About CHERE

CHERE is an independent research unit affiliated with the University of Technology, Sydney. It has been established since 1991, and in that time has developed a strong reputation for excellence in research and teaching in health economics and public health and for providing timely and high quality policy advice and support. Its research program is policy-relevant and concerned with issues at the forefront of the sub-discipline.

CHERE has extensive experience in evaluating health services and programs, and in assessing the effectiveness of policy initiatives. The Centre provides policy support to all levels of the health care system, through both formal and informal involvement in working parties, committees, and by undertaking commissioned projects. For further details on our work, see www.chere.uts.edu.au.

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Chair’s Report

2008 saw two important events that have highlighted CHERE’s successes.

First, Jane Hall as President of the Health Services Research Association of Australia and New Zealand had initiated and has encouraged the development of this Association since 1999. It now holds regular conferences which bring together an outstanding array of speakers to focus on developments in research, policy issues and an exchange between researchers and policymakers. As she steps down from the Presidency, Marion Haas is taking on the role of Vice-President, thus ensuring CHERE’s continuing contribution and leadership of the field of health services research. The Fifth Conference of the Association was held in Auckland in December. It was well attended by speakers from Australia and New Zealand, with many interesting international presenters as well. The interchange between Ted Marmor (Professor of Political Science, School of Management, Yale University) and Stephen Duckett (heading the Reform Team in Queensland Health) on Fads, Fashions and Fallacies in Health Policy and Health Management was most engaging and entertaining, showing that health economists have a sense of humour as well as passionate views about how to improve health systems. While Prof Marmor debunked much of the ‘management speak’ around new approaches to health system reform and health care management, Dr Duckett demonstrated a pragmatic approach to driving better performance and improved accountability in a State health system. CHERE was a major contributor to the conference, from Marion Haas’ involvement in the Organising Committee, the presentation of many proffered papers, to a keynote address from Jane Hall and a panel commentary and discussion from Rosalie Viney.

Second, Rosalie Viney has been appointed the Chair of the Economics Sub-Committee (ESC) of the Pharmaceutical Benefits Advisory Committee, as well as a member of that Committee. This Sub-Committee is at the heart of ensuring value for money in the PBS. Establishing value has been controversial in some well publicised applications in recent years, and value for money is always argued. Rosalie is at the heart of the experts charged to ensure the health of Australia’s unique system for approving and financing the availability of quality medicines for the whole Australian population. In addition, the Sub-Committee is leading internationally developments in the methods of health technology assessment and their implementation.

CHERE faces the hard task of finding quality people to undertake a huge and demanding workload. There has been little investment in Australia in training the cadre of economists to work in research, teaching and policy analysis as health systems become more and more complex and expensive, and the demand for health economics skills increases in both the public and private sectors. Quite correctly, CHERE has insisted that its high standards not falter in the competitive market for health economics skills. CHERE invests strongly in the development of all its staff and is widely recognized as providing a positive and supportive work environment. Unfortunately, this leads to valuable staff being highly sought for jobs in other organizations and other countries. It is interesting to see how many of Australia’s health economists have spent a formative period in CHERE. The Board is pleased to see that the arrangements for post-graduate supervision have been clarified over the last few years, and that CHERE is now attracting high caliber students.

I congratulate Professor Jane Hall and her colleagues on another year of high achievement. I also want to thank my colleagues on the Advisory Committee who give their time to discuss, encourage and occasionally cajole Jane, Marion, Rosalie and others on their great work. Finally, again thanks to UTS for their continuing support of a world class health economics research centre.
Advisory Board

The Advisory Board plays an important role in guiding the strategic directions of CHERE, and monitoring its performance. The Board has an independent Chair, and its members are appointed for their expertise and knowledge of government, the health sector, and universities, and with a commitment to research. The Deans of the supporting Faculties (Business, and Nursing, Midwifery and Health) and the Chief Executive of the Sydney South West Area Health Service are represented. Other members are appointed for their individual expertise.

**Professor Richard Madden (Chair)**  
Director  
National Centre for Classification in Health, University of Sydney

**Mr Philip Davies (Deputy Chair)**  
Deputy Secretary  
Commonwealth Department of Health and Ageing

**Professor Denzil Fiebig**  
School of Economics, University of NSW

**Professor Roy Green**  
Dean  
Faculty of Business, University of Technology Sydney

**Professor John Daly**  
Dean  
Faculty of Nursing, Midwifery and Health, University of Technology Sydney

**Mr Mike Wallace**  
Chief Executive  
Population Health, Planning and Performance  
Sydney South West Area Health Service

**Mr Rick Sondalini**  
Acting Director, Human Services Branch  
NSW Treasury

**Mr Andrew Milat**  
Manager, Strategic Research and Development Branch Centre for Chronic Disease Prevention and Health Advancement  
NSW Health

**Professor Jane Hall**  
Director, CHERE

**A/Professor Marion Haas**  
Deputy Director, CHERE

**A/Professor Rosalie Viney**  
Deputy Director, CHERE
2008 was another year of strong activity and development. A major new project, the training and job decisions of nurses, commenced. This is funded by the ARC, and led by Assoc Prof Denise Doiron from the University of NSW with Prof Debbie Street and Jane Hall as UTS co-investigators. The project will recruit a cohort of nurses and follow them through their training and transition into the workforce. Progress continued on the NHMRC Health Services Research Program Grant. This is a major collaborative partnership with Prof Robyn Ward and colleagues at the University of NSW, with the UTS involvement led by Marion Haas and Kees van Gool. This program will build evidence on the cost-effectiveness of cancer treatments into the evidence-based guidelines for treatment available to clinicians. This systematic approach to the development and dissemination of economic models is a world first. The economic evaluation team, under the leadership of Stephen Goodall, is going from strength to strength. The team has been awarded several major projects, and in partnership with the Royal Australian College of Surgeons Australian Safety and Efficacy Register of New Intervventional Procedures –Surgical, has been awarded a new contract with the Department of Health and Ageing as an evaluation group for the Medical Services Advisory Committee.

This was the final year for expenditure received under the NHMRC Program Grant, and a number of other project grants. Several new grants have been awarded, including a large ARC Discovery Grant and a NHMRC Capacity Building Program Grant. Elizabeth Savage led the team to ARC Discovery success, with the largest ARC grant ever awarded to UTS for a five year study of the impact of public hospital waiting times. This is in collaboration with Prof Michael Keane and Olena Stavrunova at UTS, and Assoc Prof Glenn Jones, Macquarie University. Rosalie Viney and Marion Haas were awarded a five year program grant to develop an innovative approach to health technology assessment which uses existing data and sophisticated econometric techniques.

This year saw the departure of Madeleine King, who has been a member of CHERE since the beginning. Madeleine was attracted to the University of Sydney to a Chair in Cancer Quality of Life, and is sorely missed at CHERE as a strong leader and contributor. Madeleine was one of the five academic staff members and led the research theme on measurement of quality of life.

The Faculty of Nursing, Midwifery and Health commissioned a review of its research activities towards the end of 2008. Its further support for CHERE is dependent on the outcome and implementation of the Review. Unfortunately this has delayed the refilling of the position held by Madeleine; but we are confident that this will be resolved and CHERE will able to recruit another senior academic in 2009. Without this position, CHERE is unable to take advantage of new funding opportunities as they become available.

My thanks go to the senior staff at CHERE for their support during the year, and in particular Rosalie Viney and Marion Haas who took over while I had my first experience of study leave. The Advisory Board under the chairmanship of Prof Richard Madden has remained encouraging and supportive, and we do appreciate the time each member contributes on our behalf. We welcome Prof Roy Green as Dean of the Faculty of Business and look forward to working with him as he strengthens the Faculty’s commitment to research. We also welcome Prof John Daly as Dean of the Faculty of Nursing, Midwifery and Health.

Finally, it is almost twenty years since I began developing this research centre in health economics. It seems to me that it is an opportune time to step back and consider how to take CHERE into its third decade, building on the strengths of what we have already achieved and looking to the challenges of the future. The research environment is changing, and UTS has embarked on an ambitious strategic investment program to build research. I have asked Prof Roy Green to commission a review of CHERE and that will take place during 2009.

Jane Hall
About CHERE

The Centre for Health Economics Research and Evaluation is a recognised Research Strength of the University of Technology, Sydney. It is located in the Faculty of Business and is a joint initiative of the Faculties of Business and Nursing, Midwifery and Health, in collaboration with Sydney South West Area Health Service. CHERE was established in 1991 and became a Centre at UTS in 2002. CHERE is recognised nationally and internationally as a centre of excellence in health economics.

CHERE contributes to the University’s mission through:

- Achieving research excellence through knowledge creation and dissemination
- Using research outcomes to contribute to the development of health policy and practice
- Providing informed commentary to the community debate on health policy
- Providing health sector relevant education to facilitate the application of economic analysis to health policy and practice.

Research Strategy

CHERE develops and uses advanced theory and methods in health economics to achieve excellence in research and produce new knowledge. We have collaborations with other leading researchers in Australia and in other countries. Our research broadly covers the financing, organisation and delivery of health services. Our areas of expertise are financing and the use of health care services; economic evaluation and health outcomes measurement; preferences and decision making in health care; and the health workforce.

Financing the health system and the incentives generated for how health services are used is a key concern in Australia as in other countries. Developments in medical technology and increasing community expectations make it more difficult to ensure that health services deliver value for money. Australia has a unique combination of public and private sources of finance for health care, and public and private sector providers. CHERE has considerable work investigating the impact of these, particularly around private health insurance. There are substantial data sets, collected for administrative purposes and surveys, which have been under-used for research. The increasing availability of panel studies are presenting new opportunities to investigate how individuals respond to changes in personal circumstances, how past experiences within the health system impact on present choices and how changes in the policy setting shape decisions and impact on outcomes. Panel data also allow more sophisticated approaches to control for unobserved heterogeneity across individuals. This approach will allow for better modelling of policy responses over time.

Economic evaluation and health outcomes measurement are an important component of the application of economics research to health care decision making. Increasingly health care funders and providers wish to assess the cost-effectiveness (efficiency) of interventions, not just their safety and effectiveness. Methods in economic evaluation are developing rapidly and CHERE has a strong focus on the application of rigorous and up to date methods, and extending these applications to complex interventions. The assessment of health outcomes that are relevant to end users, sensitive to differences in alternative interventions, and valid in comparing across health care services remains a major challenge in applying economic evaluation. CHERE is also involved in work that explores how different decision makers use and can use the results of such evaluations.

Individuals make choices about their life styles, whether to use health care, and what services to use. Health system outcomes – aggregate use of services, costs and health outcomes – depend on these choices. So understanding how individuals make choices is fundamental to understanding how the health system works, and predicting the impact of changes in policy settings or constraints. Often the data available do not include all the factors that are relevant to individuals’ choices. Or in the case of new technologies, data simply do not exist as the relevant options are not yet available. Discrete
choice modelling of stated preference data can address these crucial gaps and provide more insight into key choices, whether of consumers, providers or funders.

CHERE has developed substantial expertise in the use of this approach in health care settings.

The health workforce is crucial to the productivity, effectiveness and accessibility of health care. To date there has been little Australian research in this field. CHERE is engaged in this topic, particularly around the nursing workforce.
Financing and incentives and the use of health care services

Australia has to improve health system performance if it is to meet the growing demands on health services. Financing the health system and the incentives generated for how health services are used is a key concern. The evidence base for future health system reform builds on the experience gained analysis and evaluation of recent health policy initiatives. This research focuses on the design of incentives to encourage more efficiency, better safety, higher quality and better results for consumers.

Current projects in this research theme:

**Does the reason for buying private health insurance influence behaviour?**

**Key objective**

To determine whether the motivation for buying private health insurance affects hospital utilisation

There is considerable evidence of unexplained diversity among the privately insured population. Heterogeneity of preferences is likely to be important not just in determining the uptake of private health insurance, but also the impact of changes in private health insurance on the use of private treatment. This study uses the 2001 ABS National Health Survey to identify ‘types’ among the insured population using their stated reasons for purchasing private health insurance. It is found that insurance type (choice, financial, security and health) is significantly associated with hospital utilisation, particularly the probability of being admitted as a public or private patient. For example those with shorter durations of insurance cover are far more likely to have joined for financial reasons; and ‘financial types’ are less likely to choose the private system when admitted to hospital than ‘choice types’ who are more likely to have joined before the recent insurance incentives.

The research shows the Government’s insurance incentives were more attractive to particular types of the insured population. This has implications for the effectiveness of the insurance incentives and for the design of policies that aim to reduce pressure on the public hospital system.

A Chere Working paper was prepared in 2006 and in 2007 a revised version of the working paper was submitted to a journal.

**Funding**

NH&MRC Program Grant

**Chere staff**

Elizabeth Savage, Rosalie Viney

**Collaborator**

Denzil Fiebig

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**Family formation and the demand for private health insurance**

**Key objective**

To model the demand for private health insurance surrounding pregnancy, birth and care for children among young women

Existing studies of private health insurance (PHI) in Australia are based on the general population or on older age groups. Also, studies to date have used cross-section data and hence been unable to model the dynamics of insurance demand. This study uses a nationally representative, panel of young women from the Australian Longitudinal Study on Women’s Health to look at demand for PHI. These data include information on actual and desired children, pregnancies, and other relevant
variables for insurance such as income, health status and age. A dynamic discrete choice model of insurance choice with unobserved individual effects is estimated.

The findings show evidence of differential demand for insurance by young women based on actual and desired numbers of children. Women with and without children, who desire more children, are more likely to purchase insurance. Effects are quantitatively important. The effect is stronger for those with children and for those who are currently pregnant. The different effects on joining and leaving cover show the importance of modelling dynamics in insurance. A CHERE Working Paper has been produced and the paper was presented at the 2007 iHEA World Congress in Copenhagen.

Funding source
NH&MRC Program Grant

CHERE staff
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Collaborators
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**General Practitioners knowledge, attitudes and practices regarding cervical cancer screening in Australia**

Key objective
To investigate the knowledge, attitudes and practices of General Practitioners with regards to cervical cancer screening in Australia

In Australia, the National Cervical Screening Program (NCSP) has been an important public health achievement. General practitioners (GPs) are the main providers and have been crucial to this success. This study assesses the views of GPs about the value of the Pap smear tests, their knowledge of the current screening policy, awareness of new technologies and concerns of litigation.

Completed questionnaires were returned from 452 GPs. GPs are generally supportive of the NCSP guidelines; 88.5% agree with the 2 yearly screening interval. However, half believe the age range should be increased to include older and younger patients. Factors most important in recommending a Pap test were time since last test and false negative rate. Least important factors were; patient age, socio-economic status and cost. There are notable differences between male and female GPs. Female GPs were more likely to: support the 2 yearly screening interval; advocate expansion of the age range to include younger and older patients; be familiar with new technologies; offer opportunistic screening; and be at ease with patients from different cultural/religious backgrounds. Male GPs were more concerned about legal implications of over and under-screening.

While the NCSP is generally well supported by GPs there are differences in the knowledge and views of male and female GPs. This information is essential if we are to optimise the effectiveness of GPs as providers of cervical screening, improve the rate of appropriate utilisation and successfully implement future changes to the NCSP.

This work was presented at the HSRAANZ in Auckland 2007, and a paper has been submitted for peer-review.

Funding source
NH&MRC Program Grant
**OECD Pharmacogenetics**

**Key objectives**

To provide commentary on the OECD paper: “Policy report on challenges to health systems from pharmacogenetics”

Pharmacogenetics refers to the study of inherited differences in drug metabolism and response. Pharmacogenetics has the potential to make drug treatment more targeted and accurate – creating less variation in the drug’s effectiveness and/or fewer side-effects. Use of pharmacogenetics has the potential to improve patient outcomes and, through better targeting, save expenditure on pharmaceuticals.

The draft OECD report suggests that the impacts of pharmacogenetics are being felt in the areas of basic research, drug discovery and development, and health care policy. It examines the challenges to the broader uptake of pharmacogenetics throughout the R&D innovation cycle and identifies potential government actions to create the right enabling environment.

CHERE provided a commentary on the report to the OECD, focusing on the potential impact of pharmacogenetics on health care policy and health economics. The OECD is scheduled to publish the report in 2008.

**Funding Source**

OECD

**Risk selection and the demand for private health insurance in Australia**

**Key objective**

To investigate the relationship between risk and private health

1. An examination of the relationship between ex ante risk and private health insurance in Australia (Doiron, Jones, Savage)
   Both adverse selection and moral hazard models predict a positive relationship between risk and insurance; yet the most common empirical finding is that of a negative correlation. This research investigates the relationship between ex ante risk and private health insurance using data from the 2001 National Health Survey. The findings show a strong positive association between self-assessed-health and private health cover. The study identifies the factors responsible for this result and recovers the conventional negative relationship predicted by adverse selection when using more objective indicators of health. The findings suggest that those persons who engage in risk-taking behaviour are simultaneously less likely to be in good health and less likely to buy insurance. A paper from this research has been published in *Health Economics* - 2008; 17: 317-334.

2. Risk selection and the demand for private health insurance in Australia (Buchmueller, Fiebig, Jones, Savage)
   We investigate possible explanations for the favourable selection often found in empirical studies of insurance. Using 2004-05 National Health Survey data on hospital utilisation and individual characteristics we investigate the nature of risk selection in the Australian market for private health
insurance. Using semi-parametric techniques, we find no evidence of adverse selection in the Australian private health insurance market. We then explore the extent to which underlying risk preferences rather than risk might drive the decision to purchase health insurance using Household Expenditure Survey data. We find large and significant positive correlations between unobservables related to different insurance purchases even when risks are uncorrelated. We also find positive correlations between tobacco and gambling and negative correlations between tobacco and insurance. Our results provide new evidence for the hypothesis that risk preferences drive the empirical observation of favourable selection in health insurance markets.

**Funding source**
NH&MRC Program Grant

**CHERE staff**
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**Collaborators**
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**The distributional impact of out-of-pocket health expenditures in Australia**

**Key objective**
To investigate the distribution of out-of-pocket costs for health services and examine the level of protection offered by health care concession cards

Out-of-pocket health expenditure in Australia is high by international standards and has been growing at a faster rate than most other health costs. Most out-of-pocket expenditure is spent on over-the-counter pharmaceuticals and dental services.

It is well established that poorer sections of the community have a greater demand for healthcare than those on high incomes. Health systems that rely heavily on out-of-pocket payments expose low income individuals to higher levels of financial risk when they fall ill. The researchers model the relationship between specific health expenditures and total expenditure using semi-parametric estimation of Engel curves using data from the ABS Household Expenditure Survey 2003. Research has focused on estimating the protective effect of concession cards on out-of-pocket costs. Results suggest health concession cards do provide out-of-pocket protection for general practitioners but not for specialists services or pharmaceuticals. The research was presented at the 2007 Australian Conference of Economists in Hobart. A paper is currently under review for journal publication.

**Funding source**
NH&MRC Program Grant

**CHERE staff**
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**Collaborator**
Glenn Jones¹

1. School of Economics and Financial Studies, Macquarie University
The economic burden of asthma: a longitudinal cohort study investigating costs and utilisation

Key objective
To describe the costs and health care utilisation over time for asthma management; and investigate the characteristics which predict individual and health system costs

This longitudinal study examines the cost of asthma to the individual and the health system. Researchers are investigating the relationship between different factors (such as health status and residential area) and the use and cost of health care for people with asthma. The study also examines health related quality of life in people with asthma and investigates how this is related to asthma control. The study uses administrative data from the Federal and State governments and participants complete six-monthly surveys covering their use of health services, out-of-pocket costs and quality of life. The data collection phase of the study was completed in 2006.

Analysis of the quality of life data found that individual changes in quality of life over time were mainly associated with sleep disturbance and the use of reliever medication, while differences in quality of life between individuals were mainly associated with activity limitations. The analysis of the cost data found that costs varied substantially between individuals. After adjusting for asthma related health measures, both the health system and patient out-of-pocket costs were highest in the highest income group; health system costs were lowest in the middle income group and patient costs were lowest in the lowest income group. Adults had higher costs than children and those with private health insurance had higher patient costs and lower health system costs than those without insurance.

Funding source
Cooperative Research Centre for Asthma
NH&MRC Program Grant

CHERE staff
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Collaborator
Guy Marks

The demand for private health insurance and the impact of insurance status on healthcare utilisation

Key objective
To investigate the factors influencing the demand for private health insurance and how insurance impacts on use of the health system

1. The impact of premiums, threats and deadlines on private health insurance (Ellis and Savage)
   This research develops a model of individual insurance decisions and examines the effects of a set of insurance incentives, introduced between 1997 and 2000, on the age and income distribution of those with private cover. The analysis indicates that the major driver of the increased enrollment was a response to the deadline and advertising blitz associated with the Lifetime Health Cover policy, rather than a pure price response to the premium subsidy. A paper from this research was published in 2008.

2. The impact of financial incentives for private health insurance on use of the public hospital system (Lu and Savage)
   Using the ABS 2001 National Health Survey, we examine how supplementary insurance affects public and private hospital admissions and lengths of stay for new enrollees and for those insured prior to the insurance incentives. We find that public and private hospital lengths of stay differ significantly depending on insurance duration. Those who enrolled in response to
the incentives behave more like the uninsured than the long-term insured. While the insurance incentives substantially increased insurance coverage, our results suggest that using financial incentives were not a cost-effective way of reducing pressure on the public hospital system. This research was presented at the 2007 iHEA World Congress in Copenhagen. A paper from this research was submitted in 2007 and is under review.

3. The impact of policy changes on the utilisation of dental services in Australia (Gablinger, Jones, Savage)
   Using the National Health Surveys of 1995 and 2001 we examine differences in utilisation of dental services between the upper and lower halves of the income distribution in the periods before and after the discontinuation of the Commonwealth Dental Health Program and the introduction of the private health insurance incentive schemes. Despite higher overall utilisation of dental services, the results suggest that the policy changes increased the inequity of dental utilisation. The increase in use of dental services was large and significant amongst high income earners and small and insignificant among low income earners. Papers were presented at The Australasian Meeting of the Econometric Society, Alice Springs, in July, and The Australian Conference of Health Economists, Perth, in September 2006.

4. An examination of the causal relationship between insurance and utilisation (Doiron, Salale)
   This research takes the novel approach of using information on the partner’s health as an instrument for one’s own insurance coverage on the assumption that a partner’s health will affect one’s insurance purchase but not directly influence one’s own health care utilisation. Data from the Household, Income and Labour Dynamics in Australia (HILDA) survey are used. Results indicate the importance of correcting for endogeneity. We find that insurance cover does not reduce the usage of public facilities but it raises usage of private treatment substantially. This research was presented at a number of seminars in North America in 2007.

Funding source
NH&MRC Program Grant

CHERE staff
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The Medicare Safety Net

Key objective
To firstly measure the distribution of the Medicare Safety Net expenditure by profession, secondly identify key drivers of expenditure by Federal electorates and thirdly determine its impact on provider fees and out-of-pocket costs

The Medicare Safety Net was introduced in 2004 to provide financial relief for those Australians who face high out-of-pocket costs incurred through out-of-hospital medical services. This study examines variation in Safety Net benefits by Federal electorate and by type of medical service. The findings show significantly higher Safety Net benefits in electorates with relatively high median family income and lower health care needs. The study also shows that patients who use private obstetricians and assisted reproductive services are the greatest beneficiaries of the policy.

The analysis has shown that low income areas are not being aided by the policy compared to well-off areas. Furthermore, whilst the Safety Net was introduced to help reduce out-of-pocket medical costs, there has been significant leakage towards higher medical fees. Two papers have been submitted to peer-reviewed journals and are currently under review.
**Funding source**
NH&MRC Program Grant

**CHERE staff**
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**Collaborator**
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**Turnover in private health insurance membership**

**Key objective**
To identify the predictors of uptake and dropping of private health insurance in response to financial incentives and to develop profiles of those with different insurance behaviours

Between 1997 and 2000 the Australian Government introduced a series of incentives to encourage private health insurance (PHI) membership including Lifetime Health Insurance Cover (LHC), an age related premium loading for those purchasing insurance after a certain deadline. Panel data from the Household Income and Labour Dynamics (HILDA) survey was used. The researchers estimated a multinomial probit model for six insurance choices including those who joined before the Government insurance incentives, those who joined because of LHC, and those who have never joined PHI.

The findings suggest that Government incentives are not effective in maintaining higher PHI coverage especially among the younger population. While the LHC deadline attracted younger members in 2000, the subsequent effect of the age penalty deters new joiners.

A working paper has been prepared and an article has been submitted for review to Social Science and Medicine.

**Economic Evaluation and health outcomes measurement**

Economic evaluation and health outcomes measurement are an important component of the application of economics research to health care decision making. Increasingly health care funders and providers wish to assess the cost-effectiveness (efficiency) of interventions, not just their safety and effectiveness.

Methods in economic evaluation are developing rapidly and CHERE has a strong focus on the application of rigorous and up to date methods, and extending these applications to complex interventions. The assessment of health outcomes that are relevant to end users, sensitive to
differences in alternative interventions, and valid in comparing across health care services remains a major challenge in applying economic evaluation.

Current projects in this research theme:

A group-randomised trial of three models of nursing care for dementia patients in residential aged care

Key objective
To assess the effects and costs of Dementia Care Mapping (DCM) and Person-Centred Care (PCC) vs conventional nursing practices in the care of dementia patients living in aged care units

This study compares the care of dementia patients in 3 different scenarios:

- DCM involves detailed observations of patient's well-being and behavioural disturbances. Feedback is given to staff in a bid to improve patient care;
- PCC regards the patient as an equal partner with healthcare professionals. All treatment decisions are made with respect to the person's overall well-being. Patient care is monitored to ensure individuals receive the most appropriate treatment from all agencies;
- Usual care.

The study involving 289 aged care residents with dementia and 194 care staff in 15 dementia care units aims to investigate the effect of DCM and PCC on:

- resident quality of life and behavioural disturbance,
- staff stress, job satisfaction, and turnover rates,
- quality of care,
- cost of care.

DCM is very labour and time intensive. The researchers are interested in exploring the extent to which PCC, which is less labour intensive, may also lead to positive outcomes.

Data analyses are underway, with drafts of the first several papers being developed. A paper about the resident outcomes was presented at the International Society for the Quality of Life Conference, Toronto, in October 2007.

Funding source
Australian Health Ministers Advisory Council Priority Driven Research Project

CHERE staff
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Medical Services Advisory Committee (MSAC) Applications

Key Objective
In collaboration with ASERNIP-S (Australian Safety and Efficacy Register of New Interventional Procedures – Surgical) complete MSAC application reviews
The role of MSAC is to provide recommendations to the Australian Minister for Health and Ageing regarding the evidence relating to the safety, effectiveness and cost-effectiveness of health technologies and medical procedures. The recommendations of MSAC are used by the Australian federal government to decide whether public funding via MBS should be granted.

In 2007, ASERNIP-S and CHERE entered a formalised Memorandum of Understanding, outlining a collaborative approach to undertaking health technology assessments for MSAC. ASERNIP-S and CHERE have been working in collaboration for over 12 months, and this experience has allowed streamlined and cohesive approaches to economic assessment to be developed. Over the past year, we have produced a total of six reviews together for MSAC in what we believe is a successful and positive collaboration.

**MSAC Applications 2007-(in collaboration with ASERNIP-S)**

- Application 1033 Autologous chondrocyte implantation (protocol)
- Application 1106 Endoscopic argon plasma coagulation therapy (to be presented to the MSAC executive)
- Application 1109 Deep brain stimulation for dystonia and essential tremor (current)
- Application 1113 Endovenous laser treatment for varicose veins (to be presented to the MSAC executive)
- Application 1115 Sacral nerve stimulation for urinary incontinence (current)
- Application 1123 Computer-aided total knee arthroplasty (current)

**Funding source**
Australian Department of Health and Ageing

**CHERE staff**
Stephen Goodall, Richard Norman, Gisselle Gallego, Marion Haas

**Adolescents and young adults (AYA) with cancer or a blood disorder:**
**Validation of a modified health related quality of life (HRQOL) measure for patient and proxy in an Australian/Australasian context**

**Key objective**
To develop a valid and reliable measure of HRQOL appropriate to AYA with cancer or a blood disorder

While there are numerous instruments to measure health related quality of life (HRQOL) in cancer, most of these are designed for adults. The Pediatric Quality of Life Inventory (PedsQL), also called the PedsQL Measurement Model, is a suite of instruments designed to measure health related quality of life (HRQOL) in children and adolescents aged 2-18 years. There are parallel child self-report and parent proxy-report formats, and age-specific versions differing in developmentally appropriate language for ages 2-4 years (toddler, proxy-report only), 5-7 years (young child), 8-12 years (child), and 13-18 years (adolescent). Patient and proxy versions of the PedsQL adolescent forms (13-18 years) were modified for 16-24 year olds. The Memorial Symptom Assessment Scale was used to group patients by symptom severity. Eighty-eight AYA patients aged 16-25 and 79 nominated proxies completed questionnaires.

In 2006, these data were analysed. The researchers found that the scales had good internal consistency (Cronbach’s alpha range 0.81 – 0.96). Most scales distinguished between patients with mild, moderate and severe symptoms, confirming clinical validity. The original factor structure was replicated, confirming construct validity. Correlations among scales were as expected, confirming discriminant validity.
These modified versions of the PedsQL Generic Core and Cancer Module provide reliable, valid and sensitive measures of HRQOL in AYA with cancer or a blood disorder, suitable for use in clinical trials, research and practice. A paper describing the development and psychometric properties of these instruments is under peer review, and another describing the HRQOL of Australian AYA using these in preparation. The results have been presented at several conferences (International Psycho-Oncology Society World Congress, Venice 2006 and London 2007; the Clinical Oncology Society of Australia conference, Melbourne 2006; and the International Society of Quality of Life Research, Toronto 2007).

Funding source
CHERE

CHERE staff
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Collaborators
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Clinical trial of joint mobilisation after ankle fracture

Key Objective
To determine if adding joint mobilisation to an exercise program is more cost-effective than exercise alone in adults after ankle fracture

Passive joint mobilisation is frequently used by physiotherapists to reduce pain, improve joint movement and facilitate recovery after injury. A multi-centre, assessor-blinded randomised controlled trial was used to evaluate the effectiveness and cost effectiveness of this treatment. 91 patients with ankle fracture have completed the three stages of follow-up over 24 weeks. The primary outcome measures were the Lower Extremity Functional Scale and the Assessment of Quality of Life. Secondary outcome measures included measures of impairment, activity limitation and participation. Cost information from the perspective of the health system and the patient was collected using questionnaires. There were no clinically worthwhile differences in activity limitation or quality of life between groups at any time point. There was also no between-group difference in quality-adjusted life-years, but the treatment group incurred higher out-of-pocket costs (mean between-group difference = AU$200, 95% CI 26 to 432).

Two papers have been published (BMC Musculoskeletal Disorders 2006 and Journal of Rehabilitation Medicine, 2008) and a third on the costs and utilization of health services is being prepared.

Funding source
Motor Accidents Authority of NSW

CHERE staff
Marion Haas

Collaborators
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¹ University of Sydney
**Dementia outcomes measurement suite**

**Key objective**
To develop a set of recommended measures/tools for routine use in the assessment, diagnosis, screening and outcomes monitoring of dementia conditions and the evaluation of treatments that are applicable for the Australian health care context.

By developing a set of recommended measures it is hoped to standardise the assessment and evaluation procedures used in this field to enhance comparability of findings across research and practice settings. Work began in May 2006, the first project report was submitted to the Department of Health and Ageing in July 2006, and the second and final report was submitted in February 2007. The latter report contains a chapter on the standardisation of clinical terminology was presented for feedback and consideration, and detailed reviews of assessment tools for the following categories of measures: dementia-specific assessment; dementia-specific quality of life; cognitive assessment; multi-attribute utility; symptoms of dementia; patient and carer satisfaction; generic health related quality of life; functional skills; and other measurement issues (indigenous and cultural issues, proxy issues, tiered assessment, research gaps and implementation issues).

**Funding source**
Australian Department of Health and Ageing

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**DoCs Early Intervention Program “Brighter Futures”**

**Key Objective**
To design a framework to evaluate the effectiveness of the DoCs Early Intervention Program “Brighter Futures”.

The DoCs Brighter Futures program aims to reduce and prevent child-abuse and neglect in at-risk families by providing targeted support. The Program is being rolled out over a five year period (2003-2008) under a DoCs $1.2 billion program of reform and renewal.

CHERE is working in a consortium comprising:

- the University of NSW Social Policy Research Centre,
- the University of Western Sydney School of Education and Early Childhood Studies,
- and
- the Southern Cross University, Gnibi College of Indigenous Australian Peoples
to design and implement an evaluation framework for the Brighter Futures program.

The framework was designed in 2006. Data collection, analysis and reporting has been ongoing in 2007. CHERE will be undertaking the cost-effectiveness and cost-benefit analyses. During 2007, CHERE completed a framework document for the cost-benefit analysis and commenced work on this aspect of the evaluation. Initial data from the prospective evaluation of the costs and effectiveness outcomes has been received and is being evaluated in terms of quality and completeness.

Funding source
Department of Community Services (DoCs)

CHERE staff
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Collaborators
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3. Gnibi College of Indigenous Australian Peoples, Southern Cross University

Cost-effectiveness Analysis of Alternate Strategies to Redress Iodine Deficiency in Australia

Key Objective
To determine the cost effectiveness of alternative strategies to redress iodine deficiency in Australia and New Zealand

As part of Proposal P230 - Consideration of Mandatory Fortification with Iodine, the Department of Health and Ageing (Australian Government) commissioned CHERE to investigate the cost-effectiveness of alternate strategies to redress iodine deficiency in Australia. The motivation for Food Standards Australia New Zealand (FSANZ) proposal P230 is the re-emergence of iodine deficiency in Australia and New Zealand.

We considered alternative approaches to redress iodine deficiency in Australia and New Zealand. These were:

- Maintenance of status quo;
- The implementation of an educational program to target either pregnant women and/or the whole population to increase their intake of dietary iodine;
- The implementation of an iodine supplementation program to target either pregnant women and/or the whole population to increase their intake of dietary iodine;
- Mandatory fortification:
  - The mandatory replacement of salt with iodised salt to bread
  - The mandatory replacement of salt with iodised salt to bread, plus an iodine supplementation program to target pregnant women.
- Voluntary fortification:
  - The voluntary replacement of salt with iodised salt to bread
  - The voluntary replacement of salt with iodised salt to bread, plus an iodine supplementation program to target pregnant women.
Our findings suggest that both the Australian and New Zealand populations are mildly iodine deficient, as defined by the World Health Organization (WHO). After either mandatory or voluntary iodine fortification of bread, we estimate that Australia and New Zealand will become iodine adequate.

We also estimate the cost per person (mandatory and voluntary) removed from cohorts with levels below 50 µg/l and 100 µg/l over a ten year period. For mandatory fortification, our estimates suggest that there will be approximately 128,000 and 7,320,000 fewer people with average annual iodine levels of <50 µg/l and <100 µg/l respectively in Australia. The cost-effectiveness ratios, which estimate the costs of reducing the population below 50 µg/l UIC (100 µg/l) by one for a ten-year period are $24.32 ($0.42) for Australia and $4.28 ($0.37) for New Zealand.

For voluntary fortification, our estimates suggest that there will be 102,200 and 5,834,000 fewer person with an annual average UIC of <50 µg/l and <100 µg/l respectively in Australia. The cost-effectiveness ratios, which estimate the costs of reducing the population below 50 µg/l UIC (100 µg/l) for a ten-year period are $25.82 ($0.45) for Australia and $4.99 ($0.48) for New Zealand.

In comparing voluntary fortification with mandatory fortification, economic evaluation would conventionally exclude voluntary fortification since it is subject to extended dominance. Mandatory fortification has a greater effect in reducing iodine deficiency, and reduces the population at a lower cost per person (despite having a higher overall cost).

The findings were submitted in a report to DOHA.

Funding source
Australian Department of Health and Ageing

CHERE staff
Stephen Goodall, Richard Norman, Gisselle Gallego

Economic evaluation of genetic screening for haemochromatosis

Key Objective
To assess the cost-effectiveness of population screening for haemochromatosis

Haemochromatosis is a condition which causes iron overload which, if untreated, leads to clinical symptoms and eventual organ damage. It is an interesting case study as the development of symptoms is linked to a reasonably frequent chromosomal abnormality. Early detection allows monitoring for the development of clinical symptoms, and the treatment, regular blood donation, is effective and non-invasive. Screening is possible by genetic testing or by testing for signs of iron overload.

This study is an extension of CHERE’s genetic testing research. This cost-effectiveness analysis of population screening is based on and has been developed with the Victorian Haemscreen program which provides workplace based screening via genetic testing. The has provided estimates of costs, screening behaviours and test results from the Victorian experience. A complex decision model has been constructed which also incorporates natural disease history and treatment effectiveness. Preliminary results have been presented at several conferences.

Funding source
NH&MRC Program Grant

CHERE staff
Jane Hall
Economic evaluation of Cystic Fibrosis (CF) screening: a review of the literature

Key objective
To assess the cost effectiveness of CF carrier screening

Cystic Fibrosis is the most common serious genetic disease in Caucasians with an incidence of 1:2500 and carrier frequency of 1:25. The first component of this research was to test the quality and transferability of the economic literature on carrier screening for CF to any country context. A systematic literature search identified 14 studies focusing on prenatal CF screening between 1990 and 2005. These articles were assessed against international benchmarks on conducting and reporting of economic evaluations, focusing on the transferability of the evidence to any national context.

The findings concluded it was not possible to apply existing evidence to the local context. The variability in study design, model inputs and reporting of economic evaluations of CF carrier screening made it difficult to make any economic evidence based recommendations and raises issues on applicability and transferability of such international evidence to any national country contexts. This provided the basis for a successful grant application to Cystic Fibrosis Australia, the aim of which is to model the costs and consequences of screening for CF carrier screening. A CHERE Working Paper has been produced.


- Decision framework for the cost-effectiveness analysis completed.
- Application for data request and Ethical Approval from CF Australia. Awaiting response
- Work in Progress
  - Uptake probabilities being estimated from the genetic screening DCE data
  - Cost data being collected by investigators at Melbourne

Funding Source
NH&MRC Program Grant

CHERE staff
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Collaborators
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**Evaluation of the effectiveness of expanded newborn screening by tandem mass spectrometry**

**Key Objective**
To determine the cost effectiveness and outcomes of screening for 28 inherited disorders of metabolism compared to clinical detection

For over 25 years Australian babies have been tested for up to four treatable metabolic disorders at birth. Recent technological advances using tandem mass spectrometry have made it possible to inexpensively expand this screening to include 30 extremely rare genetic disorders. In collaboration with geneticists and clinicians across Australia, CHERE is examining the costs and consequences of using tandem mass spectrometry to screen for a range of inherited metabolic conditions in newborns compared to detection of the disorders by clinical diagnosis (when symptoms appear). This is the first study of its type to be conducted anywhere in the world. The hypothesis being tested is that early detection of disorders by tandem mass spectrometry will provide medical and cognitive benefits to affected babies not currently achieved by clinical detection, without significant harm. In this study 59 children with Medium Chain Acyl-CoA Dehydrogenase Deficiency (MCADD) were identified (35 unscreened, 2.28/100,000 total population, 24 screened, 5.2/100,000).

Before four years of age, three screened MCADD patients experienced a severe illness (including one neonatal death) versus 23 such episodes (and five deaths) in the unscreened group. Unscreened children may be more likely to be admitted to hospital and to incur higher emergency department costs than screened children, while screened children seem more likely to attend hospital outpatient clinics. The incremental cost of screening and subsequent treatment per 100,000 screened infants is $349,000. Current publications are:


**Funding source**
NH&MRC Project Grant

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**Evidence-based interpretation guidelines for health related quality of life (HRQOL) measures**

**Key Objective**
To review all available evidence about QLQ-C30, incorporating clinician and patient judgments, to produce interpretation guidelines for HRQOL scores yielded by the QLQ-C30
Patients’ perception of their quality of life is an important aspect of cancer treatment. Although it is now a common outcome in clinical trials and health services research, interpretation of the clinical significance of effects from quality of life scales is problematic. The units of measurement are unfamiliar to clinicians and patients alike. Substantial experience with quality of life instruments now provides a rich evidence base for estimating effect sizes and developing interpretation guidelines for quality of life measures. The QLQ-C30 is the core questionnaire of the European Organisation for Research and Treatment of Cancer’s modular approach to Health related Quality of life (HRQOL) assessment. It is the most widely used HRQOL instrument in cancer clinical trials.

A literature review has been used to identify papers containing results from different groups of patients or, from patients over time using the QLQ-30. The literature review commenced in 2005 and was completed in June 2007. 330 papers were identified as suitable for inclusion. A panel of over 50 clinicians has been convened to review these papers, to decide on the clinical relevance of each comparison and to predict the size of the effect on quality of life. 94 papers have been reviewed 3 times, 83 have been reviewed twice, and 82 papers have been reviewed once, giving a total reviewed at least once of 259/330 (78%), total reviewed at least twice of 177/330 (54%) and total reviewed three times of 94/330 (29%). We are now focussing on getting 200 papers reviewed twice, and 100 reviewed 3 times. Data entry is underway. The extracted data will be pooled using meta-analysis methods and the evidence used to publish interpretation guidelines.

**Funding source**
Cancer Research UK – Population and Behavioural Sciences Committee

**CHERE staff**
Madeleine King

**Collaborators**
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2. Dept of Public Health, University of Aberdeen
3. Cancer Medicine Research Unit, St James Hospital, Leeds UK
4. European Organisation for Research & Treatment of Cancer, Brussels

**Cost-effectiveness Analysis of Iodine Fortification in Australia and New Zealand**

**Key Objective**
To determine the costs and outcomes associated with mandatory fortification of salt in bread with iodine

As part of Proposal P230 - Consideration of Mandatory Fortification with Iodine, Food Standards Australia New Zealand (FSANZ) commissioned CHERE to investigate the cost-effectiveness of iodine fortification of bread in Australia and New Zealand. The motivation for FSANZ proposal P230 is the re-emergence of iodine deficiency in Australia and New Zealand.

Iodine is an essential trace element that must be derived exogenously. Iodine is required for the formation of thyroid hormones, which are essential for normal thyroid function, growth and development. The thyroid gland is able to maintain, synthesise and secrete thyroid hormones even during extended periods of excessively low or high iodine intake. However extended periods of relatively high or low iodine intake can lead to illness. Insufficient dietary iodine results in a range of adverse conditions known collectively as Iodine Deficiency Disorders (IDDs).
We modelled the distribution of average annual urine iodine content (UIC) in both Australia and New Zealand, stratified into children, pregnant women, and other adults. This modelling accounted for both the median level of UIC and the distribution of iodine levels around this median. Using Tasmanian data on voluntary fortification, we estimated the effect on the median UIC after mandatory fortification is introduced. The results suggest a significant decrease both in the proportion of individuals with iodine levels below 50 $\mu$g/l, and in those with levels between 50 $\mu$g/l and 100 $\mu$g/l. These results are relatively robust to changing the effect of fortification on UIC.

Using these data, we then estimated the cost per unit reduction in at-risk populations over a ten year period. Our estimates suggest that there will be 102,509 and 5,912,315 fewer people below 50$\mu$g/l and 100$\mu$g/l respectively, in Australia. In New Zealand the corresponding figures are 181,709 and 1,901,722 for the <50$\mu$g/l and <100$\mu$g/l cohorts, respectively. The relatively greater impact in New Zealand reflects the higher severity of iodine deficiency at baseline, and the likelihood of a greater intake of iodised salt bread. Finally, the cost-effectiveness ratios, which estimate the costs of preventing one person from having an iodine level below 50$\mu$g/l (100$\mu$g/l) are A$104.35 (A$1.81) for Australia and NZ$15.30 (NZ$1.46) for New Zealand.

The findings were submitted in a report to FSANZ.

**Funding source**
Food Standards Australia New Zealand (FSANZ)

**CHERE staff**
Stephen Goodall, Gisselle Gallego, Richard Norman

**Collaborators**
Christian Thoma, John Davies, Dorothy MacKerras (all FSANZ)

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**Home based rehabilitation program for survivors of a critical illness: a randomised clinical trial**

**Key Objective**
To test the effects of an eight-week home-based, individually tailored rehabilitation program on the health status and quality of life outcomes for the survivors of a critical illness

Over 130,000 Australians are admitted to intensive care units each year. Whilst survival rates are high, recovery post-discharge is often slow. Many patients suffer from de-conditioning as well as psychological distress. This study involves survivors of a critical illness, aged over 18 years, who have spent more than 48 hours in intensive care. Patients were recruited through eleven intensive care units around Australia. Recruits were randomly allocated to either intervention or control. Those allocated to intervention receive an individualised endurance and strength training program conducted at home over an eight-week period. Both the exercise and non-exercise groups were assessed at weeks 1, 8 and 26 (post hospital discharge) to examine physical functioning, exercise capacity, health related quality of life and psychological well-being.

Recruitment was slower than anticipated, commonly because of the requirements for home visits within a 30km radius (now nominal) of the recruitment site, and patients being transferred into the tertiary ICUs from outside local geographical catchment areas. There were 195 participants randomized, participant follow-up was completed in February 2009 and analysis has commenced.

**Funding source**
NH&MRC Project Grant
Health related quality of life (HRQOL) and supportive care needs of men after treatment for early stage prostate cancer

Objective
To describe the medium and long-term outcomes of treatment of prostate cancer in men less than 70 years of age

Prostate cancer is second only to lung cancer as the most common cancer in men.

The NSW Prostate Cancer Care and Outcomes Study (PCOS) is following a group of men with prostate cancer from diagnosis for up to five years. The original cohort contained 2021 cases recruited via the NSW Central Cancer Registry and 495 age and postcode matched controls. HRQOL is the main outcome of interest, but supportive care needs and coping styles have also been surveyed. HRQOL data are being collected using a telephone administered questionnaire. The University of California LA Prostate Cancer Index (UCLA PCI) and the hormonal domain section of the Expanded Prostate Cancer Index (EPIC) are being used to measure HRQOL at baseline then at 1, 2, 3 and 5 years after diagnosis.

Five-year interviews were completed for all cases by December 2007. When we originally set up this cohort we estimated that approximately 67% of cases would likely be alive and available for their five-year interview, equating to approximately 1,355 interviews. Retention rates in the cohort exceeded our estimates by a considerable amount, to the extent where 80% of cases who were interviewed at baseline undertook a five-year interview (n=1,602). Five-year interviews for controls will be completed in mid 2008.

The three-year quality of life data have been cleaned and analysed, and an initial paper drafted. A subsample of the cohort completed a discrete choice experiment of preferences for treatment outcomes. These data have been cleaned and an initial manuscript drafted.

A paper describing the unmet supportive care needs in the year following diagnosis was published in the Journal of Clinical Oncology in 2007. The findings show that attention should be given to sexual and psychological needs in the early months after diagnosis or treatment of prostate cancer, particularly in younger men, those with less education, and those having surgery.

Funding source
NH&MRC Project Grant
**Economic models of cancer treatment protocols (EM-CAP)**

**Key Objective**
To identify and explore current barriers and examine potential solutions to increase the uptake of economic evidence at the local level amongst health care professionals working in cancer care

This study will address one of the most enduring problems in health care: the translation of economic evidence into policy and clinical practice. The first aim of the project is to build on the strong clinical evidence available in the Cancer Institute NSW Standard Treatment (CI-SCaT) program, an online resource of more than 200 peer-reviewed cancer treatment guidelines. Researchers will produce and disseminate evidence about the cost effective use of cancer medicines in clinical practice. The systematic approach to development and dissemination of economic models is a world first. The models developed will be similar to those produced by pharmaceutical companies for PBS funding but will be developed transparently and reported with end-users in mind.

The second aim of the research is to work with local decision makers to adapt the decision analytic models to the particular context of their locality. Researchers will work with local staff to modify the decision analytic models by combining evidence of effectiveness with local information about prices and costs. Guidelines will be developed to accompany the economic models to support the use of the resource allocation tool in local settings. Factors which influence the cost effectiveness (or cost-ineffectiveness) of cancer medications in different types of treatment settings will be identified.

Work in 2007 has focused on developing methodologies for modelling CI-SCAT protocols. A high level framework for the approach to be taken in this project was published in *Pharmacoeconomics* 25, 12: 1055 -1062, 2007.

**Funding source**
NH&MRC Health Services Research Grant

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4. South Eastern Sydney & Illawarra Public Health Unit
5. Cancer Institute New South Wales

**Perceptions on health related technology decision making within the Northern Sydney, Central Coast Area Health Service (NSCCAHS)**

**Key Objective**
To capture perceptions about current technology-related decision-making processes
This project provided the NSCCAHS with feedback about the factors that influence medical technology decision making and priority setting, and gained insight into changes key stakeholders feel are necessary to improve the current process. During 2006 researchers conducted interviews and surveyed healthcare providers and health service managers, to investigate perceptions and opinions about the current processes and criteria used for the approval and introduction of new technologies at the institutional level. Types of technology include clinical devices, diagnostic/therapeutic equipment, pharmaceuticals, interventional procedures and health programs.

Results suggest current decision making is ad hoc. Clinicians are seen as the drivers for introducing new technology but budgetary impact is the main consideration. There appears to be no formal communication about technology upgrades or discontinued use of medical technology and decision makers are reliant on informal peer group networks for information. A paper was presented at the HSRAANZ Early Careers Workshop, Sydney, in November 2006. An article is currently in press in the journal Australian Health Review.

The project was completed and results were feedback to the Area on 27 November 2007.

**Funding Source**
Northern Sydney Central Coast Area Health Service (NSCCAHS) Grant

**CHERE staff**
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**Collaborator**
Dianne Kelleher - NSCCAHS

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**Well-being and informal care**

**Key Finding**
Providing informal care to another person in the same household reduces well-being

This project used Household Income and Labour Dynamics in Australia (HILDA) data to investigate the impact of care giving on self reported well-being. The HILDA survey of a national representative sample of Australians was conducted in 2001. As part of the survey respondents were asked about their well-being and informal care.

The results show that providing informal care has a clear negative effect on well-being, when care is provided to someone of 18 years and older within the same household. Providing informal care to somebody outside of one’s household does not result in well-being losses. The results of this study provide useful new data on informal caregiving in Australia and add to the literature as it compares both caregivers and non-caregivers across a range of dimensions.

**Funding source**
NH&MRC Program Grant

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**Collaborator**
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Preferences and decision making in health care

Individuals make choices about their life styles, whether to use health care, and what services to use. These decisions are also influenced by the availability of health care providers and the recommendations that providers make for treatment. Health system outcomes (aggregate use of services, costs and health outcomes) depend on these choices.

Understanding how individuals make choices is fundamental to understanding how the health system works, and predicting the impact of changes in policy settings or constraints. Often the data available do not include all the factors that are relevant to individuals' choices. Or in the case of new technologies, data simply do not exist as the relevant options are not yet available. Discrete choice modelling of stated preference data can address these crucial gaps and provide more insight into key choices, whether of consumers, providers or funders.

Current projects in this research theme:

ATN Centre for Metabolic Fitness

Key objective
To investigate the cost effectiveness of individual Cognitive Behaviour Therapy in Overweight and Obese Adolescents

CHERE researchers are investigating the costs and outcomes associated with an intervention aimed at changing behaviour in adolescents at greatest risk of becoming obese adults. Short-term data are available identifying a treatment effect, so cost-effectiveness methods can be used to estimate the resource use associated with the intervention, and then to generate information about the cost effectiveness of CBT for reducing overweight and obesity among adolescents. However, these results need to be extended to information about the cost-effectiveness of preventing overweight and obesity in adults to be relevant for policy makers. The significant methodological issue to be dealt with is the extrapolation of the short term results into long-term meaningful endpoints, such as reduction in morbidity or mortality. It is hoped that this study will identify a suitable method for doing this or identify the reasons why the current approaches to this problem are flawed.

Funding source
Australian Technology Network of Universities

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ATN Centre for Metabolic Fitness

Key objectives
To investigate the relationship between personal and socio-demographic characteristics, physical activity and obesity

The prevalence of overweight and obesity is increasing in Australia. The latest results from the Obesity and Lifestyle Study (2000) suggest that approximately 60% of the adult population is overweight or obese. This is 2.5 times higher than in 1980. Similarly the prevalence of overweight and obesity in children and adolescents has risen 2-4 times since 1985. When compared with 1997/1998 data, the overall percentage of overweight or obese adults in NSW in 2004 has risen from 44% to 48.4%. Most notably the proportion of the population who are considered to be obese has risen from 12.8% on
1997/1998 to 16.9% in 2004. To date there has been limited analysis of issues associated with
overweight and obesity using data from the NSW Health Survey. While many studies have examined
the factors associated with being overweight or obese, few have compared individuals’ perceptions of
their weight with more objective measures such as Body Mass Index (BMI). This study uses unit
record data from two NSW Health Surveys to identify factors associated with the accuracy of adults’
perceived weight, and whether those factors changed over time.

The sample size ranged from 35,005 in 1997/1998 to 13,025 in 2004. Descriptive methods and logistic
models using STATA are used to quantify the effects of a number of demographic, socio-economic,
behavioural and health-related variables on the accuracy of self-assessed weight.

It was found that significant differences exists in body mass perception and accuracy by a number of
characteristics, including participants’ current BMI, sex, self assessed health and SES. Males are
significantly more likely than females to understate their self-assessed body mass in relation to their
BMI. Similarly, respondents with lower socioeconomic status (SES) are more likely than those with
high SES and respondents who are overweight or obese are more likely than those who are thin to
understate their self assessed body mass. Respondents who record very good or good health status
are significantly more likely to over state their body mass.

Funding source
Australian Technology Network of Universities

CHERE staff
Paula Cronin, Marion Haas, Elizabeth Savage, Minh Vu

**ATN Centre for Metabolic Fitness**

**Key objective**
To use Discrete Choice Experiments to understand individuals’ preferences for dietary and
lifestyle changes

Alongside the “Whyalla Community Trial – Managing Obesity and Associated Health Issues”, CHERE
researchers have investigated the factors that motivate people to adopt beneficial lifestyle changes.
Using Discrete Choice Experiments (DCE) this project has identified preferences for particular
interventions, products or programs and the factors affecting uptake among the target population. For
the sample as a whole, the emphasis at baseline indicated preference for individually designed
exercise, reasonably structured diet programs and preference for high levels of support. A trade-off
was apparent in exercise with greater hours taken in conjunction with flexibility and shorter hours with
daily exercise schedule. The overall emphasis was one of high structure and support. At 4 months the
focus shifted to a clear preference for exercising on their own with no supervision and an aversion for
organised group exercise. Support was no longer significant and a strong preference emerged for the
intervention diet. The general move was away from structure and supervision and towards more
flexibility. Cost realities were also becoming an issue. At 12 months cost became a major factor in
preferred program and there was evidence of renewed interest in having higher support. Flexible diets
and individual exercise that is not overseen and weekly meal program. Preference for individual
exercise over committed group exercise remains. While no firm comparison of gainers and losers can
be made because of possible scale differences, there does appear to be a greater tendency on the
part of losers to take an active interest in their program and to assess their own needs rather than
relying exclusively on others’ directions.

Funding source
Australian Technology Network of Universities

CHERE staff
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Collaborators
Kate Owen

1. Faculty of Business, UTS

**Adolescents and young adults with a life threatening illness: Preferences for support services**

**Key objective**
To investigate the preferences and trade-offs for support services in a group of adolescents and young adults with a life threatening illness

Life-threatening illnesses in young people are traumatic for patients and their families. Support services can help patients and families deal with various non-medical impacts of diagnosis, disease and treatment. The aim of this study was to determine which types of support are most valued by adolescents and young adults (AYA) with cancer or blood disorders and their families.

A discrete choice experiment (DCE) was performed. Separate experiments were conducted with AYA and their guardians. Types of support included in the experiment were: assistance returning to school/work; emotional support for the patient and/or family; financial support; spiritual support; and cultural support.

Completed surveys were returned by 83/88 AYA and 78/79 guardians. AYA preferred emotional support for themselves (either by counsellors and/or peers), emotional support for their family, financial support and assistance returning to school/work over services relating to cultural and spiritual needs. Covariate analysis indicated female AYA were more likely than males to prefer emotional support, while males were more likely to prefer assistance returning to work/school and to have an aversion for cultural needs. Guardians preferred emotional support for their dependants and assistance returning to school/work. To a lesser extent, they valued financial and emotional support for themselves. Like AYA, they were indifferent about services relating to cultural and spiritual needs.

Providing the types of support services that people prefer should maximise effectiveness. Results from this DCE can inform evidence-based health policy decision making about the types of support services provided for AYA and their families.

This study was presented at AHES, Brisbane 2007.

**Funding source**
CHERE

**CHERE staff**
Stephen Goodall, Madeleine King

**Body mass in Australia**

**Key objectives**
To examine trends, behaviours and misperceptions of body mass in Australia

The prevalence of obesity has risen in many developed countries over the last century. In Australia weight levels of men are rising faster than females and males in couples of working age have the highest level of obesity. There are three components to this research which all rely on data from ABS National Health Surveys:

1. We examine misperceptions of body mass, how this has changed over time and provide a profile of those who misperceive their BMI category (Ayyar, Savage and Vu).
2. We survey the literature on food misreporting and investigate the relationship between body mass and food intake in Australia using the linked 1995 National Health Survey and Nutrition Survey and (Jones, Propper, Savage).

3. We pose the question: do exercise and labour force participation of the female partner influence BMI category for working age males and females in couple income units (Gablinger, Jones, Propper, Savage)?

Over time there is evidence of increasing body mass for both male and female adults with increasing misperception for the overweight. The findings show that working females have significantly lower body mass than their non-working counterparts, but that partner body mass is unrelated to the labour force behaviour of the female. Exercising is associated with lower weight in males with working partners. Surprisingly we find that higher energy intake is associated with lower BMI. This is consistent with international findings and suggests misreporting of food intake. We investigate methods for addressing misreports.

In 2007 the research was presented at the iHEA World Congress in Copenhagen. Two papers are being prepared for journal submission.

Funding source
NH&MRC Program Grant

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Collaborators
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Validation and calibration of the SF-36 health transition question in the Household, Income and Labour Dynamics in Australia (HILDA) survey

Key objective
To quantify the change in health status for the categories of the SF-36 health transition question in clinical terms

Cross-sectional population surveys depend on retrospective self-report if they are to estimate changes in health status over time. An example is the health transition question (HTQ) from the SF-36 health survey that ask the respondent rate his/her health compared to one year ago. However little has been done to estimate the clinical magnitude of change in health related to responses to health transition questions.

Calibrating the response categories of the HTQ against an external measure of known clinical change will help in interpreting the clinical meaning of the HTQ categories and increase its usefulness as a stand alone item in cross-sectional surveys.

We are using the HILDA study to obtain some estimates of the size of prospective change in health status on the SF-36 scales for the HTQ and comparing this against the size of prospective change for respondents who have recently developed a new long-term health condition.

CHERE Working paper 2007/15 has been produced.
Results were presented at the International Society for Quality of Life (ISOQOL) conference Montevideo 2008

An article is forthcoming in Quality of Life Research.

Funding source
NH&MRC Program Grant

CHERE staff
Madeleine King, Stephanie Knox

Care and outcomes of care for prostate cancer in New South Wales

Key objective
To describe the medium and long-term outcomes of treatment of prostate cancer in men less than 70 years of age

The NSW Prostate Cancer Care and Outcomes Study (PCOS) is following a group of men with prostate cancer from diagnosis for up to 5 years. CHERE is leading the economic evaluation component of the study which will investigate patient preferences, describe the use of health services and the costs of care. A Discrete Choice Experiment (DCE) has been used to elicit men’s preferences for treatment options, based on the relative tolerability of different side-effects of treatment and how these are offset by expected survival gains.

Analyses have been reported in CHERE Working Paper 2006/14. Further analysis will be done in 2008 to prepare papers for publications.

Funding source
NH&MRC Project Grant

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Choice experiments for complex choices: the case of contraceptives

Key objective
To use choice experiments to investigate the interaction of women’s and general practitioners’ preferences with regard to contraceptive choices

The range and complexity of contraceptive choices introduced over the past 5 years pose a significant challenge for GPs to provide information and recommendations to women, in the limited consultation time available. No detailed data are available about the factors which will influence a woman’s choice of method or the way GPs will deal with these issues.
This research will quantify the trade-offs that women make in assessing different contraceptive alternatives, provides information about how they will choose under different circumstances, and seeks to predict uptake of new products. These data are necessary to inform GPs in providing appropriate advice and recommendations to women.

During 2007, the pilot study and the main survey for the women’s choice experiment was conducted. 528 women participated in the experiment, and analysis of the results is underway. Two experiments for the GP survey are currently in the design phase.

**Funding source**
ARC Linkage Grant
Linkage partners: Family Planning NSW, Janssen-Cilag Pty Ltd, Schering Pty Ltd and Organon Pty Ltd.

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**Decisions about cervical screening: What influences women and providers?**

**Key objective**
To investigate factors that influence women’s choices and GPs’ recommendations in relation to cervical screening (including impact of new technologies, screening recommendations), using both NHS and choice experiment data

Discrete choice experiment surveys were used to collect separate stated preference data from women in the target population and GPs. The findings showed women were more likely to have a Pap test when the GP was female, she/he was their regular GP, if they were due or overdue for a screening test and when the GP recommended they have a Pap test. They were discouraged by cost and any decrease in the accuracy of the test, were influenced by the recommended screening interval, but did not care whether their GP received an incentive payment.

In making a recommendation that a woman have a Pap test, GPs took into account whether she was due or overdue for a test and any cost to the patient. They were less likely to recommend a screening test if the reason for consultation was a serious health problem or if the woman was aged 70 years or older. Our results indicate a considerable commonality in women and GPs preferences for attributes of screening programs, but the alignment was not complete.

This ongoing research allows us to predict the uptake of new technologies and provide greater understanding of how variables such as price, test accuracy, and screening interval affect participation in the screening program. Multiple papers on this research have been published, one in *Health Economics* in 2006 and another forthcoming in *Social Science and Medicine* in 2009.

During 2007 a follow-up survey was conducted. This study was conducted after the introduction of the human papilloma virus vaccine in Australia in April 2008. Analysis of these data and comparison with the previous study is currently underway.

**Funding source**
NH&MRC Program Grant
Evaluation of asthma medications

Key objective
To investigate patient preferences for preventive asthma medications with varying clinical effectiveness, side-effects and convenience

Asthma is a significant health problem in Australia affecting 16% of children and 12% of adults. Poor patient compliance is a major challenge for physicians. Understanding what influences patients’ preferences for medication is important. Discrete choice experiments (DCE) were used to elicit stated preferences for products and programs on a range of topics including asthma management. This study was embedded within a multi-centre, cross-over, randomised controlled trial of three preventive asthma medications. Four DCE surveys were completed: one at entry to the trial, and one at the completion of each of the three treatment phases. This design allowed for testing of the stability of preferences over time, and the response of patients as their experience of medication and its outcome changed.

All the DCE surveys have been analysed. In 2007, results from the first DCE were published in *Respirology* and results from the second DCE were published in *Health Economics*. The findings show patients preferred medications which enabled them to participate in usual daily and sporting activities and gave them minimal symptoms experience. In terms of medication side-effects tremors, palpitations, nervousness and headache were considered worse than oral thrush, or occasional hoarseness of speech.

Results also show that the preferences were stable over time; in another word, patients were making similar trade-offs across the same attributes. Although most respondents chose to continue with their current drug in most choice situations, the choices were affected by their experiences of the different asthma trial drugs. For example: the respondents’ likelihood of choosing an alternative hypothetical drug increases when exposed to the least effective trial drug. A manuscript on these issues is expected to be finalized in 2009.

Funding source
Cooperative Research Centre for Asthma
NH&MRC Program Grant

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Funding source
Cooperative Research Centre for Asthma
NH&MRC Program Grant

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4. University Business School (Economics) and Centre for Health Services Research, University of Newcastle upon Tyne.
Incorporating the contribution of informal carers into the economic evaluation of community palliative care

Key objective
To assess the support preferences of informal carers providing care to people receiving palliative care at home

The provision of care at home for people with a terminal illness necessitates a substantial care input from family and friends (informal care). This study aims to investigate the carers’ preferences for support with providing this care and uses a discrete choice experiment to identify:

- the support services carers prefer, and
- whether carers prefer to receive support services or financial assistance?

The analysis of the carers’ preferences for different types of support services found that while all carers valued nursing services, preferences for other services varied over the palliative process. Domestic help, transport and coordination of treatment and information sharing were important at the earlier phase, while help with personal care and respite became the priority as the care recipient’s condition deteriorated. Analysis of the health related quality of life (HRQOL) of informal carers found that over one third reported worse health than one year ago and that the carer’s HRQOL was associated with the patient’s care needs. Analysis of the carers’ preferences regarding financial assistance is on-going. Preliminary results show that some carers are willing to make trade-offs between money and services. Moreover, the carers for the patient group with high care need place significantly more monetary value on the support services than the carers for the patient group with low care need.

Funding source
NH&MRC Program Grant

CHERE staff
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Collaborators
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The training and job decisions of nurses: an integrated approach using panel surveys and dynamic discrete choice experiments

Key objective
To develop models that describe the training and job decisions of nurses and to identify factors which reduce retention in nursing so that health system and health workplace reform can be designed from a robust evidence base

Nursing shortages are already common in Australia, Europe and North America, and affect not only the capacity to keep health facilities open, but also the quality of care provided. This project analyses the factors that influence the recruitment and retention of nurses in educational programs and the
workforce, and generally in their career choices. It investigates aspects of job satisfaction and stress, and how these change with on the job experience and lifestyle.

This longitudinal study will recruit nursing students and follow them for five years. Participants will be asked to complete annual online surveys containing two parts: a questionnaire about their actual experiences, decisions and level of satisfaction and a discrete choice experiment (DCE) to elicit their preferences for jobs with different characteristics. The analysis will model the nurses’ preferences, including how they trade-off various job characteristics and how these trade-offs change over time in response to their actual experiences. A pilot study was conducted in 2008 to test recruitment methods and survey instruments. The study is expected to run for five years.

Funding source
ARC Discovery Grant

CHERE staff
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The Trade-Off Between Equity and Efficiency: A Discrete Choice Experiment to Elicit Population Opinion

Key objective
To investigate the trade-offs people are willing to make between total health gain and targetting gain to particular social groups

Standard economic evaluation considers outcomes to be of equal value irrespective of who they accrue to. However, it is plausible that, under certain circumstances, society may decide that an outcome in one group (such as the more disadvantaged) may be relatively of greater importance. While people such as Alan Williams have highlighted the possibility of weighting outcomes in economic evaluation according to societal preferences using equity weights, this has not been undertaken on a large scale. Discrete choice experiments may be a useful way forward towards doing this. They allow investigation of complicated preferences, estimating both the effect of changing individual characteristics, but also the way that characteristics interact in the decision-making process.

Funding from the Faculty of Business has provided the opportunity to undertake a pilot investigating the issue. The survey was developed through use of small convenient samples, and then piloted using an online representative sample of the Australian population. The advantage of using an online panel is that a larger sample can be reached than through more labour-intensive methods, allowing more complicated designs. The experiment suggested individuals were willing to discriminate between people, particularly favouring non-smokers.
Funding source
Faculty of Business Research Grant

CHERE staff
Richard Norman, Stephen Goodall, Gisselle Gallego, Jane Hall

Multi-Attribute Utility/Discrete Choice Experiments (MAUDcE)

Key objective
To develop discrete choice experiment (DCE) methods to model and measure community trade-offs for health states

The primary aims of this research are:

- To develop discrete choice experiment (DCE) methods to model and measure community trade-offs for health states ('utility scores') for use in calculation of quality adjusted life years (QALYs) in economic evaluation; and
- To provide utility weights that can be used in economic evaluation in the Australian context, and that can be compared with utility weights from other countries

During 2007 the major focus of the research has been on development and implementation of the discrete choice experiment approach for application to valuation of health states.

The discrete choice experiment component of the project is now fully designed and has been piloted. A key component of the pilot project was to undertake a sub-study investigating the impact of alternative experimental designs. The pilot project was conducted on a sample of 300 people. Three alternative approaches to selection of health states for inclusion in the main study were tested, and the preferred approach was identified. This sub-study forms the basis of a separate methodological paper which is currently being prepared for submission to a peer-reviewed journal.

Significant progress was made towards the time tradeoff and standard gamble components of the project. For comparability in method of administration, these will be implemented via a computer-based questionnaire. The development of the computer based version of the TTO and SG has been a major activity during 2007. The project produced a working paper and three conference presentations.


Funding source
NH&MRC Project Grant

CHERE staff
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Collaborators
John Brazier¹, Julie Ratcliffe², Jordan J. Louviere³
Understanding the determinants of participation: An analysis of breast cancer screening in New South Wales

Key Objective
To determine what factors predict the use in self-reported utilisation of the breast screening services in NSW

Many jurisdictions have used public funding of health care to reduce or remove price at the point of delivery of services. Using the 2002 and 2004 NSW Health Survey, CHERE researchers estimated multinomial logit models on the probability of three screening behaviours; never had a mammogram, had last mammogram within the last two year and had last mammogram more than 2 years ago. The models examined the relative importance of socio-economic and geographic factors as well as the level of education and being born overseas in predicting screening behaviours for women in the target aged group 50 – 69.

The findings showed that women in lower socio-economic groups were more likely to have never screened or be overdue for a screening. Place of residence and being in the younger age cohort (women aged 50 to 55) plays a significant role in predicting the likelihood of a woman to have never screened. More educated women are more likely to be overdue for screening.

The research indicates that despite the existence of a ‘free’ and well established program, social disparities remain. This indicates the need for further recruitment and maintenance strategies that focus on women (i) residing in certain geographic locations, (ii) entering the target age group, (iii) on low incomes and (iv) born overseas.

Funding source
NH&MRC Project Grant

CHERE staff
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Collaborator
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Publications

Journal Articles


**Working Papers**


**Conference Presentations**


**Industry engagement**

CHERE is strongly engaged with health policy makers, health care agencies, and clinicians to facilitate the use of research findings in the development of health policy and practice. This involves a range of activities. There are two research programs developed and implemented in partnership with policy makers and practitioners. There are a series of directly commissioned projects. These may produce situations where research will directly influence policy but for the most part the way that research influences policy will be diffuse. One contribution of research to policy is through engaging with policy making, through participation in policy and practice committees. CHERE staff are members of several key Australian policy advisory committees, including the **Pharmaceutical Benefits Advisory Committee**, the **Medical Services Advisory Committee**, and the **NSW Health NSW Health Resource Distribution Formula Technical Committee**.
Participation in significant policy forums and discussions is another way in which research evidence and skills of analysis are brought to decision making and decision makers. CHERE researchers contribute to the two significant international health policy exchanges: the Commonwealth Fund International Program in Health Policy and Practice, including the Harkness Fellowship and the Packer Policy Fellowship; and the International Network on Health Policy and Reform supported by the Bertelsmann Foundation. Other contributions include providing media commentary, and presentations to particular target audiences.

Education and Capacity Building

CHERE’s teaching includes health economics and health services research and planning through short courses and workshops, courses within other programs of study, and specialised programs in health economics and health services research. Enquiries about workshops and short courses should be directed to Rosalie Viney: rosalie.viney@chere.uts.edu.au

Programs are designed to meet the needs of three main groups:

- **Economists**: we are committed to encouraging the best young economics graduates to work on health-related issues and to enhance their economics skills. Opportunities for postgraduate coursework, for study leading to the award of a PhD, and for post-doctoral programs are available.
- **Non-economists**: specific training in health economics for people engaged in health policy development and implementation, and for those working in areas such as health care planning, management and/or evaluation is provided through short courses and workshops. For further information contact: rosalie.viney@chere.uts.edu.au
- **Clinicians**: many health care professionals, particularly those involved in epidemiological and/or health services research, require an understanding of the principles of economics as applied to health and health care. Although some of this understanding may be developed through the general workshops offered, there are also opportunities to incorporate health economics as a subject in post-graduate training in public health, clinical epidemiology and health services research.
Academic staff

Jane Hall is the founding Director of CHERE and Professor of Health Economics in the Faculty of Business at UTS. She studied undergraduate economics at Macquarie University and holds a PhD in Health Economics from Sydney University. Jane is a Past President of the International Health Economics Association (iHEA) and Immediate Past President of the Health Services Research Association of Australia and New Zealand (HSRAANZ). In 2005 she was elected a Fellow of the Academy of Social Sciences in Australia. Jane was recently a member of the Medical Services Advisory Committee which advises the Minister for Health and Ageing on the funding of new medical technologies in Australia. Jane has represented Australia on many international health policy forums. She is actively involved in policy analysis and critique, and is a regular commentator on health funding and organisational issues in Australia.

Marion Haas is a Deputy Director of CHERE and Associate Professor of Health Services Research at UTS. Formerly a physiotherapist, she has a Master of Public Health from the University of Sydney and a Graduate Diploma of Applied Epidemiology. Marion completed the NSW Public Health Officer Training Program prior to joining CHERE in 1994. Her PhD, awarded in 2002, examined the non-health outcomes of health care which are important to, and valued by, patients.

Rosalie Viney is a Deputy Director at CHERE and Associate Professor of Health Economics at UTS. She holds an honorary Senior Lectureship in the Faculty of Medicine at the University of Sydney and is a Research Associate of the Centre for Applied Economics Research at the University of New South Wales. Rosalie has a PhD in economics from the University of Sydney. Her PhD research focused on the use of discrete choice experiments to value health outcomes and investigate the assumptions underlying Quality Adjusted Life Years (QALYs). She is a member of the Pharmaceutical Benefits Advisory Committee's Economics Sub-Committee.

Elizabeth Savage is an Associate Professor at CHERE, an Honorary Associate Professor, School of Public Health, University of Sydney and an invited research affiliate, Centre for Applied Economic Research, UNSW. She studied economics at the London School of Economics. She is a member of the Resource Distribution Formula Technical Committee for the NSW Department of Health, the Finance Committee for the International Health Economics Association and is an elected board member and convenor of the Health Economics subgroup of the ARC-funded Economic Design Network. She is on of the Editorial Board of the Economic Record and between 2005 and 2007 was President of the Economic Society of Australia, NSW Branch. In 2008 she was the invited to participate in the Long-term
Research staff

**Dr Stephen Goodall** is a Health Economist and the manager of the economic evaluation research group. This role involves managing a group of health economists, and liaising, negotiating contracts and completing reports with commissioning agencies. His main areas of interest are; economic evaluation of health technologies, public health, primary care, access to health care and equity. He also provides postgraduate lectures on topics aligned with his research (to date: “Introduction to Health Economics” and “Planning and Evaluating Health Services”).

Stephen completed a Master of Health Economics from the University of York. His thesis, an econometric analysis of the HILDA (a large panel) dataset, titled “Is hospital treatment in Australia equitable?” was undertaken at the University of Melbourne. He has a PhD in Vascular Medicine from the University of Leicester, which focussed on health services research.

Prior to joining CHERE Stephen worked for 7 years within clinical development, where he helped design and managed national and international randomised clinical trials. He was also responsible for training and supervising medical colleagues during their research sabbatical. He spent two years in the Pharmaceutical Industry. At the University of Bristol he managed a large multi-centred UK Government sponsored evaluation of access to primary care. His work has led to numerous peer reviewed journal articles and conference presentations, as well as several commissioned reports.

**Patsy Kenny** is a Senior Research Officer and joined CHERE in 1990. She worked as a registered nurse before completing the BA in Government and Political Economy at The University of Sydney. Patsy was awarded her Master of Public Health from The University of Sydney in 1998.

**Kees van Gool** is a health economist and has extensive experience in international, national and regional health policy research. Kees has contributed to and managed a variety of projects including work conducted for the Commonwealth Department of Health and Ageing, MBF and the Senate Community Affairs References Committee. Currently, he is a chief investigator on an NHMRC health services research program grant investigating the cost-effectiveness of
chemotherapy protocols as well as an NHMRC capacity building grant. Kees has a Bachelor of Economics and Arts (ANU) and a Master of Economics (USYD) and is currently undertaking a PhD at the University of Technology Sydney. He is a member of Cancer Australia’s National Research Advisory Group and a regular contributor to the Bertelsmann Foundation’s Health Policy Monitor series. Kees has previously worked at the Organisation for Economic Cooperation and Development (OECD), NSW Health and the Commonwealth Department of Health and Ageing. At the OECD he was responsible for the project on health-related technologies, which focused on evidence-based policy and practice in relation to integrating new technologies into health care systems.

Paula Cronin has a Bachelor of Science and a Master of Public Health. She conducted her Masters thesis at Curtin University in Perth, working with a local Division of General Practice looking at the management of cardiovascular disease and factors that would improve patient outcomes. In the late 1990s Paula moved to the USA where she worked as a Research Associate for the Health Science Centre at the University of Texas. Her research looked at health inequalities in Grade 4 (age 8 – 10 years) children, investigating how school performance, race and socioeconomic factors affected health status. More recently Paula was a research officer with the Australian Paediatric Surveillance Unit at the Children’s Hospital, Westmead. The Unit, which gathers reports from Australian paediatricians, is producing an Australian data base of rare childhood disorders. Paula joined CHERE in June 2006 and her research interests are in the application of discrete choice experiments to value multi-attribute health states for use in economic evaluation and the perception of obesity in NSW. In addition, Paula is working in the Economics Evaluation team on a number of commissioned projects.

Dr Gisselle Gallego obtained a Bachelor of Pharmacy from The Universidad Nacional de Colombia (Colombia) and in 2006 completed her PhD at the University of Sydney. For her PhD she explored resource allocation decisions for high cost medications at the institutional level.

Gisselle is a member of the economic evaluation team, which provides research for commissioning agencies and performs health technology appraisals for the Medical Services Advisory Committee in collaboration with the Australian College of Surgeons. She is also an associate and a regular contributor to the international health policy collaboration sponsored by the Bertelsmann Foundation (Germany). Her research interests are: undertaking and applying the results of economic evaluation to health services; the evaluation of health policy; and the use of qualitative research methods in health economics and health services research.

In addition, Gisselle is a member of the executive committee for the Health Services Research Association Australia & New Zealand (HSRAANZ) and a member of the Health Technology Assessment (HTA) & Good Research Practices for Reimbursement Decisions Task Force, and the International Society for Pharmacoeconomics and Outcomes Research (ISPOR).

Dr Ishrat Hossain is a Research Fellow at CHERE. He has an undergraduate degree in Economics from Southeastern Oklahoma State University and he completed his PhD in Agricultural Economics with a minor in Statistics from Oklahoma State University (USA) in 2003. Ishrat was a Graduate Research Assistant at Oklahoma State University where his work included econometric modelling and data analysis of wheat production, agricultural surveys on grain and livestock producers, and efficiency in land lease contracts. He was
also involved in tutoring Mathematical Economics, Statistics and Economics during his time at Oklahoma State. After joining CHERE at the end of 2003 as a Post Doctoral Research Fellow, he has been mainly involved in analysing longitudinal stated preference discrete choice data related to the projects: genetic screening, asthma and prostate cancer. His work is primarily focused on modelling consumer and patient preferences on different aspects of treatments. He is also part of a team investigating the interaction and policy implications of consumers’ preferences and providers’ recommendations in the context of cervical cancer screening decisions. Among other things, Ishrat coordinates training workshops for CHERE staff on the analysis of discrete choice data, lectures in Economics and Introductory Health Economics in the MBA course, and conducts tutorials for Business Statistics in the school of Marketing.

**Jody Church** is a Research Fellow (Health Economics) at CHERE. She has an Honours Bachelor degree in Management Economics in Industry and Finance from Guelph University and a Master's degree in Economics (with an emphasis in Health Economics) from McMaster University. Prior to joining CHERE she worked as a policy analyst in the health department at the Organization for Economic Co-operation and Development (OECD) in Paris, funded through Health Canada. She also gained experience in risk management while working as a business analyst for TELUS Corporation in Canada and in business development when she was nominated for an internship in México by AIESEC and the Canadian International Development Agency. She was also a research assistant for the economics department and a teaching assistant to undergraduate students while studying at McMaster University in Canada.

**Richard Norman** completed a Bachelor Degree in Philosophy and Economics at the University of York in 2003, and a Master of Health Economics in 2004. His thesis, written at the University of Bergen, investigated the measurement of productivity in Norwegian Hospitals. His work in CHERE focuses on economic evaluation, population modelling and discrete choice experiments, particularly in the areas of quality of life measurement and equity. Prior to joining CHERE in August 2006, Richard worked within the UK National Health Service. He was involved in cost-effectiveness analyses of a range of clinical management approaches for NHS treatment guidelines. Areas of research included postnatal care, obesity management, familial breast cancer treatment and the management of chronic fatigue syndrome.

**Stephanie Knox** has a BSc from Sydney University, a BA in psychology with first class honours from Macquarie University and a Master in Public Health from the University of New South Wales. Prior to joining CHERE Stephanie worked at the Family Medicine Research Centre at the University of Sydney, where she was responsible for the analysis and reporting of findings from a large study of general practice activity in Australia (the BEACH program). Before that Stephanie worked at the National Centre in HIV Social Research, managing and analysing data from the Sydney Men and Sexual Health (SMASH) cohort and a number of other quantitative studies. Stephanie’s research interests while at CHERE include validating the SF-36 health status instrument in the Australian context and the design and analysis of discrete choice experiments.
Administrative staff

Alex Glading holds a degree in Management from Brunel University, London and is CHERE’s Finance & Administration Co-ordinator. She is responsible for monitoring and managing the centre’s Finances and Administrative functions. She supervises the centre’s administrative staff and advises the management team primarily on financial issues, as well as working closely with individual researchers regarding their activities. Before joining CHERE, Alex worked at a UK Biological Research Institute, The John Innes Centre, as an Assistant Management Accountant in the Finance Department, where she was heavily involved with scientific research accounting.

Liz Chinchen holds a Bachelor of Applied Science (Information) from UTS and is responsible for the management of the Centre’s library which consists of a large number of books, reports, discussion papers and journal articles. Liz works closely with the researchers on a variety of projects, providing a current awareness service, undertaking literature searches and locating and providing relevant information as required. Liz also maintains CHERE’s web site and organizes CHERE’s internal seminars.

Liz Justic is the Centre’s Administrative Officer. Liz contributes to the day to day running of the Centre by providing administrative support to the management team, research, teaching and support staff. Her key responsibilities include assisting the Finance & Administrative Co-ordinator, managing the Kronos staff pay system, travel arrangements, and supporting the Executive Officer of the Health Services Research Association of Australia and New Zealand (HSRAANZ).

Gretchen Togle is Executive Assistant to Jane Hall, the Centre’s director. Gretchen’s role at CHERE revolves around the Director’s functions as well as that of the Management Team in general. She provides administrative support in areas of recruitment and liaises with the Human Resources Department. She likewise provides organisational and secretarial support to the Centre. She is the Program Assistant for the US-based Commonwealth Fund’s Harkness Fellowship Program, which is officially represented in Australia by Jane Hall.