13th NSW Brain Injury Rehabilitation Program Forum

Participation: Making it Happen

5th – 7th March 2014

Conference Proceedings

Thomas and Rachel Moore Education Centre, Liverpool Hospital
Corner Goulburn and Elizabeth Streets, Liverpool NSW Australia

Forum Organising Committee:

Adeline Hodgkinson	Maysaa Daher
Barbara Strettles	Lisa Hallab
Grahame Simpson	Irena Gordon
Marion Fisher	Jane Murtagh
Philippa McRae	Jeremy Gilchrist

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Forum Schedule

DAY ONE	WEDNESDAY 5TH MARCH 2014	*ACI BIRD Meetings (members only)*
10.30 – 11.00	Arrival	
11:00 – 4:30	BIRP Directors and Managers meeting	
12.45 – 1.30	Lunch	
1:30 – 4:30	BIRP Paediatric Reference Group	

DAY TWO	THURSDAY 6TH MARCH 2014	*Master of Ceremonies: Marion Fisher*
8:00 – 9:00	Registration (includes tea & coffee on arrival)	
9:00 – 10:30	*Session 1*	*Chair: Dr Adeline Hodgkinson*
	Welcome Welcome to Country Opening Address ***Plenary Address:*** Professor Kathryn McPherson ***"Rehabilitation in 2014 and beyond - rethinking what we do, how we do it, and why."***	
10:30 – 11:00	Morning Tea	
11:00– 12:30	*Session 2*	*Chair: Dr Grahame Simpson*
	Keynote address: Professor Robyn Tate ***"Measuring participation after traumatic brain injury: update on recent research finding"*** ***Keynote address:*** A/Professor Pim Kuipers ***"The Social determinates of participation"***	
12:30– 1:30	Lunch	
1:30 – 2:15	*Session 3*	*Chair: Deborah Hoban*
	Keynote address: Professor Vicki Anderson ***"Targeting interventions: What factors impact child participation after brain injury"***	
2.15 – 3.20	*Concurrent Sessions*	

INTERVENTION *Chair: Jeremy Gilchrist*	**IMPLEMENTATION** *Chair: Jane Murtagh*	**PARTICIPATION** *Chair: Irena Gordon*
Case study: severe heterotopic ossification following an acquired brain injury in an adolescent *Jan Hancock*	Promoting client *participation* through the WHO ICF *Michael Dunne*	I-Pad use in rural health *Amanda de Roover*
Adapted yoga for neurological impairment *Lisa Bidgood*	Development of an expert allied health workforce for a new statewide ABI service *Lisa Somerville*	Occupational therapists contextualising advocacy in brain injury rehabilitation settings *Donna King*
Code-switching in Malay-English bilinguals with traumatic brain injury *Sajlia Binte Jalil*	High school transition for children with acquired brain injury *Sally Kerfoot*	Efficacy of leisure intervention groups In rehabilitation of people with an acquired brain injury *Elizabeth Mitchell*
A systematic review and meta-analysis of the non-pharmacological management of attention deficit following acquired brain injury: an update *Sohaib Virk*	Strength2Strength: Translating research into sustainable practice *Grahame Simpson*	A case study of acquired brain injury: where does recovery end? *Jan Hancock*

3:20 – 3:35	Afternoon Tea

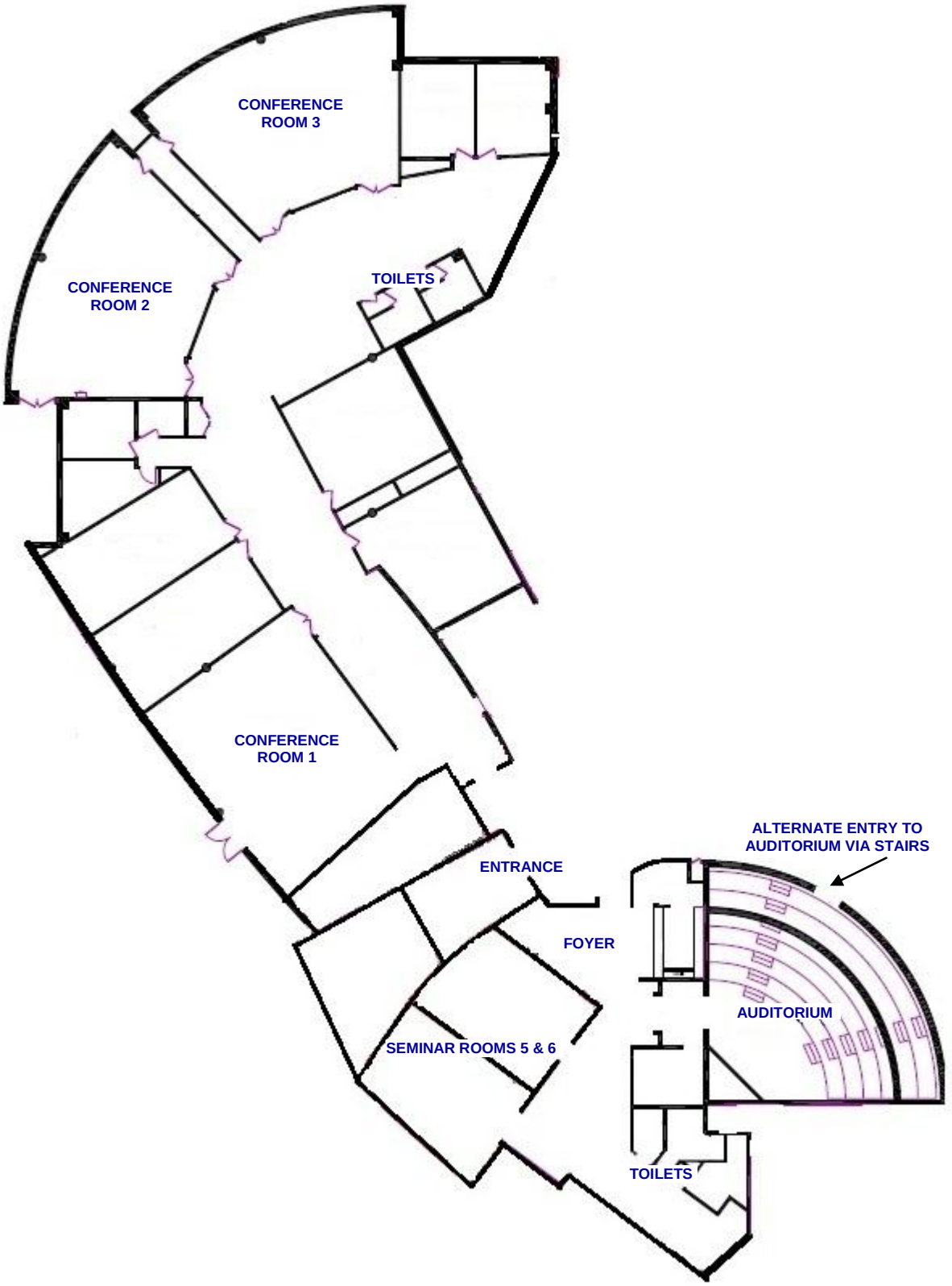
Forum Schedule

3:35 – 4:40	*Session 4*	*Chair: Deborah Hoban*
	Easy advocacy rows to hoe: Concussion in sport? – *Nick Rushworth*	
	Investigation of vocational outcomes for people with traumatic brain injury: Laying the groundwork for specialised vocational rehabilitation in NSW – *Philippa McRae*	
	The NSW BIRP: Realising our potential as an international model of best practice – *Grahame Simpson*	
4:40 – 4:50	Evaluation and close	
4:50 – 6:30	Forum reception	

DAY THREE	**FRIDAY 7TH MARCH 2014**
8:30 – 9:00	Registration (includes tea & coffee on arrival)
Workshop 1	*Includes morning tea, lunch and afternoon tea*
9.00 – 4:30	Assessment & Management of Suicide after Acquired Brain Injury Presenter: Dr Grahame Simpson This workshop aims to increase knowledge about the prevalence, clinical features and risk factors of suicidal thoughts and behaviours after ABI. The workshop will also cover approaches to the detection, assessment and management of suicidality after ABI.
Workshop 2	*Includes morning tea*
9:00-12.00	Motivational Interviewing Presenter: Allison Bell This half day workshop aims to intensively build skills and consolidate learning in the use of motivational interviewing techniques as a strategy to enhance the participation of TBI clients in the rehabilitation process
Workshop 3	*Includes morning tea*
9.00 – 1.00	Paediatric Care & Needs Scale (PCANS-2) Training Presenter: Donna Wakim The PCANS-2 is designed to measure the types, extent and intensity of support needs for young people aged 5-15 years with ABI. It can be used at any stage in the recovery process from acute to community living many years post-injury. This half-day workshop will cover the background of the PCANS-2, and how to administer, score & interpret the PCANS-2. If you are a Case Manager working with paediatric participants in the LTCSA Scheme or involved in reviewing care needs for paediatric participants you are encouraged to attend this workshop.

Venue Floor Plan and Rooms

THOMAS AND RACHEL MOORE EDUCATION CENTRE



Please Note: The front auditorium doors will close at the start of each session. Alternate entry is via stairs and rear door on Level 1. Please see forum staff if assistance is required.

Venue Floor Plan and Rooms

ROOMS

Auditorium Foyer	Registration Desk Poster Presentations Arrival Tea & Coffee Morning Tea Lunch Afternoon Tea Evening Reception
Auditorium	Welcome & Opening Address Welcome to Country Session 1: Plenary Address Session 2: Keynote Address Session 3: Keynote Address Concurrent session: Intervention Session 4: Making it Happen Evaluation and Close
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Conference Room 2	Concurrent session: Participation
Conference Room 3	Concurrent session: Implementation Motivational Interviewing Workshop on Friday
Seminar Rooms 5 & 6	Assessment & Management of Suicide Workshop on Friday

Keynote Speakers

Professor Kathryn McPherson

Person Centred Research Centre, Health and Rehabilitation Research Institute, Auckland University of Technology, NZ

Professor Kathryn McPherson has a clinical background in nursing, training in Australia before moving to the United Kingdom to study midwifery and Health Visiting and then a psychology degree and PhD, in Edinburgh. Joining Auckland University of Technology New Zealand in 2004 Kath is the Director of the Person Centred Research Centre, Health and Rehabilitation Research Institute and leader of the Person Centred Rehabilitation Team. She is also a Visiting Professor, Kings College, University of London, and University of Southampton.

The main focus of Kath's research is to: a) enhance understanding of what matters most to people with disabling conditions; b) target outcome measurement in accord with that understanding and; c) develop rehabilitation strategies that are both informed by better understanding of disabled peoples' perspectives and more responsive to their priorities.

Kath has authored/co-authored in excess of 100 peer-reviewed publications. She has been an Associate Editor with the BMJ group journal Quality and Safety in Healthcare since 2001. She is also on the Editorial Board of Disability and Rehabilitation, Clinical Rehabilitation and the International Journal of Nursing Studies

Professor Vicki Anderson

Royal Children's Hospital and University of Melbourne, Victoria, Australia

Vicki is a paediatric neuropsychologist with over 30 years' experience. She is Director of Psychology at the Royal Children's Hospital, Melbourne, Professorial Fellow in Paediatrics and Psychology at the University of Melbourne, and Director, Clinical Sciences Research at the Murdoch Children's Research Institute, and an NHMRC Fellow. Her primary research focus is better understanding the consequences of early brain injury for brain maturation, cognitive and social development and family function. Vicki established the Australian Centre for Child Neuropsychology Studies (ACCNS) in 2002, which is committed to: (i) improving our understanding of the impact of childhood brain injury; (ii) developing evidence-informed interventions to optimize outcomes of children and their families and (iii) training emerging clinicians and researchers in the field.

Keynote Speakers

Professor Robyn Tate

Professorial Research Fellow, Rehabilitation Studies Unit, Sydney Medical School, University of Sydney, NSW Australia

Professor Robyn Tate currently holds the position of Professorial Research Fellow at the John Walsh Centre for Rehabilitation Research, Kolling Institute of Medical Research, Sydney Medical School, University of Sydney, Australia. Her background is in clinical and neuropsychology. She has extensive clinical experience in the rehabilitation of traumatic brain injury, initially working in the brain injury rehabilitation service at Lidcombe Hospital Sydney from 1976, before transferring to the University of Sydney in 1991. Prof Tate has more than 150 scientific publications and 200 conference presentations and workshops. She has expertise in health outcome measurement, having developed the Sydney Psychosocial Reintegration Scale, the Care and Needs Scale, and written a reference book on outcome measures for ABI.

Prof Tate has longstanding clinical and research interests in the post-acute recovery and long-term outcome after traumatic brain injury and evidence-based clinical practice. Prof Tate initiated and is program director of PsycBITE (www.psycbite.com), a database which contains more than 4,300 records of all published nonpharmacological interventions to treat the psychological consequences of ABI. Together with her clinical colleagues, she developed the model for assessing treatment effect, to facilitate the implementation of rigorous clinical practices. Her team published the first psychometric scale to evaluate scientific quality of single-case designs. Prof Tate is Founding Co-Editor of *Brain Impairment*, an Executive Editor of *Neuropsychological Rehabilitation,* and secretary of the Special Interest Group in Neuropsychological Rehabilitation of the World Federation for NeuroRehabilitation. She has been a member of international Steering Committees for a range of projects including development of ICF core sets for traumatic brain injury, CONSORT reporting guidelines for n-of-1 trials (CENT), and knowledge translation in cognitive rehabilitation after traumatic brain injury. She currently leads an international team in developing reporting guidelines for single-case experimental designs in the behavioural sciences (SCRIBE).

Associate Professor Pim Kuipers

School of Human Services and Social Work, Griffith University, Queensland, Australia

Pim holds a joint appointment as Principal Research Fellow with Metro South Hospitals and Health Service and as Associate Professor, Centre for Community Science at Griffith University. He was previously Senior Research Fellow at the Centre for Remote Health in Alice Springs (Flinders University). Pim is a psychologist by training and completed his doctoral research in community based rehabilitation. He has been involved in research on health service delivery, rural, remote and Indigenous primary health care, multi-methods reviews, community based rehabilitation, complexity in health care, and disability services, specifically for people with brain injuries. Pim maintains an active research interest in community rehabilitation (in Australia and in developing countries). He has been a project advisor in the Lao People's Democratic Republic, and was awarded an Erasmus Mundus (European Commission) Fellowship to University College, London.

Session 1

Chair: Dr Adeline Hodgkinson

Plenary Address: Professor Kathryn McPherson

Rehabilitation in 2014 and beyond - rethinking what we do, how we do it, and why

Some key questions about rehabilitation can be hard to consider when we are busy and in the midst of delivering services and yet at the same time, they are pretty fundamental. Just some that fascinate me are:

- Why does 'rehabilitation' look like it does currently?
- What do our clients really need and want from us, and how well do we address those needs?
- Why do we do (and fund) some activities and interventions but not others, and even then – for some people and not others?
- How could/should rehabilitation develop in the future?

These questions (and of course many others others) arguably need answers if we are to develop and deliver rehabilitation that works for people and meets the challenges our health and social care systems face. This presentation will explore some of these issues and the research to date (drawing on our own work and that of others), hopefully proposing some ways forward so that we can make the most of our contributions in people's lives.

Notes:

Session 2

Chair: Dr Grahame Simpson

Keynote Address: Professor Robyn Tate

Measuring participation after traumatic brain injury: update on recent research findings

Rehabilitation has been described as “the process of helping a person to reach their fullest physical, psychological, social, vocational, avocational, and educational potential” (DeLisa et al., 1998). Many of these elements are captured within the construct of participation. This presentation describes recent research developments in the measurement of participation after traumatic brain injury (TBI). A welcome development is the release of the ICF Core Set for TBI (Laxe et al., 2013), which has the potential to systematise measurement, thereby providing direct comparison within and across both clinical and research settings. Yet selecting instruments for assessment purposes is complicated by the vast number of instruments currently available. Recent systematic review identified approximately 170 separate instruments used in published TBI research and clinical practice in the past decade that addressed the ICF activities/participation domains (Tate et al., 2013). Moreover, the structure of measures of participation varies widely, and a conceptual framework for their classification is described (Tate, in press).

References:
DeLisa JA, et al. (eds). (1998). Physical medicine and rehabilitation: Principles and practice. 4th ed. Philadelphia: Lippincott, Williams and Wilkins.
Laxe S, et al. (2013). Development of the International Classification of Functioning, Disability and Health Core Sets for traumatic brain injury: an international consensus process. Brain Injury. 27(4), 379-387.
Tate RL. (in press). Measuring outcomes using the International Classification of Functioning, Disability and Health (ICF) model, with special reference to participation and environmental factors. In: H. Levin, et al. (Eds).Traumatic Brain Injury: A review of the research and future directions. NY: Oxford University Press.
Tate RL, et al. (2013). A systematic review of assessment tools for adults used in traumatic brain injury research. Neurorehabilitation, 32, 729-750.

Notes:

Session 2

Chair: Dr Grahame Simpson

Keynote Address: Associate Professor Pim Kuipers

The social determinants of participation

The Social Determinants of Health (SDoH) model has had a substantial influence on how we understand health and health promotion, and also how we structure and provide healthcare. In addition to issues around health, a key concern for people with brain injuries, their families and for rehabilitation professionals is participation. This presentation seeks to draw from the SDoH conceptualisation and make application to the issue of promoting participation of people brain injuries. A Social Determinants of Participation (SDoP) concept is proposed, and some of the potential dimensions are identified. Implications of such an approach, particularly for rural and community based brain injury rehabilitation services, are explored.

Notes:

Session 3

Chair: Deborah Hoban

Keynote Address: Professor Vicki Anderson

Targeting interventions: what factors impact child participation after brain injury?

Notes:

Concurrent Sessions: Intervention

Chair: Jeremy Gilchrist

Case Study: Severe heterotopic ossification following an acquired brain injury

Hancock J.A. & Paget S.

Presenter: Jan Hancock
Senior Physiotherapist, Brain Injury Service, Kids Rehab, The Children's Hospital at Westmead

A case study will be presented of an 18 year old male who developed extensive lower-limb heterotopic ossification (HO) following an acquired brain injury (ABI) resulting from the rupture of a previously undiagnosed arteriovenous malformation.
HO, the formation of lamellar bone in soft tissue structures where it does not normally exist, is a common finding following acquired brain injury, estimated to occur in 10-20% of adults following ABI. It is much less common in children following ABI and frequently resolves without treatment.
In the case study we present, the adolescent's HO was extensive, causing significant reduction in passive and active range of motion, and severe mobility limitation.
We will present the adolescent's journey and outcome through outpatient rehabilitation and two surgical procedures required to manage his HO. This will include subjective and objective outcomes, physical and other, from his initial assessment to the present date. A brief review of HO will be provided. We hope that this case will be instructive to healthcare professionals presented with clients with similar concerns.
Key practice points: acquired brain injury, paediatric, rehabilitation

Adapted yoga for neurological impairment

Bidgood L.

Presenter: Lisa Bidgood
Associate Director of Allied Health and Senior Project Advisor - Allied Health Implementation Program; Caulfield Hospital VIC

Aim: Through the adaptation of traditional yoga poses our mission is to transform trauma and loss into an inner capacity of hope, acceptance and potential. The impact of physical, cognitive and sensory deficits following a brain injury greatly affects a persons' sense of self, which has a significant influence on health and wellbeing. Through the benefits of movement and breath, the participant attains a powerful sense of expansion and rejuvenation – a connection between mind and body. Vital when your body no longer works nor feels the way it once did. **Program outline:** Participants with a neurological impairment are invited to attend a 10 week program of adapted yoga. The adaptations are individualised to meet the abilities of the participant, and poses can be seated or standing within the group. Typical classes consist of asana (poses), pranayama (breathing techniques) and meditation for a total of 60 minutes. A home program of practice is encouraged. **Evaluation of the program:** The pilot has run two programs with a total of 9 participants (6 providing feedback). Evaluation was conducted via a survey upon completion of the program. This provided some quantitative data and an opportunity for clients to express their experience in their own words:

- 83% reported improvement in sit to stand
- 100% reported more confidence in their body's ability
- 67% reported increased energy after yoga
- 100% reported decreased stress levels
- 55% had incorporated the practice into their daily life (mindfulness and breathing practices for stress management.)

Participants also reported they enjoyed the "positive energy", "group togetherness", "personalised movements to meet my ability" and the "relaxation techniques". **Uniqueness:** This is the only adapted yoga group for clients with a neurological impairment run within a NSW Health facility. Due to the uniqueness of the group in both health and yoga circles, it was featured in the September issue of the Australian Yoga Journal.

Concurrent Sessions: Intervention

Chair: Jeremy Gilchrist

Code-switching in Malay-English bilinguals with traumatic brain injury

Jalil S.B., Body R. & Herbert R.

Presenter: Sajlia Binte Jalil
Senior Speech Therapist, Changi General Hospital Singapore and University of Sheffield

Background: Code-switching is a complex yet automatic process commonly present in the conversations of neurologically-intact bilingual persons. Bilingual persons need to maintain strict separation between their languages when needed, select the appropriate language to speak for a particular occasion, and bring both languages together when appropriate. Skills such as inhibition (to ensure that the second language does not intrude when inappropriate), pragmatic behaviour (taking into account the language preferences of communication partners), planning, and strategizing (deciding on which language medium best highlights a point of importance), are necessary for this to happen. Bilingual adults with traumatic brain injury (TBI) may have deficits in these areas and might display inappropriate code-switching as compared to the more socially acceptable patterns displayed in the non-TBI population. **Research question:** (i) What are the similarities and differences in the pattern and amount of code-switching used by bilingual adults with vs. without TBI? (ii) Does code-switching behaviour change over time (given neurological recovery) in the TBI population? **Method:** Six 5-minute conversations (between two non-TBI and four TBI-familiar partner dyads) were recorded within the clinical setting and transcribed using conversation analysis (CA) methodology. The patterns of code-switching observed in the conversations were analysed for similarities and differences in terms of amount and function. **Results:** Differences in code-switching patterns appear to exist not only between TBI and non-TBI dyads, but also between the non-TBI dyads. Factors such as language proficiency seem to influence the amount and nature of code-switching in non-TBI data. In the TBI data, inappropriate code-switching with a non-bilingual communication partner in the presence of another who is bilingual was observed. Code-switching was used to a limited functional repertoire in conversation compared to the non-TBI data in the early stages of TBI but appears to increase after approximately 5 months. **Conclusions:** Further conversation samples are required to ascertain if code-switching patterns observed in these six samples are similar across a larger population of TBI and non-TBI conversations.

A systematic review and meta-analysis of the non-pharmacological management of attention deficit following acquired brain injury: an update

Virk S., Morrow A., Williams T. & Brunsdon, R.

Presenter: Sohaib Virk
Medical student, University of New South Wales

Background and aims: Attention deficits are common cognitive sequelae of acquired brain injury (ABI) and have been strongly linked to poor social, educational and vocational outcomes. A systematic review and meta-analysis conducted for studies published between 1995 and 2010 revealed a non-significant treatment effect of non-pharmacological interventions for post-ABI attention deficits. Only 12 randomised control trials met the inclusion criteria at that time. However, given the increased focus on neurocognitive rehabilitation in recent years, our aim is to update this previous systematic review in order to provide further evaluation of the efficacy of such non-pharmacological interventions. **Method:** We conducted the updated systematic review in line with the previous 2010 review. This included a search of MEDLINE, EMBASE, PsycINFO and the Cochrane Central Register of Controlled Trials (CENTRAL). The search encompassed new peer-reviewed, randomised-controlled trials that examined the effect of non-pharmacological interventions on attention in individuals with documented post-ABI attention deficits. Articles published from January 2010 to December 2013 were included. **Results:** We will present updated meta-analysis results, synthesising data from recently published randomised control trials with those identified in the 2010 systematic review. **Conclusion:** The findings of our review should provide clinicians with greater clarity about the efficacy of non-pharmacological interventions in treating post-ABI attention deficits.

Concurrent Sessions: Implementation

Chair: Jane Murtagh

Promoting client participation through the WHO ICF

Dunne M. & Hummell J.

Presenter: Michael Dunne
Westmead Brain Injury Rehabilitation Service

Aims: The Community Rehabilitation Team (CRT) comprises a clinical psychologist, occupational therapist, physiotherapist, social worker and speech pathologist. The CRT primarily provides home and community based, goal oriented, culturally sensitive, short-term therapy services for adults with traumatic brain injuries and their families. Since 2004, the CRT has been using the World Health Organization (WHO) International Classification of Functioning, Disability and Health (ICF) as a framework to guide multi-professional service provision, develop client and family goals and to evaluate goal achievement. **Program outline**: Team members collaboratively develop broad and specific goals with clients and family members. These are documented in a database according to the appropriate ICF Functioning and Disability components - *body function and structure*, *activity* and *participation*. The specific goals are further classified using the relevant ICF domain/s (1st level) and categories (2nd level). **Evaluation methods**: At 3 to 4 monthly intervals, client and family goals are reviewed at a team meeting and new goals documented. An analysis of goal achievement was most recently conducted in 2012. Findings from this review demonstrated that service delivery during the 2011 calendar year was primarily directed at enhancing client goal achievement for the ICF *activity* and *participation* components. Findings further indicated positive change in the *categories* of leisure, insight, and speaking. As a result of this evaluation, the team commenced documenting key *Environmental Factors* barriers and facilitators for each client. **Uniqueness of program**: The CRT uses a novel application of the ICF to clinical practice which promotes a focus on the *participation* of clients in relevant life situations and in developing and evaluating individualized client goals. This is consistent with internationally accepted principles on the provision of home and community based therapy services.

Development of an expert allied health workforce for a new state-wide ABI service

Somerville L., Watterson D., McGrath R. & Gates S.

Presenter: Lisa Somerville
Associate Director of Allied Health, Alfred Health Victoria

Aims: (1) To design a dedicated allied health workforce that will provide evidence-based care to the ABI clients across the continuum; (2) To minimise duplication across disciplines and service streams (inpatient and community); (3) To utilise transdisciplinary approaches to provide domain-based intervention; (4) To ensure that all allied health interventions are directed by patient-led goals. **Program Outline:** The Alfred Health ABI Service is due to open in Aug 2014. The purpose built and designed facility is currently under construction. There are three high level elements of the model of patient flow through the ABI rehabilitation service from intake to discharge. The Community ABI Service and Transitional Living Service will work in collaboration with various existing disability and community support services, and also local rehabilitation services providers.

There are three potential streams of care for patients in the target group admitted to the ABI rehabilitation service. (1) Patients in Post Traumatic Amnesia (PTA); (2) Patients with complex medical and behavioural needs (with or without PTA) requiring slow stream rehabilitation. Patient led goals for rehabilitation will be established and a comprehensive rehabilitation plan commenced. (3) Patients in low coma arousal who will only be admitted for care and discharge planning to appropriate destination. This paper will describe the development of allied health workforce competencies for each discipline and grading of Allied Health Professional that will enable the implementation of a transdisciplinary intervention approach. **Evaluation Methods:** The proposed evaluation of the allied health workforce will be included as part of the ABI service process evaluation. The relevant aspects of this proposed evaluation will be discussed. **Uniqueness of the program:** This paper describes a rare opportunity to design a dedicated workforce from the commencement of the specialised, statewide service. It will offer an opportunity to develop a workplace culture that promotes a transdisciplinary philosophy.

Concurrent Sessions: Implementation

Chair: Jane Murtagh

The transition from primary school into high school for children with acquired brain injury

Kerfoot S., Brandtman T. & Stewart K.

Presenter: Sally Kerfoot
Brain Injury Service, Kids Rehab, The Children's' Hospital at Westmead

The transition from primary school into high school is frequently a challenging period in the life of teenagers with acquired brain injury (ABI) and their families. In order to ensure this transition is as smooth as possible, as well as a positive experience, the occupational therapists from Kids Rehab at the Children's Hospital at Westmead have offered annual participation in high school transition groups for all eligible outpatients from the brain injury service. This program has been in place for many years, with data from pre and post testing available since 2005. A review of the current literature regarding transitioning from primary into high school in the acquired brain injury population, along with a retrospective analysis of the high school transition groups from the past 8 years will be presented. Recommendations for the future direction of the high school transition program offered to this population to facilitate successful transition into high school will be presented. Recommendations will consider the ongoing role of such groups with high school starters who have an ABI and how the increasing uptake of technology amongst school students can be maximised.
Key practice points: acquired brain injury, paediatric, high school transition

Sustaining resilience among families supporting relatives with traumatic injury: Translating strength 2 strength into practice

Simpson G.K., Care-Unger C. & Jones K.

Presenter: Dr Grahame Simpson
Senior Research Fellow & Research Leader, Brain Injury Rehabilitation Research Group, Ingham Institute for Applied Medical Research; Social Worker-Clinical Specialist, Liverpool Brain Injury Rehabilitation Unit

Aims: Building resilience among families supporting relatives with traumatic injury will contribute to making the provision of long-term family support sustainable. To address this issue, a psycho-educational program (Strength 2 Strength) was developed and trialled among 8 rehabilitation centres across Sydney and NSW. The current translation project now aims to install S2S as part of routine clinical practice across NSW. The four aims of the project were to (i) map potential stakeholders across the health, disability and community sectors who could deliver S2S; (ii) provide training for potential facilitators in the delivery of S2S; (iii) finalise a manual for future training of prospective facilitators; and (iv) develop a sustainability strategy that includes ongoing mentoring of S2S facilitators. **Methods:** For objective (i) a mixed approach of brainstorming to identify potential stakeholders with known "experts" combined with a snowballing methodology has been devised. For objective (ii) a series of three facilitator training workshops will be conducted across the 12 month period. The development of the manual (objective iii) will occur as an iterative process, with successive versions refined and trialled through the workshops, and finalised by the end of the project. Participants provide feedback from each workshop by means of a purpose-designed evaluation form. To address objective (iv) a series of mentoring pathways and evaluative mechanisms are being developed. **Results:** To identify stakeholders, a data protocol has been devised based on snowballing principals and is being administered to potential facilitators of the S2S program. Results are entered into a two dimensional matrix, mapping onto capacity and level of interest. Mapping of the stakeholders will employ geographic identification software. For objective (ii) the first facilitator training workshop was held in November 2013. The xx participants who attended the workshop provided a global satisfaction rating of xx on a 5-point Likert scale. For objective (iii) work has commenced on manualising the facilitator training program, using the November workshop material as a starting point. Finally, work has commenced on developing mentoring pathways to follow on from the facilitator training workshops which includes a mix of web-based and group-based mentoring mechanisms. The first mentoring workshop will be held at the end of March. **Discussion:** The current project provides an example of translation from research into clinical practice. It addresses challenges of both scaling up a program for state-wide delivery and establishing mentoring processes that will meet the needs for sustainability and treatment adherence in program delivery.

Concurrent Sessions: Participation

Chair: Irena Gordon

iPad use in rural health

Young A., Rogan A. & de Roover A.

Presenter: Amanda de Roover
Rehabilitation Coordinator, New England Brain Injury Rehabilitation Service, Tamworth

The Interact Home Telehealth Project was implemented in July 2012 as a joint venture between HNELHD and the Department of Broadband, Communications and the Digital Economy. The goals were to implement viable home telehealth models of care to empower consumers in their healthcare, reduce social isolation and improve equitable, timely access to rural healthcare services. NEBIRS and NRSCIS are rural outreach health services providing healthcare over a large geographical area to people with a traumatic brain injury and spinal cord injury respectively. This paper will highlight how NEBIRS and NRSCIS accessed the Interact project and its trial iPads to facilitate health goals, improve access to information and enhance communication for remote and rural clients. The take home messages are that access to technical support was essential to the success of the iPad trial, and that the iPad is a mainstream, portable and socially acceptable technology that meets many varied health goals across different disability groups.

Occupational therapists contextualising advocacy in brain injury rehabilitation settings

King D.

Presenter: Donna King
Occupational Therapist/Case Manager, South West Brain Injury Rehabilitation Service Albury NSW

Background: The skill of advocacy has been noted as essential in any interaction between an occupational therapist and client. The specialty area of brain injury rehabilitation (BIR) is an area of practice that requires advocacy to ensure that a person with a brain injury experiences the right to engage in their chosen occupations. However, there have been no studies exploring the use of advocacy by occupational therapists working in BIR. **Aim:** This study investigated how occupational therapists working in BIR defined, and implemented advocacy when working with clients. **Method:** An interpretative phenomenological analysis (IPA) approach was used to guide planning, data collection, and analysis. Thirteen occupational therapists, from six NSW metropolitan and rural BIR units, participated in semi-structured interviews. All interviews were transcribed and member-checked, prior to in-depth idiographic, inductive and interrogative analysis of each transcript. **Results:** Participants commonly referred to the representation and education of clients and significant others when defining *advocacy*. They indicated that advocacy was a skill and strategy all BIR workers used with their clients. The participants were unable to identify the provision of advocacy within this setting to be unique to the occupational therapy staff. However, they all felt that occupational therapists were well suited to advocate for clients in BIR settings. **Conclusion:** Although participants had difficulty identifying unique ways in which occupational therapists used advocacy in BIR settings they all agreed that advocacy is an important skill for occupational therapists to further develop and implement.
Keywords: Advocacy, represent, education, occupational therapy

Concurrent Sessions: Participation

Chair: Irena Gordon

Efficacy of leisure intervention groups in rehabilitation of people with an acquired brain injury

Mitchell E.[1,2,3], Passey M.[2,4] & Veitch C.[2]

1. South West Brain Injury Rehabilitation Service /Murrumbidgee Local health network,
2. University of Sydney, Sydney, NSW, Australia.
3. Health Education and Training network (HETI)
4. University Centre for Rural Health – North Coast*, University of Sydney, Lismore, NSW*

Presenter: Elizabeth Mitchell
Physiotherapist/Rehabilitation Coordinator, South West Brain Injury Rehabilitation Service Albury NSW

Purpose of study: To determine whether participation in a leisure intervention program called "Pushing the Boundaries" targeted for individuals who have an Acquired Brain Injury (ABI) living in rural/regional NSW, improved the leisure satisfaction, self-esteem and quality of life of participants. **Methodology:** Using a pre and post intervention design, participants completed the Leisure Satisfaction Scale, Rosenburg Self Esteem Scale and the World Health Organisation Quality of Life scale –bref, prior to each program, immediately following and at three months post program. Data were analysed using a paired Wilcoxin test. Individual leisure goals generated by participants during the program were also investigated. **Summary of results:** Participants were eight men and four women aged between 19-49 years who were recent clients of a rural Brain Injury Rehabilitation Service. The majority (7/12) had acquired their ABI more than two years previously and for most (10/12) the cause was trauma. Program participants showed clinically important and statistically significant improvements in leisure satisfaction (p=0.002), self-esteem (p=0.03) and quality of life (p=0.02 to 0.008 for 4 domains of the WHO-QOL-Bref scale) three months post program. **Conclusions:** The findings indicate that adults with an ABI participating in a "Pushing the Boundaries" program can experience improvements in leisure satisfaction, self-esteem and quality of life.

A case study of acquired brain injury: where does recovery end?

Hancock J.A., Thomas B.M. & Brandtman T.

Presenter: Jan Hancock
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The goal of rehabilitation post brain injury is optimising the long term physical, cognitive and social outcomes for an individual. Rehabilitation starts in the acute (hospital-based) phase, is characteristically intense immediately post discharge, and then interventions lessen and cease with time. Often the first 12-24 months post brain injury (or neurological insult) is viewed as the critical period to "rehabilitate". For children who sustain an acquired brain injury (ABI) in their formative years, their pattern of recovery is made more complex and prolonged by the process of physical, cognitive and social development and their inevitable maturation. A case will be presented (including videos) of a 16 year old boy, 10 years post hemispherectomy for Rasmussen's encephalopathy. Subjective and objective outcomes, physical and other, pre and post implementation of a gym based program will be presented. Pertinent issues and current evidence related to long term outcomes in the paediatric ABI population will be discussed, including school and community participation, physical activity, weight management, cognitive function and family burden. This presentation will also present information on a new data registry for children with ABI, and will promote discussion regarding long term management of children with ABI.
Key practice points: acquired brain injury, paediatric, rehabilitation

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Session 4: Making it Happen

Chair: Deborah Hoban

Easy Advocacy Rows to Hoe: Concussion in Sport?

Presenter: Nick Rushworth

Publicity surrounding the 4,500 former gridiron players engaged in class action lawsuits against the National Football League (NFL) in the United States – who generally allege that the NFL either knew, or should have known, about the potential long-term consequences of repeated concussions – has led to increased research and media interest in the cumulative effects of the injury. But it's only as recent as last November that the international authority on the subject – the "Concussion in Sport Group" – acknowledged, for the first time in its history, that concussion is a "subset of TBI". This presentation will provide a brief overview of a policy paper on concussion in sport Brain Injury Australia has prepared for the Australian Government as well as its current partnership with Sports Medicine Australia in delivering a nationwide concussion education campaign built around Brain Injury Australia's "5Rs" of concussion.

Nick Rushworth has been Executive Officer of Brain Injury Australia - the national peak acquired brain injury advocacy organisation – since 2008. In 1996, armed with a bicycle, Nick attacked two cars. The cars won, but Nick's recovery from a severe traumatic brain injury was exceptional. Formerly a producer with the Nine Television Network's "Sunday" program and ABC Radio National, Nick's journalism has won a number of awards, including a Silver World Medal at the New York Festival and a TV Week Logie Award.

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Session 4: Making it Happen

Chair: Deborah Hoban

Investigation of vocational outcomes for people with traumatic brain injury: Laying the groundwork for specialised vocational rehabilitation in NSW.

Presenter: Philippa McRae

Background and aims: This study aimed to examine employment outcomes and participation in vocational rehabilitation (VR) services by metropolitan and rural clients of the Brain Injury Rehabilitation Program (BIRP), NSW Health. **Method:** Participants included all BIRP outpatients attending between April 2011 and July 2012, who sustained a traumatic brain injury (TBI) as an adult (*N* = 721). The majority of clients had a severe injury. Data were collected about pre-injury employment, post-injury employment, participation in VR services, and physical or psychosocial factors impacting upon ability to return to work. Additionally, case study interviews and clinician focus groups contributed a description of the existing service systems and recommendations for improving service access and client outcomes. **Results:** Pre-injury, 75% (n = 532) of clients were in paid employment. Post-injury, 42% (n = 304) had engaged in paid employment at some point, with 29% (n = 207) currently working. There was a significant shift from full-time to part-time employment post injury as well as continued restrictions and reduced productivity for 50% of employed clients. Pre-injury employment and education status, length of time post-injury, severity of injury and post-injury psychosocial status all impacted significantly on clients' ability to gain and sustain employment post-injury. Forty-one percent (n = 294) of clients had participated in VR services post-injury. Of these, 198 clients (67%) had achieved open employment, with significantly better outcomes for those resuming their pre-injury employment. **Conclusions:** This is the largest multi-centre study to examine employment outcomes and vocational participation for people with TBI in Australia. Identification of employment barriers and particular disadvantages posed by injury gave rise to recommendations to improve service options. Three key program models were recommended for implementation in NSW: **(i)** An early intervention model targeting the efficient co-ordination of RTW for those able to resume their pre-injury employment; and **(ii)** A "work trial" program for people seeking new employment, requiring intensive placement and training support. These programs will be implemented by selected vocational service providers at 4 BIRP regions in NSW, commencing in 2014. This initiative is a partnership between ACI and the Safety, Return to Work & Support Division (SRWSD) involving BIRP services, the NSW Motor Accident Authority; Workcover and Lifetime Care and Support Authority.

Philippa McRae trained in Occupational Therapy at The University of Sydney, with both a Bachelor and Masters degrees and has worked in community-based neurological rehabilitation throughout her career. She has been the Manager of the Head2Work vocational rehabilitation program at the Brain Injury Rehabilitation Unit, Liverpool Hospital for the past 13 years. This team of 5 staff provide the only specialist dedicated TBI VR program in NSW. Philippa has undertaken vocational outcome studies within the Head2work program (2007-2009) and was Project Officer for the BIRP Vocational Participation Project (2011-2012), the largest multi-centre study to examine vocational participation for people with TBI in Australia.

Session 4: Making it Happen

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The NSW BIRP: Realising our potential as an international model of best practice.

Presenter: Dr Grahame Simpson

The NSW BIRP is one of few specialist state-wide models of care that exist anywhere in the world. The universal access to a decentralised network that incorporates metropolitan and rural centres, the continuum of care with integrated inpatient and community rehabilitation services, the team-based approach to community rehabilitation, and the integration of paediatric and adult services within the one service system are all significant features. Since the introduction of the Brain Injury Rehabilitation Directorate, there has been a growing capacity across the system to develop as a national and international benchmark in brain injury rehabilitation. A number of elements are important in achieving this aim. Clinician-driven decision making in determining the direction of the BIRP helps to maintain the state-wide consensus. State-wide data collection provides crucial information about the profile and performance of the BIRP. For example, we know that the BIRP has an annual intake of about 1,000 new admissions and we have important demographic, injury and functional data about these clients. It provides us the opportunity to now benchmark against international schemes such as the US TBI Model Systems for TBI rehabilitation so that we can evaluate our performance. The development of the network and the data collection systems have also laid the platform for a new level of research into key areas of rehabilitation service provision, with a rapid translation of results back into practice at the local level. The ability to engage with and utilise external expertise with a network-based rather than centre-based focus is also crucial. For example, as the Australian Rehabilitation Outcomes Centre refines and upgrades it processes, we have the clearest understanding yet on where the BIRP is positioned within the NSW TBI rehabilitation landscape. Similarly, the resources that the Agency for Clinical Innovation have available in both clinical redesign and health economics will contribute to the further development of the BIRP clinical pathways and provide data on the current and projected costs of the program. The BIRD has also facilitated the development of knowledge diffusion processes through state-based training with web-support which can ensure clinicians have access to and can be upskilled in the latest evidence-based practice. The ultimate promise is to provide not only positive outcomes at an individual client level, but to aim for population-based outcomes, so that anyone who sustains a severe TBI in NSW will be able to access world's best practice in TBI rehabilitation.

Dr Grahame Simpson is Senior Research Fellow, Group Leader of the Brain Injury Rehabilitation Research Group at the Ingham Institute of Applied Medical Research, and Social Worker-Clinical Specialist at the Liverpool Brain Injury Rehabilitation Unit in Sydney Australia. Dr Simpson has worked at the unit for the past 25 years as a clinician and clinical researcher addressing complex areas of psychosocial adjustment to traumatic brain injury. Dr Simpson is Associate Editor of the journal Brain Impairment and member of two editorial boards, the Journal of Head Trauma Rehabilitation and Australian Social Work.

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Poster Presentations

Posters will be displayed in the Auditorium Foyer on Thursday 6th March during Morning Tea, Lunch and Afternoon Tea.

1. **'BILS' (Brain Injury Life Skills): Home based life skills rehabilitation program for people with mild to moderate brain injury**
   Author: Becky Zropf

2. **Rehabilitation Case Management Network, Generation 2.**
   Authors: Jessica Barnes, Katrina Curtain, Colleen Andreacchio & Marion Fisher

3. **Examining employment outcomes and vocational participation for people with traumatic brain injury in NSW: A multi-centre study**
   Authors: Grahame Simpson, Philippa McRae, Lisa Hallab & Barbara Strettles

4. **NSW Brain Injury Rehabilitation Program**

   a. **Service Activity for 2011**
   Authors: Sunghwa O'Mahony & Barbara Strettles

   b. **Outcome measures for children and young people with brain injuries**
   Authors: Helen Badge and NSW BIRP Clinicians

   c. **Community Outcomes in adults with brain injuries**
   Authors: Helen Badge and NSW BIRP Clinicians

   d. **Transitional Living Programs: Clinical Outcomes**
   Authors: Helen Badge and NSW BIRP Clinicians

Thankyou & Evaluation

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Please leave your completed Evaluation Forms in the auditorium before you leave, or email to Maysaa Daher: maysaa.daher@sswahs.nsw.gov.au.

THANK YOU FOR ATTENDING THE 13TH BRAIN INJURY REHABILITATION PROGRAM FORUM

Videos of all presentations will be accessible online after the Forum.
ACI Members will receive the notice that the presentations are available and the link to download in Clinician Connect, the official ACI newsletter.

If you wish to receive the newsletter and are not yet a member then visit www.aci.health.nsw.gov.au and complete the membership application.

Attendance certificates will be sent by email within one week of the Forum.

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