choices and preferences form part of the evaluation criteria of the health programs. This paper demonstrates the advantages of this extended framework of valuation and the role played by HRQOL in the costs and benefits estimates and health program evaluation decisions.

An application of the cost of benefit analysis of a certain Pharmaceutical Benefit Scheme (PBS) product in Australia is presented in detail in this paper, to show the analysis of the costs and benefits of the health programs and to investigate what impact does it have on the quantity as well as the quality of life.

Stephen Jan : The trade in human organs in Tamil Nadu: the anatomy of regulatory failure

There has been much recent interest in the trade in human organs in India. This paper examines both the extent to which regulatory controls through the Transplantation of Human Organs Act (1994) are effective in curbing commercialisation and the nature of the constraints on the effective implementation of this Act. The study, a politico-economic analysis of health sector regulation, is based on a stakeholder analysis drawing on the views of key decision makers, service providers, organ donors and recipients. The findings indicate widespread acknowledgement of an organs trade and highlights four major constraints on the effective implementation of the Act: the commercial interests of middlemen and service providers; ambiguities and loopholes in the Act; low monitoring capacity of regulatory authorities and; pressures and responsibilities exerted on the Authorising Committees. A feature of the Act is that its implementation is subject to a major incentive compatibility constraint – it is seemingly not in the interest of any of the key players, including the regulatory authorities, to restrict the organ trade. To some extent, this institutional problem is created by the specific nature of the regulatory intervention, and as a consequence, measures involving straightforward redrafting of the regulation may go some way to addressing these incentive problems.

Glenn Jones : Is population ageing driving increases in health expenditure: an analysis of aggregate and individual data?

Health spending in Australia has grown from 8.1% of GDP in 1991-92 to 9.5% in 2002-2003. Awareness of population ageing has been heightened by recent reports by the Australian Treasury and the Productivity Commission. It is important to disentangle the many factors that influence future health expenditure. Elderly people use significantly more health services than those in younger age groups, leading many to view population ageing as the key driver of increasing expenditures. This research examines aggregate and individual level Australian data to determine the extent to which expenditure growth is driven by population ageing or by level of service provision. This paper uses aggregate AIHW data to analyse age-related inequality in health expenditures over time using Lorenz curves. It decomposes growth into that attributable to population growth and to expenditure per capita. This is done for total health expenditure and separately for hospital expenditure, pharmaceuticals and out-of-hospital care. It also uses the National Health Surveys of 1995 and 2001 to examine how probabilities for health service use by age group have changed over the period, controlling for a large number of personal and household characteristics. The aggregate analysis shows that total and per capita expenditures (constant dollars) have grown over time and that age-related inequality in health expenditure and its components have also increased. The decompositions indicate that the main factor driving the increases is expenditure per capita and not ageing. This is especially pronounced for pharmaceuticals. In the disaggregate analysis, although age remains an important predictor of utilisation, many other factors impact on expenditure.

Judy Kavanagh : Equity considerations in the financing arrangements for aged care

The recent spotlight on funding for aged care in this election year has raised the issue of whether the current arrangements are 'fair'. An article in the Dominion Post of 26 July "One hand gives, the other takes" commented that it is unfair that elderly people should have to use up their assets to pay for their care while younger people receive care for free. At the other extreme, a scheme to put insulation and heating in the homes of Christchurch's elderly has stalled through lack of support from the city's community boards, in part due to one board

member claiming that the beneficiaries of the capital investment would be the elderly recipients' heirs – a situation he found 'not equitable'.

This paper discusses the equity issues raised by the current regime of co-payments for aged care. The paper raises the question of whether aged residential care is partly accommodation as well as health care, whether ageing and age related disability itself is a reasonably predictable future liability, and whether the intergenerational transfer between young and old is 'fair' given the progressively ageing population. The paper does not come to any particular position; the purpose of the paper is to set the policy debate in the context of the broad meaning of 'equity'. The views expressed in the paper are those of the author and not the Ministry of Health.

Xiong Linping : Model Medical Insurance Reform of Urban Employees in China

The ongoing medical insurance reform in urban China has had a profound impact on the financing, management and provision of health services. Since early 1995, the medical insurance reform for urban employees has been extended to the whole country and has produced some significant achievements. However, China is now an ageing society. As the ageing of the population quickens, the number of elderly people is becoming very large. This will bring the heavy burden on medical insurance. The reform of China's medical insurance system still faces many heavy tasks. This paper uses microsimulation model to predict the medical expenses for urban employees in Zhenjiang, Jiangsu Province. Using the model, the medical insurance policy was simulated over the five-year forecast period 2002 - 2006. The results estimated that the medical expenses of medical insurance participants in Zhenjiang increase over this period. Retirees were found to be the main group of employees receiving the highest share of medical resource expenditure, with their medical expenses accounting for more than 40% of total medical expenses. The proportion of medical expenses paid by the unified social funds for all groups of participants will increase annually. On a base case using existing policy settings, the paper also modeled the other two policy settings to investigate what happens to key output variables if the policy settings are changed. The study shows that microsimulation is a very useful tool in modeling individuals' medical behaviour and forecasting the effects of different settings of medical insurance policies.

Ian McRae: WHERE HAVE THE GP SERVICES GONE? A DECOMPOSITION ANALYSIS OF CHANGES IN THE NUMBER OF SERVICES PROVIDED BY AUSTRALIAN GPs

Since the mid 1990s the total level of GP services provided in Australia has been falling in both per capita and absolute terms. This decline has been in part attributed to the feminisation of the GP workforce, and to other compositional changes such as ageing. It is also potentially attributable to changes in behaviour of Australian GPs.

A decomposition analysis is applied to separate the effect of changes in the composition of the GP workforce from changes in the levels of activity of the individual GPs in the workforce. We show that behavioural change by individual GPs is the major driver of the decline in GP services. The level of behavioural change in different age-sex cohorts is examined to identify which groups of GPs are providing more or less services than in the

past, and in which groups individual GPs are actually reducing the number of services they provide.

George Messinis : Patent Quality and R&D Productivity in Pharmaceuticals: The Role of Inflation and International Collaboration*

Lanjouw and Schankerman (2004) proposed that patent quality is a key driver of R&D productivity but did not find supportive evidence for pharmaceuticals. This study revisits this hypothesis using OECD data for the period 1980-2000. It extends the literature in three ways: it develops new R&D price deflators to account for R&D price inflation; it employs two complementary indicators of patent quality, and applies dynamic panel data estimation techniques. When corrections are made for cross-sectional dependence, two major findings emerge: international inventor collaboration is an important indicator of patent quality, and there is strong support for the maintained hypothesis.

Richard Milne : COST EFFECTIVENESS OF ZOLEDRONIC ACID VERSUS PAMIDRONATE IN TREATMENT OF HYPERCALCAEMIA OF MALIGNANCY

Hypercalcaemia is a common life threatening metabolic complication of malignancy. Zoledronic acid is a new bisphosphonate that is more potent and more effective than pamidronate in correcting hypercalcaemia. An economic model was developed to compare zoledronic acid 4mg infusion with disodium pamidronate 90mg infusion as first-line therapy for correction of moderate to severe hypercalcaemia. **METHODS.** The evaluation comprises a Markov model containing 3 health states: hypercalcaemic; normocalcaemic; or dead. The model is based on patient-level data from 2 pivotal RCTs. It incorporates the probabilities of normalisation of hypercalcaemia during the first and second 5-day periods after treatment. Relapse probabilities and mortality for responders were obtained from Kaplan-Meier survival analyses of patient-level data. The model has a time horizon of 19 5-day cycles. Representative health state utilities were obtained from 50 New Zealand women using TTO. **RESULTS.** From a District Health Board perspective, in the base case the incremental cost utility ratio is \$7759. Under all realistic changes in key input parameters the cost per QALY is less than \$15,000. **CONCLUSIONS.** Zoledronic acid 4mg infusion is a cost effective alternative to disodium pamidronate 90mg infusion in first-line treatment of moderate to severe hypercalcaemia of malignancy.

Richard Milne : NEW ZEALAND WOMEN'S QUALITY-OF-LIFE VALUATIONS OF ADVANCED BREAST CANCER

The objective of this study was to obtain community quality-of-life valuations for 4 health states representative of advanced (metastatic) breast cancer. **METHODS.** Case descriptions were developed for hormonal therapy, chemotherapy, radiotherapy and hypercalcaemia. TTO and VAS valuations were obtained via interviews from 50 New Zealand women. Representations of the health states on the EQ-5D were also obtained from the same respondents and valued using New Zealand and UK tariffs. **RESULTS.** The 4 valuation methods ranked the 4 health states identically as follows: hormonal therapy > chemotherapy ≥ radiotherapy > hypercalcaemia. In order of TTO, EQ-5D (NZ tariff), EQ-5D (UK tariff) and VAS the valuations (mean, 95% C.I.) were: hormonal therapy [0.65 (0.57,0.73); 0.54 (0.51,0.58); 0.60 (0.54,0.65); 0.54 (0.48,0.59)]; chemotherapy [0.49 (0.40,0.57); 0.48 (0.43,0.53); 0.51 (0.43,0.59); 0.46 (0.41,0.51)]; radiotherapy [0.45 (0.37,0.54); 0.31

(0.27,0.35); 0.25 (0.18,0.33); 0.35 (0.30,0.40)]; hypercalcaemia [(-0.17 (-0.29,-0.05); -0.05 (-0.07,-0.03); -0.52 (-0.56,-0.48); +0.13 (0.09,0.17)]. The 4 methods gave similar results for chemotherapy, but for all other states the TTO valuations differed from those obtained using the EQ-5D and the VAS. CONCLUSIONS. New Zealand women are able to consistently evaluate and value case descriptions of advanced breast cancer using either VAS or TTO or the EQ-5D.

Timothy Moore : How can studies of the cost-of-illness of substance abuse be made useful for policy analysis?

Cost-of-illness approaches have been used to estimate the costs of substance abuse in several countries, including Australia and New Zealand. Their usefulness for any economic evaluation is severely limited. Conservative point estimates lead to the use of lower bound estimates and the practice of not estimating the cost of any consequences where uncertainty is considered too large. This frequently leads to estimates for the social costs of substance abuse that likely to be half the estimates derived using a “best estimate” approach. Another limitation is that comparing the current level of substance use with the counterfactual of no substance abuse means no information is provided on the relationship between use and economic effects. Despite these limitations, law enforcement agencies and systems dynamics researchers have used these studies to evaluate substance abuse policies, and it seems likely that the use of these studies in this way will become increasingly common. Given this, several recommendations are made to improve their utility: (1) all possible substance abuse costs should be identified, so readers are aware of any omissions; (2) upper and lower bounds should be made around a main estimate; (3) wherever possible, estimates for social costs should be made separately for high and low intensity of drug use. These changes would only marginally increase the resources required to conduct such studies, but would greatly enhance their value to substance abuse researchers and policy makers.

Des O'Dea : Willingness-To-Pay' For the Financial, Comfort, and Health Benefits of Home Insulation

Background: ‘Willingness-to-Pay’ can be a valuable technique for estimating the worth of public sector investments, including those which improve health outcomes. New Zealand houses have traditionally not been well insulated and this remains true for many lower income households, with adverse effects on occupants’ health. In a recent large-scale experiment insulation was retro-fitted to 1400 dwellings in seven localities, half being insulated in 2001, and the other half (the control group) in 2002. Extensive data were collected on dwelling and household characteristics, energy consumption, and use of health-care services. (Howden-Chapman et al; 2005) This included participants’ expected and actual trade-offs between financial savings from lowered energy consumption, and increased warmth; and also their ‘willingness-to-pay’ for the insulation in advance, and ‘willingness-to-accept’ payment for it afterwards.

Methods: Data were analysed ‘before’ and ‘after’, as influenced by locality, type of tenure, health-care subsidies, etc. Results were also compared with a more standard cost-benefit analysis, valuing energy savings and reduced use of health-care services.

Results: Participants in the experiment on average gave estimates of the value of insulation reasonably consistent with actual cost. Their predicted \$/warmth trade-offs beforehand were also consistent with actual trade-offs.

Conclusions: Willingness-to-Pay techniques proved workable in this application. They are a useful alternative for valuing ‘benefit’ in both housing and health economics.

Christopher L. Pate : Forecasting Patient Visits using Winters’ Method: A Case Study of U.S. Army Health Care Workload in Japan

The Winters’ forecasting technique is a simple and powerful way to analyze time-series data and generate estimates which can ultimately be used to inform the decision-making process in health care organizations. Using time-series data covering a 30-month period, this study uses the Winters’ method to evaluate unadjusted primary care visits at a U.S. Army health care facility located in the Kanto Plain of Japan. The research study presents descriptive statistics, forecast equations, model estimates, and predictions. Implications for decision-making in health care organizations and directions for future research are also discussed.

Elizabeth Savage : Do financial incentives for supplementary private health insurance reduce pressure on the public system? Evidence from Australia

In many developed countries, budgetary pressures have made government look into private insurance to reduce pressure on their public system. Between 1997 and 2000 the Australian government implemented a series of reforms intended to increase enrollment in private health insurance and reduce public health care costs. Using the ABS 2001 National Health Survey, we examine the impact if increased insurance coverage on use of the hospital system, in particular on public and private admissions and lengths of stay. We model probability of hospital admission and length of stay for public (Medicare) and private patients. We use Propensity Score Matching to control for selection in the insurance decision and estimate a two-part model for hospital admission and length of stay. We determine how predicted unconditional lengths of stay vary with duration of insurance cover, and compare the results using the matched and original datasets. Our results indicate there is selection associated with insurance choice. We also find that unconditional Medicare and private lengths of stay differ by length of time with private insurance cover. Those with shorter periods in cover behave more like the uninsured than those insured more than 5 years. While the insurance incentives increased PHI cover substantially, the impact on use of the public system appears to be less pronounced and increased private usage outweighs reduced public usage. This effect may change with longer insurance durations. The results of this study have important implications on the role of government intervention in health insurance markets.

Deborah Schofield : Ageing, the health system and the economy: where do the intersections lie?

The Australian Treasury’s Intergenerational Report and the Productivity Commission’s Report on the Economic Implications of an Ageing Australia highlighted the emerging pressures resulting from an ageing population. There will be significant growth in Australian Government health spending which will place significant pressure on future budgets. An ageing population also has two other important specific impacts on the health system. First, demand for health services will rise. Second, as the population is ageing so is the health workforce, leading to likely workforce shortages. The ageing of the health workforce also has an impact on wider factors such as national labour force participation rates and future wage pressures. This paper projects the increase in demand for health services as a result of ageing of the population. It then compares the extent to which ageing

of the health workforce will likely reduce the size of the health workforce. Finally, the related impacts on the future economy and budgetary policy environment are discussed.

Maria Shanahan : Modelling the costs and outcomes of changing general practitioner behaviours with respect to screening for at risk drinking.

Aim: The aim of this project was to assess the relative cost-effectiveness of four strategies (computerised reminder systems, target payments and interactive CME) to increase the provision of screening and brief intervention by Australian general practitioners with the ultimate goal of decreasing risky alcohol consumption among their patients.

Rationale: Between 1992 and 2001, approximately 31,000 Australians died from alcohol-related disease and injury. Additional harms include lost productivity, road accident costs, legal and court costs.

It is increasingly recognised that early screening and intervention with at-risk drinkers may have significant benefits in the prevention of alcohol-related health and social problems.

This has meant a shift from primarily treating highly dependent drinkers to attempting to prevent harm among those whose alcohol consumption is typically characterised by low-dependent, or episodic drinking to intoxication. GPs are in a strong position to effectively modify behavioural risk factors at the population level but GPs screen fewer than half their patients for alcohol consumption or issues.

Methods: This project used a modelling approach to combine information on the effectiveness and costs of four separate strategies to change GP behaviours to estimate their relative cost effectiveness.

Results: The computerised reminder system and academic detailing appear to be most effective in achieving a decrease in grams of alcohol consumed among risky drinkers.

Regardless of the assumptions made, the targeted payment strategy appears to be the least cost effective method to achieve a decrease in risky alcohol consumption while the other three strategies appear reasonably comparable.

Michael Shields : Socio-Economic Status, Health Shocks, Life Satisfaction and Mortality: Evidence from an Increasing Mixed Proportional Hazard Model

The socio-economic gradient in health remains a controversial topic in economics and other social sciences. In this paper we develop a new duration model that allows for unobserved persistent individual-specific health shocks and provides new evidence on the roles of socio-economic characteristics in determining length of life using 19-years of high-quality panel data from the German Socio-Economic Panel. We also contribute to the rapidly growing literature on life satisfaction by testing if more satisfied people live longer. Our results clearly confirm the importance of income, education and marriage as important factors in determining longevity. For example, a one-log point increase in real household monthly income leads to a 12% decline in the probability of death. We find a large role for unobserved health shocks, with 5-years of shocks explaining the same amount of the variation in length of life as all the other observed individual and socio-economic characteristics (with the exception of age) combined. Individuals with a high level of life satisfaction when initially interviewed live significantly longer, but this effect is completely due to the fact that less satisfied individuals are typically less healthy. We are also able to confirm the findings of previous studies that self-assessed health status has significant

explanatory power in predicting future mortality and is therefore a useful measure of morbidity. Finally, we suggest that the duration model developed in this paper is a useful tool when analysing a wide-range of single-spell durations where individual-specific shocks are likely to be important.

Alexandra Sidorenko : Modelling macroeconomic impact of HIV/AIDS epidemic in Ukraine.

Ukraine's HIV/AIDS epidemic is among the fastest growing in Europe, with the officially registered new HIV cases having doubled over 2000-2004. The official data suggests that the HIV/AIDS epidemic in Ukraine is entering the generalised epidemic phase: by the end of 2004, the share of heterosexual mode of transmission has increased to almost a third of new cases. The spread of HIV/AIDS is superimposed on the adverse demographic situation characterised by both depopulation and deteriorating health status. The paper discusses macroeconomic effects of the epidemic in Ukraine based on the finding of the recent study led by the author and funded by the World Bank. The modelling results for Ukraine demonstrate that HIV/AIDS epidemic can lead to serious consequences that may become catastrophic without an effective and timely action plan

Rhema Vaithianathan : Better the Devil you Know to the Doctor You Don't

Most countries ban the advertising of prescription medication directly to consumers yet allow drug companies to intensively promote drugs to doctors. We argue that such a differential treatment of promotion cannot be justified on economic grounds, but is a result of a paternalistic bias in health care regulation, which portrays patients as gullible and doctors as perfect agents. We argue for a complete deregulation of Direct-to-Consumer advertising (DTC) advertising. Doctors ought to be required to reveal their interaction with drug companies. This is particularly apt, given the calls for similar transparency rules to address the potential conflict of interest between drug companies and researchers.

Bernard van den Berg : The well-being of informal caregivers: A monetary valuation of informal care

This paper estimates the value of providing informal care by means of a well-being valuation method. The value of providing informal care is monetarily evaluated by assessing the (compensating) income necessary to maintain the same level of well-being after an informal caregiver provides an extra hour of informal care. In the econometric analysis a distinction is made between the care recipient who is and the care recipient who is not a family member of the informal caregiver. The informal caregiver's well-being is measured by means of two self-reported subjective questions that were posed in a questionnaire answered by 865 Dutch informal caregivers between the end of 2001 and the beginning of 2002. The results indicate that, at sample average, an extra hour of informal care is worth about 15 Euros. This equals 15 or 16 Euros if the care recipient is a family member and about 8 or 9 Euros if not. The results obtained in this study are comparable to the results found when using the contingent valuation method on the same data set. Finally, we will also explore this methodology with Australian data.

Kees van Gool : Catch us when we fall: an analysis of the Medicare safety net

Since 1984 Medicare has insured all Australians for expenses incurred for private outpatient medical services. Medicare is a rear-end deductible, fee-for-service program, and providers' ability to set fees at their own discretion is constitutionally guaranteed. Following public concerns over the rising level of out-of-pocket expenses in recent years, Australia's Federal Government introduced a "safety net" mechanism. The safety net, implemented in 2004, reimburses 80% of a patient's out-of-pocket costs for medical services once annual out-of-pocket expenses exceed AUD300 for retirees and low income households and AUD700 for everyone else.

Objectives: This paper evaluates two aspects of the safety net policy: regional supply and demand drivers of safety net expenditure, and the potential inflationary impact that the safety net has had on medical fees.

Methodology: Multiple regression analysis is conducted on regional data from the Health Insurance Commission to explain, firstly, the relationship between regional safety net payments, average household income, regional demographic patterns and supply side variables such as the number of practising general practitioners and specialists. Secondly, aggregate time series data is used to examine changes in utilisation, fees and benefits for services provided by general practitioners and specialists in the period immediately before and after the introduction of the safety net.

Results: The analysis shows widespread regional variation of safety net payments and that average household income is positively and significantly linked to spatial expenditure. The paper also shows that the safety net has had some impact on provider behaviour, including the fees charged and the fee structuring by certain sub-specialist groups.

Conclusions: The safety net was heralded by the government as a fundamental reform in Australia's Medicare program and aimed to deliver greater equity of access to private outpatient medical services. The initial results presented in this paper reveal that the safety net also creates some contradictory outcomes. More research is needed at the individual level to assess the impact of the policy on patient and provider behaviour.

Rosalie Viney : Does the reason for buying health insurance influence behaviour? Analysis of the 2001 National Health Survey

Following the implementation of a range of government measures to increase private health insurance coverage in Australia, the 2001 National Health Survey asked respondents not only about their insurance status, but also about their reasons for having or not having health insurance. The most common reason given for having health insurance was 'security/peace of mind' but other reasons included 'choice of doctor', 'shorter wait for treatment', 'lifetime cover/avoid the surcharge', 'to gain government benefits/avoid the Medicare surcharge'. This study uses these data to identify different categories (types) of consumer in terms of their reasons for having health insurance. Four broad types of consumer are identified: those who purchase health insurance for security reasons, for increased choice, for financial reasons, and for health reasons. We find that, controlling for risk behaviours, health status and socio-economic status, insurance type is significantly associated with hospital utilization, particularly the probability of being admitted as a public or private patient. We also investigate whether insurance type explains timing of insurance purchase.

Laura Wilkinson-Meyers : Economic Evaluation of Universal Newborn Hearing Screening

The Ministry of Health in New Zealand is considering the implementation of a national newborn screening programme to aid in the detection of permanent congenital hearing impairment (PCHI). It is estimated that between 135 and 170 infants are born each year with PCHI, but the current protocol has resulted in an average age of detection of 46.1 months, significantly later than comparable countries. This paper investigates the cost-effectiveness of some of the available options for newborn screening in New Zealand to include: (1) the current selective approach which only screens infants with specific risk factors for PCHI, (2) selective screening of infants in neonatal intensive care units (NICU) only, (3) selective screening of tertiary and secondary hospital births only, and (4) universal screening of all births, including outreach to families in smaller facilities and those who give birth at home. The primary outcome measures include the number of infants diagnosed at the age of 6 months (early detection) or undiagnosed at 6 months (late detection), the number of infants screened, the cost per detection, the cost per diagnosis by 6 months, as well as the estimated lifetime costs of early and late detection. The discussion highlights the unique problems faced when conducting economic evaluations for the New Zealand population.

Meng Xin : Ageing and Healthcare Expenditure in China

The impact of ageing on health expenditure has attracted a great attention from policy makers and academics. Majority of the studies in health economic, however, focus on developed countries, where health care systems are well developed, and examine the effect of ageing on national health expenditure. In China, where old age dependency ratio has grown faster than most countries and the health care system has moved away from a public to a largely self-financed system, the issue of whether ageing induces a sharp increase in health expenditure and if elderly population can afford such an expenditure is of a greater concern. This paper addresses these issues using a household survey data. By endogenise health condition of individuals, we found that ageing is one of the most important contributing factors to the increase in health expenditure. On average, an individual in his/her 60s spends 50 per cent more out of pocket health expenditure than the population average, whereas those who were in their 80s spend 120 per cent more than the population average.