Margaret Mathers
Dip Speech Therapy Grad Dip (Linguistics) PhD
Margaret is a Clinical Research Assistant working part time on two projects. Margaret trained in Speech Pathology and has worked clinically internationally. During her postgraduate studies at the University of Newcastle, using a sociolinguistic model, Margaret investigated language use in children with Attention Deficit Hyperactivity Disorder (ADHD).

Rachel Motney
BPsych
Rachel has recently joined the RSU as a part-time Research Assistant. Rachel is assisting Associate Professor Robyn Tate on two research projects concerning adolescents with traumatic brain injuries. Rachel has previously worked in the health sector in the area of Human Resources and holds a Bachelor of Psychology from James Cook University. She is also currently completing her 4th-year Psychology Honours program through the University of Sydney.

Nick Pontifex
BSc (Biology)
Nick completed his Bachelor of Science in Biology at the Louisiana College, USA, in 2003 before completing his Doctorate in Physiotherapy at the University of Saint Augustine, Florida in August 2007. Nick is currently working for Dr Lisa Harvey as a Research Assistant on a study designed to determine the effectiveness of electrical stimulation by increasing the strength of the quadriceps in people with incomplete SCI.

Ulrike Rosenkoetter
Dip (Psyc)
Ulli completed a Psychology degree in Germany and has worked as a Phone Counsellor and Research Assistant. As a part-time Clinical Research Assistant, Ulli is now working on a study that determines the services accessed by adults after sustaining a brain injury as well as the evaluation of an intervention program that assists young people with TBI in the transition from school into the adolescent world.

Manuela Studler
BHSc (Physio)
Manuela graduated with a Bachelor of Health Science - Physiotherapy from the Auckland University of Technology in 2004. Manuela has worked at the Auckland Spinal Unit and is currently also working part time with Spinal Outreach Service and Moorrang Spinal Unit at the Royal Rehabilitation Centre Sydney. She is currently working for Dr. Lisa Harvey as a Research Assistant on a study looking at the hand function of people with tetraplegia.

Roberta Perla
BA (Psych) MSc (Clin Psych)
Roberta has a Masters in Clinical Psychology from the University of Newcastle Upon Tyne, England. Roberta has worked in various areas of psychology including Family Therapy, Psychometric Assessment and assessment of Attention Deficit Disorder, Anxiety, Depression and related disorders and has trained in the use of Neurofeedback. Her current role is as a Research Assistant for PsycBIOTECH.

THE REHABILITATION STUDIES UNIT IS A PART OF THE UNIVERSITY OF SYDNEY NORTHERN CLINICAL SCHOOL.

No Fault Lifetime Care and Support for the Catastrophically Injured

The 2005 Australian and State Ministers recognised the potential benefits in nationally consistent state and territory based long-term care arrangements. Notwithstanding this statement, there continue to be wide areas of disparity and inequity in the availability of care and support for people who have sustained a catastrophic injury. Each year approximately 800 Australians are catastrophically injured to the extent that they require lifetime care and support - more than 95% comprise people who sustain traumatic spinal cord injury (SCI) and traumatic brain injury (TBI).

The causes of the injuries vary and cover motor vehicle, workplace, recreational and sporting accidents, and medical incidents and assault. However the inconsistencies in benefit structures and arrangements between schemes and across jurisdictions results in marked differences in support provided to these 800 people.

In 2006 NSW amended its motor accident legislation to join Victoria and Tasmania in providing a no-fault lifetime care and support scheme (LTCSS) to people who sustain a major injury through a motor accident. The Scheme provides all reasonable care and support requirements including community care and support, hospital and medical fees, equipment, and home and vehicle modifications. The scheme is now in its third year of operation, and has generally been regarded as a highly successful example of combined social and economic policy.

Benefits of the LTCSS include:
- Removing inequities in coverage and entitlement for catastrophic injuries incurred in motor accidents by removing the previous “fault” requirement
- Removing the barriers presented by the delays and litigation of the common law system to positive health, social and economic outcomes for catastrophically injured people
- Providing an economic benefit in reducing the cost of dispute and litigation
- Providing security in an innovative “lifetime approach” to funding future care needs and in so doing reducing carer burden
- Realising the potential of young people with a disability through an individual approach to lifetime planning
- Establishing an insurance model for governance, accountability and monitoring of outcomes in welfare settings, which may be applied to catastrophic injury caused other than in motor accidents, and in the wider disability system

The new Commonwealth government has re-invigorated interest in the 2005 initiatives, and is attracted to the NSW model of LTCSS. Moreover, the idea of a National Disability Insurance Scheme was pursued at the Australia 2020 Summit, which recommended further work on a submission asserting that:

“...the time is right to reform the disability sector: to shift from the current crisis-driven welfare system to a planned and fully-funded National Disability Insurance Scheme.”

Work is underway to investigate the feasibility of a number of options, through the Disability Investment Group convened by Commonwealth Parliamentary Secretary Bill Shorten. It is anticipated that the Commonwealth will seek to engage with States and Territories to develop a collaborative approach to developing a National Traumatic Injury Insurance System (NTIIS), comprising consistent schemes along the NSW LTCSS model, but covering injury from all causes – a la 2005!

Over a wider time frame there seems no reason why this or a similar insurance model cannot be extended to all major disability.

John Walsh
1 Botanyd, S and Skyes, H. 2008. Disability Reform: From crisis welfare to a planned insurance model
It has been 10 years since the Rehabilitation Studies Unit was re-established as an interdisciplinary research unit focusing on research and education in the field of injury related disability. This has led me to reflect on the changes over the last decade.

We have increased the volume and breadth of our research considerably. While it is up to others to decide whether the quality has also improved, I believe that we should be particularly proud of the large number of studies of rehabilitation interventions that have been completed using randomised trial methods.

Congratulations are due to Robyn Tate on her promotion to Professor. This is a very appropriate recognition of her internationally acclaimed research and scholarship.

Education has also been a major achievement. This has been provided to health professionals of many disciplines in a spectrum of topics ranging from helping people with severe brain injury to adjust to a changed life, to studies of standing and mobility in people with spinal cord injury and hip fracture.

Through supervision of research students we have increased capacity of rehabilitation research considerably. If I recall correctly we have currently supervised over 10 PhD students and 12 Masters students to completion.

We have also had significant impact on issues that influence the lives of people with disabilities, particularly young acquired disabilities. The Lifecare and Support Scheme is the most important development in NSW in this area. Other results have been on traumatic brain injury.

I would like to thank John Walsh for his hard paper about the future of care and support for people with catastrophic injury.

I would like to congratulate Lisa Harvey and Robyn Tate who are chief investigators on the National Health and Medical Research Council Project Grants that have recently been funded.

FROM THE CHAIR

Ms Petrina Casey
MPH PhD Student
Petrina has over 10 years experience in management roles in Personal Injury Insurance and Occupational Health. The focus of these roles was the development and implementation of policy and strategies in scheme design, injury prevention and injury management and most recently Petrina has set up her own Consultancy Practice in this area. Petrina has a background in Nursing, completed a Master in Public Health in 2004 and is currently a part time PhD student under the supervision of Prof. Ian Cameron and Dr. Annemarie Feyer.
Petrina was working in the Insurance Sector when the 2001 Report by the Australasian Faculty of Occupational Medicine and RACP found that “people with compensable injuries have poorer health outcomes than those with similar but non-compensable injuries.” While the influence of insurance scheme design on outcomes may seem obvious, evidence for the relationship between scheme design and other variables in terms of health outcomes is less well documented. This added to her interest in pursuing knowledge around health outcomes in compensation schemes.

The Whiplash Outcome Study (WOS) is based in NSW where Whiplash Associated Disorder (WAD) following motor vehicle crashes represents about 45% of all claims in schemes. This added to her interest in pursuing knowledge around health outcomes in compensation schemes.

The Whiplash Outcome Study (WOS) is based in NSW where Whiplash Associated Disorder (WAD) following motor vehicle crashes represents about 45% of all claims in the NSW Compulsory Third Party Scheme. The aim of WOS is to look at the role socio-economic and general health status has in determining outcome following a whiplash injury. To be eligible, participants will have sustained a WAD, lodged a claim for compensation, be over 18 years and not require the services of an interpreter being identified through an Insurer database. To date 156 responses have been received, representing 36% of those who agreed to receive an invitation to participate. The analysis of the baseline data is underway and the 12 month follow-up has commenced. Preliminary analysis shows the mean SF-36 WOS population scores as compared with Australian normative data.

Ms Regina Schultz
BPsych (Hons) MClinNeuroPsy
Regina Schultz is a Clinical Neuropsychologist and Clinical Psychologist at St Vincent’s Hospital, Sydney. She is currently completing her PhD through the Rehabilitation Studies Unit, University of Sydney, under the supervision of Professor Robyn Tate and Dr Michael Perdices. The aim of her research is to examine cognitive recovery in the first twelve months following a moderate to severe traumatic brain injury (TBI). The main project is a longitudinal investigation involving serial (monthly) cognitive (e.g., memory, attention) assessment for the first twelve months of post TBI. Data collection for this study is currently underway. As part of her PhD studies, Regina conducted a systematic review of the current research examining cognitive recovery in the post-acute stages following moderate to severe TBI.

Background: Despite the spate of studies in the 1970’s regarding the natural history of cognitive recovery in the post-acute stages after traumatic brain injury (TBI), our understanding of the process of recovery has not advanced in three decades. Method: A systematic review, searching 3 databases (Medline, CINAHL and PsycINFO), was undertaken to examine the current evidence regarding cognitive recovery in adults after TBI. Eligibility criteria included: PTA >1 day, testing intervals >2 years post-trauma, and >3 assessment points. Results: Searches yielded 3634 articles with <1% eligible for inclusion. Only a small number of studies conducted serial assessments, usually over 3 monthly intervals, but the focus of these studies was generally to compare TBI sub-groups rather than changes over time. The present paper describes identifiable recovery patterns and examines apparent methodological limitations, which include: i) long intervals between assessments, ii) inconsistent assessment time-points iii) different measures used across the studies and, iv) limited direct statistical comparisons across time-points. Conclusion: Although a comprehensive body of literature exists confirming the long term cognitive sequelae of TBI, methodological inconsistencies in the current research leaves a murky picture about the natural cognitive recovery in the post-acute stage. The paper concludes by describing the methodology used in our own longitudinal research of this issue.

Graph 1: Mean SF36 scores - people with whiplash and Australian norms

It is a prospective study with baseline self report data collected within 3 months of injury and follow-up measures at 12 and 24 months post injury. The main Outcome Measures to be used in WOS are the Short Form 36 (SF36), Functional Rating Index (FRI), Pain Catastrophising Scale (PCS) and socio-economic factors. WOS commenced in November 2007 with participants who sustained a WAD, lodged a claim for compensation, be over 12 and 24 months post injury. It is a prospective study with baseline self report data documented. This added to her interest in pursuing knowledge around health outcomes in compensation schemes.

The main objective of this study was to investigate the interaction between quality of life (QOL) in people with spinal cord injury (SCI) and expectations of daily living, and a measure of self efficacy and its interaction with pain. The design involved a cross sectional study with multiple independent measures and the study included 106 persons with SCI of 12 months or more duration living in the community who were enrolled from past admission lists in a Sydney rehabilitation unit. All SCI participants were asked to complete two questionnaires by postal survey in their post rehabilitation stage. The measures included the Short- Form Health Survey (SF-36) health questionnaire, a valid and reliable measure of QOL, as well as the Moorung Self- Efficacy Scale (MSE). Self-efficacy is a measure of a person’s belief or sense of confidence in his or her own ability to perform a particular task or behaviour successfully in the future. A low level of self-efficacy may place a person at risk of experiencing higher levels of distress and poor mental health.

Table 1: The combined negative influence of low self efficacy and pain on QOL in persons with SCI (DIF = 366 norms standardized for age and sex are provided)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Low self efficacy</th>
<th>High pain</th>
<th>Low self efficacy &amp; High pain</th>
<th>Low self efficacy &amp; High pain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role Function</td>
<td>36 domains (mean)</td>
<td>36 domains (mean)</td>
<td>36 domains (mean)</td>
<td>36 domains (mean)</td>
</tr>
<tr>
<td>Role stress</td>
<td>36 domains (mean)</td>
<td>36 domains (mean)</td>
<td>36 domains (mean)</td>
<td>36 domains (mean)</td>
</tr>
<tr>
<td>General Health</td>
<td>36 domains (mean)</td>
<td>36 domains (mean)</td>
<td>36 domains (mean)</td>
<td>36 domains (mean)</td>
</tr>
<tr>
<td>Mental Health</td>
<td>36 domains (mean)</td>
<td>36 domains (mean)</td>
<td>36 domains (mean)</td>
<td>36 domains (mean)</td>
</tr>
</tbody>
</table>

As expected, persons with SCI were found to have lowered quality of life (QOL) compared to age and sex standardized Australian population norms for the SF-36. What was concerning was the finding that low self-efficacy and the presence of pain were found to reduce QOL across all SF-36 domains even further, beyond the influence of the physical impact of the SCI (see Table 1). Factors such as completeness of lesion, sex, age at time of injury, time since injury were not significantly associated with reduced QOL. Tetraplegia was found to be associated with lowered QOL in physical functioning and greater limitation due to bodily pain. A further point needs to be made. The negative impact on QOL and life satisfaction may well be cumulative. The combination of the two negative factors “low self-efficacy” and “pain”, was associated with an even greater reduction in QOL compared to SCI individuals with each of the two factors independently. This reduction was seen in all SF-36 domains except for physical functioning (Table 1). This is a concerning finding and needs to be addressed in rehabilitation and in community-based interventions for people with SCI.
The Reintegration to Normal Living Index - is it useful in an Australian community-living rehabilitation setting?

Over the past two decades, the concept reintegration to normal living has gained increased attention. Reintegration to normal living is highly sought after following rehabilitation. The assessment and understanding of community reintegration determinants is essential to understanding both the impact of illness or disability, and to evaluate the effectiveness of rehabilitation. The Reintegration to Normal Living Index (RNL Index) offers a means in which to measure an individual’s level of reintegration. The aim of this study was to examine the validity and reliability of the modified Reintegration to Normal Living Index (mRNL Index) with a sample of community dwelling adults who had received rehabilitation services.

Methods
Participants were recruited from outpatient rehabilitation services, primarily through the Royal Rehabilitation Centre Sydney and Mount Wilga Rehabilitation Hospital. Participants completed three measures (mRNL Index, Community Integration Measure (CIM) and Life Space Assessment (LSA)) and were invited to complete the same measures two weeks after initial assessment. Data were analysed using Rasch and psychometric models. Methodological guidelines published by Linacre (1999) were used in conjunction with recommendations by Bond and Fox (2007) to determine the validity of the items and the rating scale of the mRNL Index.

Results
Forty-six adults took part in the study. Mean age of the sample was 55 years (±20 years) and the majority were males (68%, 26%). There were 15 persons with brain injury; 12 were stroke survivors; 4 had sustained fractured neck of femur; 3 with multiple sclerosis; 3 had spinal cord injuries; 2 had heart disease; and 7 had other injuries or illnesses. The length of time since impairment ranged from 1 month to 8 years, with a mean time since impairment of 10.4 months (±15.7 months). The readability of the mRNL Index was improved to rephrasing of the original RNL Index. The Flesch reading ease of the mRNL Index increased by 15% following rephrasing.

Construct validity of the mRNL was confirmed by good fit to the Rasch measurement model. To examine dimensionality, an unrotated principal component factor analysis was conducted on the whole mRNL Index. The empirical variance was acceptable at 70%. The unexplained variance of the first component accounted for an eigenvalue of 3.5, which exceeded an acceptable value of 3 indicating that the index had sub-dimensions. The first contrast distinguished items 1-4 (functioning) from items 5-8 (self-help), moving from community, taking longer trips and self care) against items 8-11 with (dealing with life events, being comfortable with self in the company of others, being comfortable with people who are important, and having a role in the family) (See table 1).

The mRNL Index demonstrated acceptable internal consistency (Cronbach’s alpha .80), as did the daily functioning subscale (Cronbach’s alpha .80) and the perception of self subscale (Cronbach’s alpha .82). Temporal reliability of the mRNL Index was acceptable (ICC(3,1), 83, p< .0001). As hypothesised the LSA did not correlate with these subscales (rho = .08) and was moderately correlated to the daily functioning subscale (rho = .59). The CIM was found to be moderately correlated with both mRNL subscales (rho = .50).

The National Transition Care Forum
Two hundred and twenty people participated in the inaugural National Transition Care Forum at Melbourne’s Crown Casino in September 2008 to consider, discuss and debate key questions associated with Transition Care. The Forum was held by the TIE (Transition Care - Innovation and Evidence) group of researchers who are funded by the National Health and Medical Research Council to investigate key questions about Transition Care. Professor Ian Cameron, Head of the Rehabilitation Studies Unit, is the Senior Investigator (CIA) of the TIE group.

Forum delegates represented aged care stakeholders organisations across urban and rural Australia including the Australian Department of Health & Ageing, State Departments of Health, the Country Women’s Association, Service Providers, National Seniors and Alzheimers Australia.

Table 1: Contrast 1 from principal component analysis of standardised residual correlations for items (sorted by loading)