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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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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. Other members are appointed for their individual expertise.

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

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

**Professor Stephen Taylor**
Associate Dean, Research and Development
UTS Business School

**Mr Rick Sondalini**
Director, Health Branch
**NSW Treasury**

**Dr Liz Develin**
Director (Acting), Centre for Epidemiology & Evidence
**NSW Ministry of Health**

**Professor Chris Baggoley**
Chief Medical Officer
Department of Health and Ageing

**Professor Lloyd Sansom, AO**
Emeritus Professor, Division of Health Sciences
University of South Australia

**Mr Mike Woods**
Deputy Chairman
Productivity Commission

**Professor Jane Hall**
Director Strategy, CHERE

**A/Professor Rosalie Viney**
Director, CHERE

**Professor Marion Haas**
Deputy Director, CHERE

**Stephen Goodall**
Deputy Director, CHERE
Director’s Report

While 2012 was a year that marked some fairly significant changes for CHERE in terms of staffing and structure within the Centre, it has also demonstrated the strength of the Centre that these changes have happened very smoothly. We have seen a growth in research output, research income and a continued strong presence in policy arenas, demonstrating the impact of our research. The major changes for the Centre have been in the management group. During 2011 the senior staff at CHERE began a process of succession planning, with the aim of ensuring that the record and reputation of CHERE for excellence in health economics and health services research and policy advice would be robust to changes in staff. With the support and agreement of the UTS Business School and the Deputy Vice Chancellor, Research, the founding Director of the Centre, Professor Jane Hall has moved into a new role as Director Strategy for the Centre, and Rosalie Viney was appointed as the Director of the Centre, commencing in June 2012. Marion Haas has continued as a Deputy Director, as well as her important role within the University as the Chair of the Human Research Ethics Committee and Stephen Goodall, who has been a member of the management group for a number of years, and leads the Economic Evaluation group has been appointed as a Deputy Director. We are delighted that Stephen’s growing role in the Centre and the University has been recognised with his promotion to Associate Professor at the end of 2012. Dr Kees Van Gool, who has also been a highly valued member of the CHERE Management Group, has taken two years leave without pay to pursue an exciting opportunity, both for his research career and for his family, in a position in the Economic Analysis Group at the OECD in Paris. We look forward to his return in early 2014. To ensure the continued quality of our research programs, Dr Rebecca Reeve has taken on the role of Program Manager for CHERE’s Policy Evaluation program of research, assisting Professor Marion Haas in leading this program, and Dr Richard Norman has recently been appointed as Program Manager for the Economic Evaluation Program, supporting Associate Professor Stephen Goodall, who leads the program.

The careful succession planning is just one of the many instances of Jane’s vision for the Centre over the past twenty years, and I am very grateful to her for her wisdom, advice and leadership over all of that time, but particularly since I have assumed the role of Director. She has been an exemplary leader of a Research Centre and has provided the foundations on which CHERE's reputation for research excellence has been built. Recognition of her huge contribution is evident in two prestigious awards. In late 2011 Jane was awarded the inaugural Professional Award by the Health Services Research Association of Australia and New Zealand, awarded to a health services researcher who has made an outstanding contribution in research, mentoring and the development of the field. In 2012 we were delighted that she was awarded the UTS Research Leader Award, again recognising her enormous contribution to the University and to the fields of health economics and health services research. Jane’s new role as Director of Strategy is absolutely critical for the Centre over the coming years. Not only do we continue to benefit from her contribution to the management of the Centre, but her new focus on strategy also creates the opportunity for CHERE to be positioned to capitalise on new developments in health services and health economics research nationally and internationally. This change in the management structure has also allowed Jane to focus on important new initiatives such as the Australia-US Health
Policy Program which CHERE has been contracted to administer and develop over the period from 2012-2016. The first health policy fellowships were awarded in late 2012, and the fellows will commence their programs during 2013. To maximise the benefits of this program, a collaboration with the Health Services Research Association of Australia and New Zealand has been established to leverage a capacity building program for Australian health services researchers to run in conjunction with the Australia-US Health Policy Program.

We have continued to develop and consolidate our PhD Program during 2012. Early in the year we were delighted to graduate our first PhD student, Dr Kees Van Gool. Kees completed his PhD in 2011, but his graduation was in February 2012. This marked an important milestone for the Centre, as the administrative arrangements for enrolment of students at CHERE had only been established in 2008. We now have a strong cohort of PhD students, with another student, Richard Norman completing his studies in 2012 and four other students at various stages of their studies with three new successful applications for students to commence in 2013. The PhD students undertake formal coursework as determined by their supervisors to complement their research and develop their skills, but also participate in a regular PhD student group at CHERE which provides opportunities to present and receive regular peer review of their research. Alison Pearce was the UTS Business School winner of the Ph3 (three minute thesis) competition, and all of our students have presented their work at national and international conferences in 2012. We are also delighted that Richard Norman was successful in being awarded a highly prestigious Chancellor’s Post-Doctoral Fellowship to continue his research on quality of life and valuation of health outcomes. This is a great achievement and testimony to the calibre of his research.

2012 has also seen the growth in our educational programs at different levels of the system. We introduced a new subject, Health Technology Assessment, that was first taught in Summer semester 2012, and has been included as a core subject in the Masters of Health Services Management. This new subject reflects the growing strength within the Centre in economic evaluation and health technology assessment and has been developed in recognition of a gap within the health economics education market in NSW. It also represents part of CHERE’s strategy to develop a suite of educational offerings in health economics that complement other health and economics education within the University and that can articulate with other courses. At the same time, the Centre has been very active in short course and workshop education through its Cancer Research Economics Support Team (CREST) Program, which is aimed at providing research and capacity building support to the thirteen Cancer Clinical Trials Groups across Australia.

There have been important developments in the health policy arena in Australia over the past twelve months, including the Strategic Review of Health and Medical Research led by Mr Simon McKeon AO. Jane Hall, Marion Haas and I attended a private meeting with the Review Panel in Sydney, and it is very pleasing to see that the Review’s draft and final reports have recognised the importance of health economics and health services research for the efficient and effective operation of the Australian health system, particularly by recommending the need for new funding schemes and efforts directed towards capacity building in health economics and health services research. The establishment in the past 18 months of the Independent Hospitals Pricing Authority (IHPA) and the National Health Performance Authority has highlighted the need for high quality health economics input to inform policy and funding decisions in the health system. Professor Jane Hall is a member of the Advisory Board of IHPA. In addition, the landscape of primary care is changing somewhat with the emergence of
Medicare Locals. For CHERE a core role is to provide expert advice and evidence based commentary on health policy initiatives. This is through direct involvement in the policy process (for example participation in committees and in policy forums, as well as through our commissioned research which has a strong policy focus), through engagement with policy makers, commentary in the media and academic analysis of health policy initiatives. A flagship example of this is CHERE’s new program of research as an APHCR I Centre of Excellence in the Economics and Financing of Primary Health Care. Jane Hall, Stephen Goodall and Marion Haas are Chief Investigators on this major five year collaborative research program that will encompass new research and active engagement with funders, providers and decision makers in primary care. This program will form a core part of the quantitative evaluation of health policy strand of CHERE’s research in the coming year.

The Economic Evaluation team at CHERE has continued to grow in expertise and in the range and scope of projects and research being undertaken. CHERE was once again successful in being awarded a contract to undertake evaluations of submissions to the Department of Health and Ageing for reimbursement of drugs under the Pharmaceutical Benefits Scheme and has continued its collaborative arrangement to undertake evaluations for the Medical Services Advisory Committee. As well the number of peer reviewed projects and grant applications related to evaluation of interventions that the group is collaborating on has grown. This reflects the standing of the Centre with clinical and health services researchers. The Cancer Research Economics Support Team has continued to be a key resource for Cancer Clinical Trials Groups, and has led to many exciting new collaborations for CHERE. We have also seen several publications in 2012 from our program of research on valuation of health outcomes, which is a key input to economic evaluation of health care interventions. A key objective of our research is to bring together different analytical tools and make more productive use of administrative and survey data to inform economic evaluation models, and we have a number of our PhD students exploring work in this area.

On behalf of all of the members of CHERE, I would like to thank the CHERE Advisory Board for its unfailing support of the Centre. This year we have been delighted to welcome three outstanding new members to the CHERE Advisory Board, Professor Lloyd Sansom, Dr Chris Bagoley and Mr Mike Woods. They joined the Advisory Board in October and have already demonstrated their active engagement with the Centre’s research, policy and capacity building activities. Professor Richard Madden has continued his role as Chair, and has, as ever, been a great advocate for health economics and health services research and also provided excellent guidance and advice to the Director and Deputy Directors of the Centre.

I would like to thank all of our staff for their outstanding work throughout the year, that has contributed to an excellent year of research, educational developments and engagement with the health policy process for the Centre, as well as to our standing within the University and the fields of health economics and health services research. Gretchen Togle has made a seamless transition from her role as Executive Assistant to the Director, to a broader role providing Executive Assistance to the Management Group and continued to provide excellent support. Liz Justic, who has been a wonderful, cheerful and efficient administrative officer for the centre staff over many years, retired at the end of 2012, and while we miss her greatly, we wish her well in her retirement. Liz Chinchen, our Research Manager, has gone from strength to strength in her role, taking on a much broader set of tasks and playing a key role in preparing research grant applications as well as supporting research activities. Vanessa Nolasco has provided outstanding support to the management group in managing the finances
and overall administration of the Centre with great proficiency. And our research staff, who I won’t mention individually, have each made extremely valuable contributions to the Centre, performing their roles with diligence and distinction, demonstrating willingness to get involved in all projects and activities and to undertake them to the highest level. I want to particularly thank all of the staff for the support and trust that they have shown in what has been a time of transition for the Centre. Finally, I want to particularly thank the CHERE management team, Jane Hall, Marion Haas and Stephen Goodall for their enormous support. They have ensured that the Centre continues to run smoothly and go from strength to strength.
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 UTS Business School. 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.

CHERE’s work is broadly based on the following themes:

- Economic evaluation
- Quantitative evaluation of health policy
Economic Evaluation

Economic evaluation is 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 within this research theme:

Advanced care planning

Key Objectives

To evaluate the effect of an advance care planning intervention on patients’ end of life wishes and on patients’ quality of death

This project aims to evaluate in a randomised controlled trial the effect of a formal advance care planning intervention (ACP) on the documentation of patient wishes, compliance with known end of life (EOL) wishes and the quality of death of patients with progressive incurable cancer on first line chemotherapy. The quality of life of patients subsequent to the intervention, the impact of death on surviving family and the costs of care will also be assessed. The intervention aims to promote discussion between patient and family and the health care team about prognosis and EOL issues and to promote documentation of the patient’s preferences for continuing and EOL care. The intervention will also provide patient and family who request information on life expectancy with typical, best case and worst case scenarios for survival time.

Funding source
NHMRC Project Grant

CHERE staff
Jane Hall, Richard Norman, Patsy Kenny

Collaborators
Martin Tattersall¹, William Silvester², Josephine Clayton¹, Karen Detering², Phyllis Butow¹, Belinda Kiely¹, Jonathan Cebo², Stephen Clarke¹, Melanie Bell¹

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². Austin Health (Victoria)

A population-based comprehensive lifestyle intervention to promote healthy weight and physical activity in people with cardiac disease: The PANACHE (Physical Activity, Nutrition And Cardiac HEalth) study
Key Objectives
To determine the effectiveness and cost-effectiveness of a telephone-delivered lifestyle intervention, focusing on healthy weight and physical activity, in people with cardiovascular disease in urban and rural settings

Cardiovascular disease (CVD) is the leading cause of death and the most costly disease group treated in Australia. Maintaining a healthy weight and undertaking regular physical activity are important for the primary and secondary prevention of CVD. However, many people with CVD are overweight and insufficiently active. In addition, in Australia only 20 to 30% of people requiring cardiac rehabilitation (CR) for CVD actually attend. To improve outcomes of and access to CR, the efficacy, effectiveness and cost-effectiveness of alternative approaches of CR need to be established.

PANACHE is a randomised controlled trial, including an economic evaluation, of patients who have been referred to a CR program. The intervention group receives an 8 week comprehensive lifestyle intervention which comprises of 4 behavioural counselling and goal setting sessions on weight, nutrition and physical activity via telephone; written materials and a pedometer via mail. The control group receives 2 behavioural counselling and goal setting sessions by telephone on physical activity only, plus the written materials and pedometer. Participants complete a pre-questionnaire and two post-questionnaires at 8 weeks and 8 months. The primary outcome is healthy weight (i.e. body mass index). Secondary outcomes include physical activity, sedentary time and reported relevant nutritional habits. Information about resource use and health related quality of life is collected pre and post trial as inputs into the economic evaluation.

CHERE’s role is to determine the relative cost-effectiveness of these approaches to the secondary prevention of CVD. The results of the trial will be used to build a decision analytic model of costs and benefits from within the trial and beyond the trial period. This will be done by extrapolating the intermediate clinical (healthy weight and physical activity levels) and quality of life (QALYs) endpoints to the final outcomes (death or cardiovascular events) using epidemiological data. Results will be presented as incremental cost-effectiveness and cost-utility ratios. This will allow comparison of the healthy weight intervention group and the control group in terms of, for example, cost per kilogram lost or cost per QALY gained. The trial protocol has been published and two further papers submitted. A paper describing the costs and outcomes of the trial is being prepared.

Funding Source
NSW Health Promotion Demonstration Research Grant 2008/2009

CHERE Staff
Marion Haas, Jody Church

Collaborators
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². University of New South Wales
³. University of Sydney
⁴. Heart Foundation
**An economic evaluation of community and residential aged care falls prevention strategies in NSW**

**Key Objective:**
To assess the costs and benefits of falls prevention strategies in the older people living in NSW in both the community and residential aged care

In New South Wales, no other single cause of injury (including road trauma), costs the health care system more than fall-related injury (NSW Department of Health, 2006). In addition to the direct economic costs, falls also reduce independence and confidence, cause increased anxiety / depression and reduce health related quality of life. The costs associated with falls are expected to escalate over the next 20 years unless effective prevention programs are implemented and these costs are predicted to rise to 2.7 times those in 2001 by 2051 (Hendrie, et al., 2004, Moller, 2003). This project aims to evaluate the cost-effectiveness of interventions that help reduce the risk of falling and furthermore, the associated morbidity and mortality that result from falling.

The first part of the analysis involved conducting a meta-analysis exploring interventions for preventing falls, in both the community and residential care. Only interventions with robust positive results were then analysed on a cost-effectiveness basis. The second part of the analysis involved designing a Markov decision-analytical model to simulate the impact of interventions on the elderly population in NSW. The benefits associated with the varied interventions were measured by falls avoided, injuries avoided and hospitalisations avoided. Cost-effectiveness was measured in terms of the incremental cost per life year gained and cost per QALY (quality adjusted life year). The model parameters were tested by sensitivity analysis.

The results show that in community-dwelling older people, the most cost-effective interventions are expedited cataract surgery, psychotropic medication withdrawal, Tai Chi, home hazard Assessment and group-based exercise. In the residential aged care setting, the most cost-effective interventions are medication review, hip protectors and vitamin D supplementation. The economic model was sensitive to a number of model inputs; in particular the key driver appeared to be the quality of life decrement associated with a fear of falling. The model was also sensitive to the effectiveness and cost of each intervention, however there is more certainty regarding those estimates.

This work has resulted in the publication of two peer-reviewed articles:

**Church, J., Goodall, S., Norman, R. & Haas, M.R.** 2011, 'An economic evaluation of community and residential aged care falls prevention strategies in NSW', *NSW Public Health Bulletin*, vol. 22, no. 3-4, pp. 60-68.


**Funding source**
CHEEP – NSW Health and Cancer Institute

**CHERE staff**
Jody Church, Richard Norman, Stephen Goodall, Marion Haas
Collaborators
NSW Department of Health

Can discrete choice experiments be used to predict uptake of new drugs?

**Key objective:**
To explore whether discrete choice experiments can be used to predict uptake of new drugs?

The Pharmaceutical Benefits Advisory Committee (PBAC) is responsible for evaluating clinical and economic evidence and making recommendations to the Australian Minister for Health and Ageing on whether a drug should be listed on the Pharmaceutical Benefits Scheme (PBS). Forecasts of the financial implications of a new PBS listing are required to ensure that resources are available to fund the new drug and the impact on health budgets will not be overly strenuous. Unfortunately the estimated uptake of new drugs is often based on weak evidence.

The aim of this study is to explore the use of discrete choice experiments (DCEs) to predict uptake of new drugs. The study will involve 1) a review of currently available DCEs that may be used to predict uptake of new drugs; 2) testing the external validity of the DCEs by comparing the results to mature prescribing data; and 3) design a model using DCE data that predicts uptake over time and then test the external validity of the model using the same process as before.

**Funding source**
Faculty of Business Research Grant

**CHERE staff**
Bonny Parkinson, Richard Norman, Rosalie Viney

Clinical trial of rehabilitation after ankle fracture (the EXACT Trial)

**Key objective**
The aim of the trial is to determine whether a rehabilitation program (involving supervised exercise, gait training, and advice) is more effective and cost-effective than the provision of general advice about exercise after cast immobilisation for ankle fracture

Ankle fracture is one of the most common injuries of the lower limb. Initial management consists of surgical or conservative orthopaedic treatment and a period of immobilisation. Subsequently, the presence of pain, stiffness, weakness and swelling impairs the performance of everyday activities and results in significant activity limitation and participation restriction.

Rehabilitation programs are often provided to address the health consequences of the fracture and the subsequent immobilisation. There have been no randomised trials of the effectiveness of a comprehensive rehabilitation program after removal of cast immobilisation for ankle fracture.

A randomised controlled trial is being conducted to determine the effects of a rehabilitation program on activity limitation and quality of life. The intervention will be applied to people with ankle fracture initially treated with a period of cast
immobilisation. The results of the trial will enable an evidence-based approach to the treatment of ankle fracture.

Data collection has commenced and will be completed in 2012. The trial protocol has been published.


**Funding source**
NHMRC project grant

**CHERE staff**
Marion Haas

**Collaborators**
Anne Moseley¹, Rob Herbert¹, Christine Lin¹

¹. The George Institute for International Health

**CREST: Cancer Research Economic Support Team**

**Key Objective**
CREST has been established at CHERE to develop resources to assist the Australian Cancer Collaborative Clinical Trials Groups in the incorporation of health and pharmaco-economic analyses into trial protocols, as well as to build capacity within the Trials Groups in health economics

A website has been set up to support CREST (www.chere.uts.edu.au/crest). The main focus of the work in 2012 has been on liaising and communicating with Groups to provide high quality and timely advice to individual Trials Groups and researchers and developing a range of resources for Groups, including Factsheets and a Protocol Audit Tool. Capacity building is a key component of the services available from CREST, and has been provided using both formal and informal learning opportunities and strategies. In 2012, these included two introductory workshops (in Brisbane and Melbourne) and an Introductory Modelling workshop (Sydney). CREST staff also attended a number of concept development workshops and spoke at management and scientific advisory committee meetings. Stephen Goodall attended the ACORD workshop to provide economic evaluation support to ACORD, the first time that health economic issues have been formally included in the program. Stephen was invited to participate as a Future Faculty member of ACORD; this role included providing a seminar on economic evaluations in cancer clinical trials, advice regarding quality of life and patient reported outcomes and protocol development support to workshop attendees.

**Funding source**
Cancer Australia

**CHERE staff**
Rosalie Viney, Marion Haas, Kees van Gool, Stephen Goodall, Jody Church, Paula Cronin, Jane Hall, Patsy Kenny, Stephanie Knox, Richard Norman, Bonny Parkinson, Alison Pearce
**Collaborators**
Sallie Pearson¹, Preeyaporn Srasuebkul¹

1. School of Pharmacy, University of Sydney

**Developing multi-attribute utility instrument weights for Australia (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

This project has involved the collection and analysis of valuation data from an Australian community based sample for two of the most widely used multi-attribute utility instruments used to estimate Quality Adjusted Life Years for economic evaluation. The two instruments are the EQ-5D and the SF-6D. Valuation data for both instruments has been collected using discrete choice experiments, and using time trade-off for the EQ-5D. A secondary aim of the project has been to use these data to explore a range of methodological issues in valuation of health states. To date the following papers have been published:


**Funding source**
NH&MRD Project Grant

**CHERE staff**
Rosalie Viney, Madeleine King, Richard Norman, Paula Cronin, Deborah Street

**Collaborators**
John Brazier¹, Julie Ratcliffe¹

1. University of Sheffield UK

**Evaluation of the NSW *Get Healthy Service***
Key Objective
The aim of this project is to provide a comprehensive formative, process, impact and cost evaluation of the NSW Get Healthy Information & Coaching Service

CHERE is part of a team engaged by NSW Health to evaluate the NSW Get Healthy Information & Coaching Service. CHERE’s role was to oversee the conduct of an economic appraisal of the planning, delivery and outcomes of the service. In 2012, Marion Haas supervised James Scandol in the economic appraisal of the Get Healthy Service. A report has been submitted to the NSW Ministry of Health and a paper prepared for submission to a journal.

Funding source
NSW Health

CHERE staff
Marion Haas

Collaborators
Philayrath Phongsavan¹, Adrian Bauman¹, Margaret Allman-Farinelli¹, Liz Eakin², Lesley King¹

¹. University of Sydney
². University of Queensland

Evaluation of NSW Health drug and alcohol consultation liaison services

Key Objectives
To investigate the prevalence of alcohol and other drug related hospital presentations and the effectiveness of enhanced Drug and Alcohol Consultation Liaison services

Drug and alcohol morbidity is common amongst patients presenting at emergency departments yet frequently unidentified. This increases the risk of inappropriate treatment and management of patients. Issues including post operative morbidity and behavioural incidents as well as higher rates of re-presentation, re-admission and re-injury are associated with drug and alcohol related presentations. The aim of this evaluation is to assess the effectiveness and cost-effectiveness of Drug and Alcohol Consultation Liaison (CL) services in NSW. Consultation Liaison (CL) services are a sub-specialty of psychiatry, to provide direct access to specialist services for support, treatment advice and assistance with the management of the condition. In NSW a number of health services have been funded to provide enhanced Drug and Alcohol CL services to reduce the health burden and associated costs that drug and alcohol problems place on the health system.

The evaluation will use data from a survey of a sample of patients presenting to eight NSW hospitals to determine the proportion of presentations where drug and alcohol use was a contributing factor and the proportion of patients with a recent substance use problem. A follow-up survey will be conducted at three months with those patients identified through the survey as having a recent substance use problem to assess the use of CL services, uptake of referral to drug and alcohol treatment, and the extent to which CL services impact on client outcomes (e.g. substance use patterns). This study includes seeking consent to access the patient’s medical records, including Medicare data and NSW inpatient, emergency department and Area Health Service CL data. The
results of these surveys will be combined with information about the resources and funding of CL services, as well as any resource savings from reduced admissions to assess the costs and outcomes of CL services. The focus will be on identifying whether there are factors that contribute to more cost-effective provision (such as hours of operation), or any characteristics of CL service provision that facilitate improved patient management and clinical pathways. The evaluation will also make use of aggregate data on drug and alcohol presentations in NSW public hospitals to identify any underlying trends in patterns of service.

The evaluation commenced on 1 November 2010. Site visits have been undertaken at participating hospitals and patient surveys have been completed. The evaluation team have applied for and obtained ethics approval to access Medicare and Pharmaceutical Benefits data from Medicare Australia, and NSW Inpatient and Emergency Department data and CL data for consenting participants. Baseline data analysis is complete and 4 progress reports have been submitted to date.

Funding source
NSW Department of Health

CHERE staff
Rosalie Viney, Rebecca Reeve, Stephanie Knox, Sheena Arora, Patsy Kenny, Kees van Gool, Stephen Goodall

Collaborators
Catherine Montigny (CI)¹, Lucy Burns², Elizabeth Conroy², Kerryn Butler², Tim Slade², Elizabeth Savage³, Meliyanni Johar³

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². National Drug and Alcohol Research Centre (NDARC), UNSW
³. Department of Economics, UTS

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 were completed in 2008 and 390 controls (80%) of the original cohort completed their 5th year interview. A paper describing the quality of life study was published in the British Medical Journal in 2009. The findings show that the various treatments for localised prostate cancer have a persistent effects on long term quality of life. Men with prostate cancer and the clinicians who treat them would be aware of the effects of treatment on quality of life and weight them up against the patient's age and the risk of progression of prostate cancer if untreated, to make informed decisions about treatment.

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.

A subsample of the cohort completed a discrete choice experiment of preferences for treatment outcomes. A final version of a manuscript will be shortly submitted to the BMJ.

Linked data have been obtained from Medicare and PBS for men who consented to these data being released. A costing study is currently underway.

A submission has been made to the NHMRC to obtain funding to complete 10 year quality of life measures in all men remaining in the cohort.

**Funding source**
NH&MRC Project Grant

**CHERE staff**
Paula Cronin, Bonny Parkinson, Jody Church

**Collaborators**
Madeleine King¹, David Smith², Rajah Supramaniam², Jeanette Ward³, Martin Berry⁴, Bruce Armstrong⁵

1. University of Sydney
2. The Cancer Council New South Wales, Sydney
3. Institute of Population Health, Ottawa, Canada
4. Cancer Therapy Centre, Liverpool Health Service, Sydney
5. Sydney Cancer Centre and School of Public Health, USYD

**Investigating best practice primary care for older Australians with diabetes using record linkage**

**Key objective**
The primary aims of this research project are to:
• investigate processes of primary care provision for older people with diabetes;
• identify the predictors (patient, system, and environment) of provision of primary care (best practice or worse); and
• explore the relationship between primary care (best practice or worse) and measures of health outcomes including quality of life and hospitalisation

In Australia most people access health care through community based primary care settings such as general practice (GP), pharmacy, and allied health. In these settings care may be fragmented due to the range of health professionals involved, mix of private and public funding and practice, number of stakeholders with funding responsibility, and mix of fee-for-service and salaried staff. Because there is no comprehensive source of data on service use in this setting, primary care is underrepresented in health statistics, and there has been limited exploration of processes of care for people with chronic health care needs.

Diabetes is a significant chronic disease that is largely managed in the primary care setting. Research has identified the elements of best practice diabetes management, helped clinicians reach consensus on processes of care for people with diabetes and led to the publication of management guidelines suitable for implementation in primary care settings.

Current initiatives to increase the availability and use of administrative data collections provide important opportunities to explore processes of primary care using record linkage. Record linkage will be used to investigate the relationships between processes of care, costs, and health outcomes among Australians aged 45 years or more to inform policy development relation to primary health care and integration of multidisciplinary care.

Data collection using a secondary survey of participants in the 45 and Up project is complete. Data linkage is underway. Preliminary analysis is underway and a number of papers are in draft.

Funding source
NHMRC project grant

CHERE staff
Marion Haas

Collaborators
Elizabeth Comino¹, Mark Harris¹, Louisa Jorm², ⁵, Bin Jalaludin³, Jeff Flack⁴, Kris Rogers⁵

1. Centre for Primary Health Care and Equity
2. Faculty of Medicine, UWS
3. Centre for Research Evidence, Management and Surveillance, SSWAHS
4. Sydney South West Area Health Service
5. Sax Institute

Mandatory public health interventions, loss of consumer choice and economic evaluation: Does the (dollar) value for those in favour, compensate for the loss in consumer choice

Key objective:
To conduct a pilot study to quantify the loss of consumer choice, in dollars. By doing so we aim to estimate the ‘cost’ associated with reduced consumer choice when mandatory health programmes (MHP), in particular preventative interventions, replace voluntary ones
Governments are increasing their focus on mandatory public health programmes following positive economic evaluations of their impact. This project involved reviewing the economic theory behind the loss of consumer choice resulting from MHPs. A literature review was then conducted to identify economic evaluations of MHP, whether they discuss the impact on consumer choice and any methodological limitations. It was found that the impact of MHP on the loss of consumer choice has largely been ignored in economic evaluations and there were significant methodological limitations whenever it was included.

Whether the loss of consumer choice from implementing MHPs can be measured using discrete choice experiments (DCEs) was then explored using the following case studies: fortification of bread making flour, mandatory influenza vaccination, and banning trans-fats. Overall it was found that DCEs can be used to measure the loss of consumer choice and the loss of consumer choice must be estimated for each MHP being evaluated.

Future research into the importance of the loss of consumer choice to the final implementation decision is planned.

A paper has been accepted for publication in the Journal of Nutrition:


Funding source
Faculty of Business Research Grant

CHERE staff
Bonny Parkinson, Stephen Goodall, Richard Norman, Viktoria Rabovskaja

Medical Services Advisory Committee (MSAC) Applications

Key Objective
External evaluators for MSAC, in collaboration with ASERNIP-S (Australian Safety and Efficacy Register of New Interventional Procedures – Surgical)

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 since 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)
- Application 1129 Second Generation Contrast Agents for Use in Patients with Suboptimal Echocardiograms (complete)
- Application 1137 Middle ear implant for sensorineural, conductive and mixed hearing losses (under assessment)
- Application 1140 Matrix-induced Autologous Chondrocyte Implantation (MACI) and Autologous Chondrocyte Implantation (ACI) (current)
- Application 1143 Radiofrequency Ablation in Barrett’s Oesophagus with Dysplasia (current)
- Application 1090.1 Review of MSAC Assessment 1090 - Artificial Intervertebral Disc Replacement (current)
- Application 1054.1 Review of MSAC Assessment 1054 - Hyperbaric Oxygen Treatment (HBOT) of two indications, late soft tissue radiation injury and radio necrosis and hypoxic problem wounds in non-diabetic patients (current)

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

**CHERE staff**
Stephen Goodall, Richard Norman, Paula Cronin, Braedon Donald, Jody Church, Bonny Parkinson, Marion Haas

**Modelling the costs and benefits of interventions to prevent and reduce obesity**

**Key Objective:**
To complete the first stage of developing a decision analytic model of interventions designed to reduce the poor health impacts of obesity

There is increasing concern, within Australia as in other countries, that the rising incidence of overweight and obesity will increase the future prevalence of chronic disease, increase premature mortality, and add to the costs of health service delivery. Governments are being lobbied to undertake population level interventions focused on overweight and obesity. However, there is as yet little evidence about the effectiveness and cost-effectiveness of possible interventions, particularly in terms of lifelong health outcomes. Controlled trial evidence of long term outcomes is difficult to accumulate for several reasons: it is not simple to control for all factors which influence an individual’s lifestyle; and long term can mean most of an individual’s lifespan. Consequently, estimating how a lifestyle intervention impacts on long term health outcomes and health care costs requires the development of an appropriate decision analytic model.
A decision analytic model will need to capture causality from the intervention to final health outcomes using the best available clinical or epidemiologic evidence. Modelling lifestyle interventions are complex as the model needs to accurately reflect the following, i) how a change in exercise leads to a change in BMI; ii) which leads to a change in risk factors, such as blood pressure levels and cholesterol; iii) leading to a change in habits that may or may not be sustained; iv) which lead to a long term changes in risk factor profile; v) which result in lower incidence of symptomatic disease; vi) and may result in less severe disease events; vii) and eventually will reduce premature mortality. The effect may vary by population sub-groups such as age and/or sex; and this must be incorporated in the model. Further, lifestyle factors have an impact on many chronic diseases and any one disease or condition is often associated with multiple risk factors. However, models often only focus on one risk factor or one disease, see for example (Liew, et al., 2006). It is obvious from this that the required model will be complex.

The overall objectives are:

- Gather economic model parameter data
- Develop economic model (“gold standard”)
- Build collaborations with other teams
- Further CHERE’s and UTS’s knowledge/reputation

**Funding source**

UTS Early Career Researcher Grant

**CHERE staff**

Jody Church, Richard Norman, Stephen Goodall

**Probiotic Prophylaxis of Spinal Cord Injury Urinary Tract-Infection TherapeUtic-Trial (ProSCIUTTU)**

**Key objective**

*To determine the effectiveness and cost-effectiveness of prophylaxis probiotics to reduce urinary tract infections in patients with spinal cord injury*

People with spinal cord injury (SCI) are commonly colonized with multiresistant organism (MRO) as a result of recurrent urinary, chest and/or wound infections. MRO occur due to over-exposure to antibiotics during treatment of infections. Presence of MRO in SCI patients makes conventional treatment difficult if further infections develop as treatment usually requires prolonged hospitalization and use of more expensive drugs. MRO spreads easily to other patients within the hospital, requiring extra infection control precautions. Furthermore, transmission of MRO to patients already immunocompromised increases mortality and morbidity.

Probiotic agents are bacterial cultures similar to that found in yogurts. Certain strains of probiotic bacteria have been shown to be possibly effective in treating MRO in other patient populations. We do not know from these studies whether this potential treatment will work for people with SCI. ProSCIUTTU is a randomized controlled trial in 372 people with SCI which commences in mid 2010 and will run for a period of 3 years. The trial hypothesis is that Probiotics may prevent urinary tract infections in people with SCI. Unlike antibiotics, Probiotics do not cause development of further antibiotic resistance.
SMILE: a randomized controlled trial of humour therapy in residential care: the Sydney Multisite Intervention of LaughterBosses and ElderClowns

Key Objective
The aim of the SMILE trial is to examine the effectiveness and cost-effectiveness of humour therapy on mood, social engagement, and agitation in residents of aged care facilities.

In a multi-site blinded cluster-randomised controlled design, 406 residents in 36 Residential Aged Care Facilities (RACF), stratified by size and level of care, were allocated to a humour therapy program or a standard care control. The intervention comprised training RACF staff in strategies for incorporating humour into daily routines, plus a professional performer engaging residents in humorous activities (e.g. music, mime) in a minimum of nine 2-hour humour therapy sessions over a 12 week period.

CHERE’s role will be to assess the costs and cost-effectiveness of the intervention relative to usual care. Data collection is complete and data cleaning and preliminary analysis is underway. A protocol paper has been prepared.

Using clinical and economic evidence to inform local decision making in cancer care (EM-CAP)
This NHMRC Health Services Research Program grant is a collaboration between CHERE and researchers at UNSW and consists of a number of projects, three of which involve CHERE.
Key Objective
The outcome of this program is to produce and disseminate evidence about the cost effective use of cancer medicines in clinical practice. Freely available economic models in a readily accessible form integrated into local circumstances will allow decision makers, clinicians and patients to better determine suitable cancer treatments. Inherent in our implementation plan is the development of skilled academics, clinicians and policy makers who can continue our activities in the future.

Developing an Economic Model for Treatment Side-effects
One of the key objectives for the EM-CaP program is to develop a model to estimate the resource use associated with managing chemotherapy side effects which is independent of the medicine under consideration. Alison Pearce, a PhD student enrolled at CHERE has undertaken a literature review to identify the previous work done in this area, including an analysis of methodological approaches. This led to eleven recommendations for best practice methodology to guide modelling of the resource use associated with managing chemotherapy side effects. The data requirements for the model have been identified. This includes the incidence of adverse events in clinical trials, adverse event management from clinical practice guidelines, and resource costs from administrative data. A number of additional projects have arisen from the work in this area to date. These projects will also form part of Alison’s PhD Program. These are:

- Exploring the management of adverse events outside clinical trials, including incidence, management strategies, compliance with management recommendations and resources use.
- Examination of the strengths and weaknesses of clinical trial data as an input to economic models.

Whilst work on the constructing the economic model continues, we have also conducted a case study of how one NSW-based private health insurance company has approached the problem of access to high cost cancer medicines. A report has been submitted to the PHI company and a journal article published.

Elements of Care Study
This study, using primary data collected in hospitals in metropolitan and rural areas of NSW aims to identify the individual care elements involved in administering specific chemotherapy treatment protocols and estimate the costs associated with each care element and determine where these costs are borne. In 2009, 370 patients receiving chemotherapy were recruited in 11 hospital sites across NSW. The study completed recruitment of patients in 2010. In addition, we have successfully negotiated access to secondary data sources including: MBS, PBS, Admitted Patients Data Collection, Emergency Department Information System and NSW Central Cancer Registry on the patient cohort. Analysis of these data is ongoing and a descriptive paper is in draft.

Developing General Economic Models of Administration of Chemotherapy Medicines
This project was completed in 2009 by a student from the University of Utrecht, Johan de Raad, who was based at CHERE for a period of six months. Johan’s research involved both review of chemotherapy protocols and field work at hospitals to estimate resource associated with chemotherapy administration. The major findings were that costs estimated in the field (ie in chemotherapy units) are higher than those typically reported in Australian costing data and that there are significant differences in costs.
between different types of protocols. This work features in a paper published in the
*Clinical Journal of Oncology Nursing*.

**Developing General Economic Models of Adverse Events associated with Chemotherapy Medicines**
This work is the subject of a PhD being undertaken at CHERE by Alison Pearce.

**Publications**

**Funding source**
NHMRC Health Services Research Program Grant

**CHERE staff**
*Marion Haas, Kees Van Gool, Jane Hall, Alison Pearce* (PhD student), *Rosalie Viney*

**Collaborators**
Robyn Ward¹, Margaret Faedo¹, Sallie-Anne Pearson², Carole Harris¹ (PhD student)

¹. Lowy Cancer Institute, UNSW, NSW Cancer Institute, SESI Area Health Service
². School of Pharmacy, University of Sydney
Quantitative evaluation of health policy

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 use of econometric methods to evaluate policy and thus to encourage more efficiency, better safety, higher quality and better results for consumers.

Current projects within this research theme:

Achievements in, and barriers to health reform

Key objective

The purpose is to monitor the implementation of Australia’s current health reforms through surveys of clinicians, managers and opinion leaders to identify achievements and perceived barriers to implementation

The Commonwealth government, with agreement from the States and Territories, has been introducing a package of reforms to Australia’s health system over the past two years. The reforms comprise a number of key elements including changes to the way public hospitals are funded and measures to strengthen accountability; they are intended to improve health outcomes and ensure the sustainability of the health system. An understanding of what is happening throughout the system, in state health authorities, in regional agencies, at the local level, and at the clinical interface can provide a rapid review of how implementation is progressing, and can identify issues and barriers that need addressing as further reform is effected.

The first phase of this research involved an online survey of members of the Australian Healthcare and Hospitals Association which includes managers and other decision makers from within commonwealth and state bureaucracies, local health authorities, hospitals, community health services, and other relevant agencies. The survey collected data on respondents’ attitudes and views about the reforms, including the need for reform, the expected impact of the reform strategies and potential barriers to their implementation. It was conducted at the end of 2011 and represents respondents’ views at the early stages of the reform process. The results of this survey have been reported in a CHERE Working Paper. A second survey to ascertain the views of the members of the Australian Health Economics Society commenced in September 2012.

Funding source
UTS Partnership Grant

CHERE staff
Jane Hall, Kees van Gool, Patsy Kenny

Collaborators
Prue Power

1. Australian Healthcare and Hospitals Association
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 the COSA 39th Annual Scientific Meeting and IPOS 14th World Congress of Psycho-Oncology in November 2012. The following paper has been published in Health Policy:

Goodall, S., King, M.T., Ewing, J.E., Smith, N.F. & Kenny, P.M. 2012, 'Preferences for support services among adolescents and young adults with cancer or a blood disorder: A discrete choice experiment', Health Policy, vol. 107, no. 2-3, pp. 304-311

Funding source
CHERE

CHERE staff
Stephen Goodall

Collaborators
Madeleine King
Jane Ewing

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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.

The data collection has been completed for this study:

728 women participated in 2 choice experiments.

162 GPs completed 2 choice experiments.

Results have been presented at the Australasian Health Economics Society conference in Hobart in 2009, the Health Services Research conference in Brisbane in 2009 and the iHEA 8th World Congress, Toronto, Canada in 2011

Published papers:


Several other manuscripts are currently under review.

The scope of the project was extended in 2010 with support from a UTS Faculty of Business Research Grant. The Faculty funding resulted in the development of code for estimating the Generalized Multinomial Logit model in Stata© software in collaboration with Dr Arne Hole from Sheffield University, UK.

The Stata gml code is publicly available at: http://www.shef.ac.uk/economics/people/hole/stata.html

Funding source

ARC Linkage Grant

Linkage partners: Family Planning NSW, Janssen-Cilag Pty Ltd, Schering Pty Ltd and Organon Pty Ltd.

CHERE staff

Rosalie Viney, Marion Haas, Stephanie Knox
Combining Health Economics and Econometrics for Technology Assessment in Health: the CHEETAH project

Key objective
The key objective of this grant is to build capacity in health technology assessment in Australia, particularly in the application of econometrics methods to modelling of costs and outcomes of health care interventions and health care utilisation, to inform resource allocation and reimbursement decisions.

The specific focus of the program of research is towards:
1. Incorporating the most relevant patient outcomes in HTA, allowing for heterogeneity in preferences;
2. Characterising and evaluating the uncertainty inherent in HTA due to inadequate evidence; and
3. Monitoring diffusion, effectiveness and cost effectiveness of technology in real-world settings and providing information that will allow for appropriate disinvestment in ineffective technologies.

During 2012 the focus of the program of research has been on designing research projects and analysing administrative, survey and panel data from a variety of sources. The PhD training program within CHERE continues successfully; CHEETAH partially supported 3 students during 2012. Richard Norman has been successful in completing his PhD and Bonny Parkinson (commenced 2011) and Jody Church (commenced 2012) continue their research. Two members of staff partially supported by CHEETAH (Richard Norman and Julia Langton) submitted applications for an NHMRC Early Career Fellowship. Nine projects are underway or completed. Two papers have been published, four are in preparation or submitted for review and four conference papers have been presented.

Funding Source
NHMRC Capacity Building Grant in Health Services Research

Collaborators
Denzil Fiebig¹, Edith Weisberg², Deborah Bateson², Deborah Street³, Leonie Burgess³.

1. School of Economics, UNSW
2. Family Planning NSW
3. Faculty of Science, UTS

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Cystic fibrosis: A new framework for cost-of-illness studies

Key Objectives
To develop a new framework for future cost-of-illness studies that provides a better understanding of the costs distribution via identifying costs’ determinants.
and predictors as well as revealing underlying heterogeneity

This project will conduct an economic analysis of the healthcare cost associated with treating patients with cystic fibrosis in Australia. It will explore the use of econometric modeling methods using individual level data to estimate healthcare costs for different ages, disease severities and other variables. It will also focus on using markers of disease progression to explain the impact of healthcare costs. Such markers provide surrogate outcomes that can be used to extrapolate effectiveness data from short term trial results to longer term health system impact. As a result, this research will develop more rigorous standards around undertaking costing and cost-of-illness studies that will provide a platform for future economic evaluations. More specifically, the objectives of this project are to: 1) identify determinants of total healthcare costs; 2) explore potential predictors in explaining healthcare costs; 3) reveal heterogeneity in the cost distribution and estimate the lifetime costs; and 4) examine the costs and consequences of newborn screening for cystic fibrosis, a program implemented throughout Australia.

A paper on cost determinants has been written and submitted to PharmacoEconomics. Summary of the results were presented at the iHEA 8th World Congress (Toronto, 2011) and the Australian Conference for Health Economists (Melbourne, 2011).

Funding source
UTS Early Career Research Grant

CHERE staff
Yuanyuan Gu, Kees van Gool

Estimating utility of health: Some methodological issues

Key Objectives

To develop and apply novel methods for modelling quality of life valuation using advanced econometric techniques. The strength of these techniques lies in their flexibility, in that the data informs the structure of findings, rather than being pre-defined by the analyst.

Cost-effectiveness analysis of alternative healthcare interventions relies on having a measure of effectiveness, and many regard the quality adjusted life year (QALY) to be the current gold standard. In order to compute QALYs, we require a suitable system for describing a person’s health state, and a utility measure to value the quality of life associated with each possible state. There are a number of different health state descriptive systems, and the most commonly used one is the EQ-5D, under which health is decomposed into five dimensions and each dimension has three levels, resulting in a total of 243 (3^5) health states. We take a sample from these states and ask selected respondents from a target population to value these health states (thus providing something called utility scores). A regression model is then estimated and used to predict the utilities of all other health states.

In the last twenty years a large number of studies have been carried out to identify the best methodology on how to collect the EQ-5D valuation data. In contrast, there are very few studies on how to use these data to estimate utilities. In general the EQ-5D utility score is skewed, censored, hierarchical and noncontinuous. However, these features have been largely ignored by the existing economic valuation studies and very often a normal distribution assumption is adopted for the ease of estimation. This
oversimplification is very likely to cause biased utility estimates and thus inaccurate cost-effectiveness analysis. Consequently, policy makers would make their decisions based on a fragile ground.

This project intends to fill in the gap and aims to identify and develop appropriate statistical tools that can accommodate the special features associated with the EQ-5D data. Moreover, we will use these better methods to analyse the Australian EQ-5D data collected through an NHMRC project conducted by the Centre for Health Economics Research and Evaluation (CHERE), and provide more accurate utility estimates to Australian health economists and policy makers.

The final report has been completed and submitted to the Faculty of Business. Summary of major results were presented at the 34th Australian Conference of Health Economists (Darwin, September 2012). A paper is drafted and will be sent to a highly ranked journal.

**Funding source**
UTS Faculty of Business Grant

**CHERE staff**
Yuanyuan Gu, Richard Norman, Rosalie Viney

**Research Excellence Finance in Economics Primary Health Care (REFinE-PHC)**

**Key objective**
The key objective of this grant is to investigate how primary health care policies affect the use and costs of health care, the quality of care, patients’ health outcomes and whether patients’ experiences are improved

The four themes that the research undertaken by the CRE are:

1. Overall financing and organization of PHC in Australia, including trends
2. Consumers’ perspectives of quality of care in PHC
3. Evaluating policy initiatives to understand the influence of incentives on consumers’ and providers’ behaviour
4. Investigating the interface between PHC and hospital care- specifically the concept of ambulatory sensitive admissions

Each theme will be underpinned with a literature review which will aim to elucidate what is known about the topic, the strength of evidence available, its applicability to the Australian context and the gaps in research evidence. The identified gaps will be assessed for their “researchability” in terms of research questions, available data and policy relevance.

The main focus in 2012 (the first six months of the grant) is to establish the CRE; both in terms of research activity and its other goals of capacity building and knowledge transfer. This includes staff and student recruitment, establishing the Advisory Board and developing the mechanisms for communication, principally the website and the annual scientific meeting. To this end we have employed two part time research officers to commence the literature reviews and have commenced recruitment for additional staff. We have established the Advisory Board. The projects commenced are:
1. Recent history of primary care policies in Australia. There have been many changes in Australian primary care, in terms of both policies and incentives. As a research team, we need an easy reference in sufficient detail to support our research planning. This project will catalogue the introduction of different incentives, the policy context within which they were introduced and their implementation, over the last twenty years. This will provide background information for refining new, policy-relevant research questions. It will be updated annually over the life of the CRE. As part of this, we will also analyse the trends in MBS primary care items over last twenty years, by State and Territory.

2. Relationship between access to and quality of primary care and use of emergency departments. The Commonwealth Fund Surveys provide repeated cross-sectional data on emergency departments use, patient characteristics and a range of indicators of quality of primary care services, including accessibility, availability of after hours care, financial barriers and more. We will identify trends over time, and relate these to developments in policy to support access to primary care. Further, the international aspect of the Surveys allows us to undertake cross-country comparisons with nations with both similar and radically different approaches to primary care.

**Funding Source**
Australian Primary Health Care Research Institute

**CHERE staff**
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**Collaborators**
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1. University of Queensland
2. Australian National University
3. University of NSW
4. University of Sydney
5. University of Washington, USA

**The impact of care-giving on the health of informal carers: Change over time and association with stressors and resources**

**Key Objective**
To investigate the impact of care-giving on the mental and physical health of informal carers

Informal carers represent approximately 13% of the Australian population and this is likely to increase as the population ages. Health is an important factor in the capacity of informal carers to continue providing care and research has shown that informal carers (or some groups of informal carers) have worse mental and physical health than similar non-carers. However, it is possible that some of these differences relate to the health of carers before they become carers.

This study uses data from the Household Income and Labour Dynamics in Australia (HILDA) survey to examine the mental and physical health of informal carers, measured as health related quality of life (HRQOL) using the SF-36 Health Survey. HRQOL was investigated in terms of differences between carers and non-carers, and
changes from prior to the commencement of care-giving, in order to identify if there are changes that are likely to be the consequence of care-giving. We also investigated the extent to which changes varied according to the duration of care-giving, the amount of care provided, socio-economic status, perceived social support and the competing demands of family and work.

The study found that the physical and mental health impacts differed among carers; many carers reported positive change, while others reported a substantial negative change. The combination of high levels of caregiving with workforce participation increased the risk of negative physical and mental health effects. The results were presented at the HSRAANZ 2011 conference and a journal paper was submitted this year (currently under review).

**Funding source**
NH&MRC Project Grant

**CHERE staff**
Patsy Kenny, Jane Hall

**Collaborators**
Madeleine King

1. School of Psychology, University of Sydney

**Extended Medicare Safety Net: Review of Capping Arrangements**

**Key objective:**
To measure the impact of capping Medicare Safety Net benefits on provider fees and out-of-pocket costs

The Medicare Safety Net was introduced in 2004 to provide additional financial assistance to households who incurred high out of pocket costs through their Medicare related service use. Our 2009 Review of the Safety Net showed that despite its small overall expenditure in relation to the overall Medicare program, the Safety Net represents a fundamental change in Australia’s public insurance arrangements. The Review found strong evidence that provider charges increased significantly due to the Safety Net, particularly amongst obstetricians and providers of assisted reproductive services.

Following our 2009 review of the Medicare Safety Net, the Australian Government reformed the program by placing caps on the amount of Medicare Safety Net benefits payable for a small number of Medicare items. Our 2011 Review of Safety Net Caps examined the impact of the policy change on provider fees, OOP costs and service utilisation. We found evidence to suggest that there have been some falls in provider fees in 2010, and these are most evident amongst capped items. However, the decline in Medicare benefits has been greater which has meant that OOP costs have increased for most capped services. The 2011 review showed that there are numerous opportunities for providers to shift billing practices in order to avoid caps, thereby creating incentives that may not be aligned with providing the most efficient care. The 2011 Review was tabled in both Houses of Parliament and is available [here](#).
Funding source  
Department of Health and Ageing

CHERE staff  
Kees Van Gool, Elizabeth Savage, Meliyanni Johar, Stephanie Knox, Rosalie Viney

Collaborators  
Glenn Jones

1. Macquarie University

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.

We have recruited a cohort of over 700 undergraduate nursing students during their education and are following their transition into the nursing workforce. The early working years are a time when nurses are particularly vulnerable to dropping out of nursing, so understanding what factors precipitate their exit will help design policies for retention.

Nursing students and graduates have been recruited from the University of Technology Sydney and the University of New England, so our cohort encompasses nurses from both urban and rural backgrounds. Recruitment commenced in 2008 and has continued until 2012.

Participants are 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 first wave of data collection commenced in late 2009 and ended this year; the second and third waves are currently underway with the fourth wave due to commence in 2013.

The data are being used to 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. To date, analyses using Wave one data have resulted in several papers and conference presentations. Already we have shown how preferences for jobs differ according to the respondent’s stage in the BN program and clinical experience.
What factors drive the gap between Aboriginal and non-Aboriginal diabetes rates and related health outcomes in NSW? Pilot study

Key Objectives
To investigate the risk factors for diabetes and associated complications within the Aboriginal population of NSW. To inform policy and practice regarding appropriate resource allocation to help reduce diabetes rates for Aboriginal people

Diabetes mellitus is a National Health Priority Area which affects all Australians but is of particular significance to Aboriginal people. Diabetes and its complications impact on quality of life and contribute to early death. Aboriginal people in NSW are three times as likely as non-Aboriginal people to be diabetic. By determining the key drivers of the gap between Aboriginal and non-Aboriginal diabetes rates, the research results will assist health service providers and policy makers to better direct resources towards appropriate interventions to prevent and manage diabetes in Aboriginal communities in NSW. This will be a significant contribution to policies and strategies aimed at 'closing the gap'.

This study uses use National Health Survey and National Aboriginal and Torres Strait Islander Health Survey data to estimate differences in diabetes rates and risk/prevention factors between Aboriginal and non-Aboriginal people in non-remote NSW. This is followed by logistic regression analyses of the risk factors for diabetes, to determine which factors have the largest impact on diabetes in the Aboriginal population. Together the two parts provide evidence of the key drivers of the diabetes gap.

The pilot study is now complete and the results indicate that improved nutrition and exercise and capacity to access and act upon health care information are required to close the gap. Current policy directions focussing on improved nutrition and exercise, awareness and engagement with primary care resources appear to be appropriately targeted; however, further research is required to determine whether the methods to achieve these targets are effective.

The results of the pilot study provide a foundation for future research using 45 and up study data with linkage to Hospital Admissions, MBS and PBS data. This extension using data linkage is required to evaluate the efficacy of specific methods to achieve policy targets to reduce diabetes incidence. Similarly, for patients with diabetes, analysis of the utilisation of health services (including uptake of MBS items such as an
annual cycle of care and HbA1c testing) and the impact on diabetes complications will indicate where resources should be allocated to improve diabetes management and reduce diabetes related health complications for Aboriginal people with diabetes.

**Funding source**
UTS Faculty of Business Grant

**CHERE staff**
*Rebecca Reeve, Jody Church, Marion Haas, Rosalie Viney*

**Aboriginal Reference Group**
*Wylie Bradford¹, Debra Fernando²*

1. Macquarie University
2. Sax Institute
Publications 2012

Refereed Journal Articles

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Goodall, S., King, M.T., Ewing, J.E., Smith, N.F. & Kenny, P.M. 2012, 'Preferences for support services among adolescents and young adults with cancer or a blood disorder: A discrete choice experiment', Health Policy, vol. 107, no. 2-3, pp. 304-311.
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Norman, R., Church, J., Van den Berg, B. & Goodall, S. 2012, 'Australian health-related quality of life population norms derived from the SF-6D', *Australian and New Zealand Journal of Public Health*, vol. in press.


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**Book Chapters**


**Reports**


**Working Papers**


Conference Presentations


Ewing, J.E., Goodall, S., King, M.T., Smith, N.F. & Kenny, P.M. 2012, ‘Preferences for support services among adolescents and young adults with cancer or a blood disorder: Results of a discrete choice experiment’, COSA 39th Annual Scientific Meeting and IPOS 14th World Congress of Psycho-Oncology, Brisbane, November 2012.

Ewing, J.E., Goodall, S., King, M.T., Smith, N.F. & Kenny, P.M. 2012, 'Preferences for support services among adolescents and young adults with cancer or a blood disorder: Results of a discrete choice experiment [conference abstract]', COSA 39th Annual Scientific Meeting and IPOS 14th World Congress of Psycho-Oncology, Brisbane, November 2012 in Asia-Pacific Journal of Clinical Oncology, ed Ackland, S, Wiley, Australia, pp. 129-129.


Norman, R. & Goodall, S. 2012, 'Panel discussion - Integrating research and policy to safeguard fair distribution of health care resources: Incorporating an ethical and social value focus', Health Technology Assessment Conference, Sydney, November 2012.


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.

Contact:
Associate Professor Rosalie Viney
Email: rosalie.viney@chere.uts.edu.au
Phone: 61 2 9514 4722
Fax: 61 2 9514 4730

Education

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 Liz Justic.

- **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.

Students under supervision
The following PhD students were supervised by CHERE staff in 2012:

Heni Wahyuni  
Jody Church  
Richard Norman  
Bonny Parkinson

Academic staff

Rosalie Viney is Director of 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.

Jane Hall is the Director of Strategy for the Centre and Professor of Health Economics in the UTS Business School. She was the founding Director of CHERE and held that position until 2012. She is a Fellow of the Academy of Social Sciences in Australia. In 2012 she was recognized with a UTS Vice-Chancellor's Award for Research Excellence in Research Leadership. In 2011 she was awarded the inaugural Professional Award made by the Health Services Research Association of Australia and New Zealand, for her outstanding contributions to research, developing the field and mentoring others. She is currently leading the APHCRI funded Centre of Research Excellence in the finance and economics of primary care. She is actively involved in policy analysis and critique, and is a regular commentator on health funding and organisational issues in Australia. Jane has represented Australia in many international health policy forums.

She is a member of the Board of the Bureau of Health Information; and a member of the Independent Hospital Pricing Authority. She is the Australian representative of the Harkness Fellowship in Health Policy and Practice; and Director of the Australian-American Health Policy Program. She is an Associate Editor of Health Economics, and of Health Policy.

Marion Haas is Professor of Health Economics and a Deputy Director of CHERE. Formerly a physiotherapist, she has a Master of Public Health from the University of Sydney and a Graduate Diploma of Applied Epidemiology. A leading health services researcher in Australia for many years, Marion has extensive policy and research based experience of health services funding and financing in Australia. Her research interests are in the application of economic analysis to policy and practice; planning and evaluating health services; incorporating health economics into health services research, including clinical trials; the application of discrete choice methods to consumer preferences in health; and understanding the impact of health policy on access to, utilisation and costs of health care services. She is currently a chief investigator on a number of major grants, including the APHCRI funded Centre of Research Excellence in the finance and economics of primary care. She is Chair of the Human Research Ethics Committee at UTS. Marion is a founding member and Vice President of the Health Services Research Association of Australia and New Zealand.
Stephen Goodall is a Health Economist and a Deputy Director of CHERE. He is also 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.

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.

**Research staff**

Sheena Arora is a Research Fellow at CHERE. She has a background in economics and a Master’s degree in Public Health (specialising in health economics), from the University of Sydney. She has been involved in various public health research projects, including the coordination of a large scale randomised controlled trial for the Centre for Medical Psychology and Evidence Based Decision Making (CEMPED), and most recently, as a project coordinator at the National Drug and Alcohol Research Centre (NDARC). She also has teaching experience, teaching epidemiology to postgraduate students at the University of Sydney.

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.

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.

Yuanyuan Gu has a Bachelor’s degree in Statistics from Fudan University in Shanghai, a Master of Commerce Honours degree in Economics from University of New South Wales (UNSW), and has recently completed his PhD in Economics at UNSW. Yuanyuan’s master thesis develops a Bayesian approach to analyse the contaminated data when people lie or misreport in the survey. Yuanyuan’s PhD thesis develops novel Bayesian methods for analysing health economics data. In particular he is interested in identifying the sources of heterogeneity in consumers’ choices. Prior to joining CHERE in 2010, Yuanyuan was employed at UNSW, since 2005, as a tutor and associate lecturer in quantitative methods and econometrics. Previously Yuanyuan worked as consultant assistant at Boston Consulting Group Shanghai Office from 2002 to 2003.

Changhao Hou has a Bachelor of Medicine, Bachelor of Surgery (MBBS) from Southern Medical University (China), specialising in Stomatology and a Master of Health Economics from the University of York (UK). His Master’s thesis estimated the marginal effects of patients’ clinical characteristics on healthcare costs longitudinally and identified cost predictors for healthcare costs associated with dementia. At CHERE Changhao is part of the Economic Evaluation team reviewing and conducting evaluations for the Pharmaceutical Advisory Committee (PBAC). Before joining CHERE, Changhao worked in The Affiliated Nanhai Hospital, Southern Medical University as a intern dentist and maxillofacial surgeon from 2009-2010.

Patsy Kenny is a Senior Research Fellow 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, her treatise investigated patient participation in treatment decisions for breast cancer. Her early research experience comprised the economic
evaluation of health care programs involving innovative nursing and midwifery roles as well as the economic evaluation of cancer treatments. More recent research has included health related quality of life (HRQOL) in asthma and lung cancer, preferences of patients and informal carers, nurses’ job preferences and the HRQOL of informal carers. She has experience in the conduct of longitudinal studies and the analysis of repeated measures data, including HRQOL and cost data. She is currently a member of the NSW Population and Health Services Research Ethics Committee.

**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.

**Richard Norman** is a Senior Research Fellow employed at CHERE since 2006. He has been awarded a Chancellor’s Post-Doctoral Fellowship to explore drivers and preferences for quality of life in the Australian population. He has recently completed a PhD investigating the valuation of health gains for use in economic evaluation in health. Prior to that, he completed a Bachelor Degree in Philosophy and Economics in 2003, and a Master of Health Economics in 2004, both from the University of York. His Masters thesis, written at the University of Bergen, investigated the measurement of productivity in Norwegian Hospitals. His areas of interest include applied microeconometrics, quality of life and economic evaluation. Specific topics include population modelling and discrete choice experiments, particularly in utility measurement and equity. A STATA do file to generate Australia EQ-5D weights based on Viney et al. (2011) can be found here.

Prior to joining CHERE, Richard worked in the UK National Health Service developing cost-effectiveness analyses alongside National Institute for Health and Clinical Excellence (NICE) guidelines.

**Bonny Parkinson** is a Research Fellow at CHERE and has considerable experience in economic evaluation of healthcare interventions and technologies, both in Australia and the United Kingdom (UK). She has a Bachelor of Economics with Honours from the Australian National University and a Master of Health Economics from the University of York. Her Masters thesis focused on integrating health economic modelling in the product development cycle of medical devices. She is currently undertaking a Doctor of Philosophy at the University of Technology, Sydney specialising in issues surrounding pharmaceutical policy in Australia. At CHERE she has reviewed and conducted evaluations for Pharmaceutical Benefits Advisory Committee and the Medical Services Advisory Committee. She is a member of the Cancer Research Economics Support Team (CREST) and has provided advice to Cancer Collaborative Clinical Trials Groups on how to incorporate health economic analyses into trial protocols. She has also received a Faculty of Business grant looking at predicting the uptake of pharmaceuticals and supervised a Masters student from the University of York on her thesis looking at estimating the cost-effectiveness of folate fortification in Australia. She is currently a reviewer for the Centre for Research and
Dissemination at the University of York. In 2012 Bonny was elected a General Councillor of the Australian Health Economics Society (AHES).

**Alison Pearce** originally trained as an occupational therapist, working in neurological rehabilitation for a number of years before becoming interested in research and Alison originally trained as an occupational therapist, working in neurological rehabilitation for a number of years before becoming interested in research and obtaining a Masters of Public Health. She moved into the area of cancer research, and has gained extensive experience in the management and operational design of oncology clinical trials and health services research.

She is currently completing her PhD investigating the costs of chemotherapy adverse events, for use in economic evaluation. This includes developing model-based Australian costs of some common chemotherapy adverse events, and examining how adverse events are experienced and managed outside of clinical trials, and how this influences model-based cost estimates.

Alison is also the Project Coordinator for the Cancer Research Economics Support Team (CREST), which provides support to the 13 Collaborative Cancer Clinical Trials Groups supported by Cancer Australia to include health economics in their research.

She is the Australian Emerging Researcher representative to the Health Services Association of Australia and New Zealand Executive Committee.

**Rebecca Reeve** is a team investigator on CHERE’s NHMRC Capacity Building grant and is program manager of the policy evaluation program of research. She has also worked with the economic evaluation team evaluating submissions put before the Pharmaceutical Benefits Advisory Committee. In association with the Social Policy Research Centre at the University of NSW Wales, she participated in the economic evaluation of the NSW Brighter Futures program. Rebecca is the project manager of the cost-effectiveness component of economic evaluation of Drug and Alcohol Consultation Liaison Services in NSW hospitals. She has also undertaken an econometric analysis of the long term costs of childhood abuse in Australia. Rebecca has received two UTS Faculty of Business grants; (1) as CIA, to investigate the factors underpinning the growing gap between Aboriginal and non-Aboriginal diabetes rates and (2) as CIB, to examine effects of speech impairment on educational and emotional outcomes of children using the Longitudinal Study of Australian Children. Rebecca teaches in CHERE’s postgraduate unit “Introductory Health Economics” and co-supervises 2 PhD students.

Rebecca has an Honours degree in economics from Macquarie University (2004) and a PhD in Economics from Macquarie University (2010). Rebecca’s PhD thesis investigates the degree and causes of Indigenous poverty in NSW major cities and the efficacy of current policy approaches to improving Indigenous welfare. Her Honours thesis examined the impact of alternative immigration and fertility rates on Australia’s future labour force outcomes. In 2003, Rebecca was a Ronald Henderson Research Foundation intern at the St Vincent de Paul National Council of Australia, where she undertook a research project on the condition of poverty in Australia. Prior to joining CHERE in late 2009, Rebecca was employed at Macquarie University, since 2004, as a tutor and lecturer in microeconomics and econometrics.
Administrative staff

**Vanessa Nolasco** 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, Vanessa worked at a NSW Government services department, Land and Property Information, as an Assistant Management Accountant in the Finance Department, where she was involved with budgeting, pricing and policy.

**Liz Chinchen** is the Research Manager at CHERE. She holds a Bachelor of Applied Science (Information) and oversees the key research support activities of the Centre. This includes conducting literature searches on a variety of topics, information management and management of CHERE’s reference library. Liz is responsible for the reporting of CHERE’s research activities and outcomes to the Faculty, University and wider community. Liz is also responsible for the management and updating of the CHERE website.

**Gretchen Togle** is Executive Assistant to the CHERE Management Team. She also provides administrative support in areas of recruitment and liaises with the Human Resources Department. Gretchen 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.

**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 research, teaching and support staff. Her key responsibilities include assisting the Finance & Administration Coordinator, organising travel arrangements, and supporting the Executive Officer of the Health Services Research Association of Australia and New Zealand (HSRAANZ).

Professional Activities

In 2012 CHERE staff conducted a number of reviews for journals and grant applications:

**Journals**
- Asia-Pacific Journal of Clinical Oncology
- Australian Health Review
- BMC Health Services Research
- BMJ
- Health Economics
- Health Expectations
- Health Policy
- Journal of Paediatric Intensive Care
- Value in Health
- Medical Decision Making
- Quality in Primary Care
- Quality of life Research
Grant Applications
NHMRC