December 2013

Newsletter

Message from the Scientific Director, Professor Roslyn Boyd

In September I attended a workshop by the Azov Sea in Ukraine to examine the Evidence based principles of management for Children with Cerebral Palsy in a global perspective. The outcome of the workshop was the formation of an International Federation/ Alliance of Academies of Cerebral Palsy, which will result in greater advocacy for the rights of children with CP. This Federation will meet at the 5th International Cerebral Palsy Conference in Stockholm on 1st-4th June, 2016.

In October I was an invited speaker at the European Academy of Childhood Disability where I presented on: From whose perspective, researchers, clinicians, families of children with marked CP (GMFCS IV and V) in clinical trials: whose life is it anyway. I spoke about the lessons learnt from two randomised trials in which the perspectives of researchers (reduction of hip displacement), clinicians (prevention of hip surgery) and families (reduction of pain, improvement of care and comfort) were not necessarily aligned. As a new European report from the SPARCLE study has outlined, the major barrier to participation in adolescents with CP is pain. I highlighted how care and comfort goals, measurement of pain and quality of life for children and their carers needs to be a priority.

For our families, collaborators and key stakeholders I hope you find the QCPRRC study updates and highlights informative reading, QCPRRC has been very busy and productive. Warm regards, Ros Boyd

Evidence based principles of management of CP: a Global Perspective - Azov Sea Workshop, Ukraine.

22 experts from all of Europe, India, Africa and North America participating in this international think tank.
A link to the abstracts in English is provided below.

The focus of the workshop was to develop guiding principles for rehabilitation for children with cerebral palsy, that should be:

(i) evidence based
(ii) activity based (i.e. child performs the activity themselves)
(iii) relevant/salient and goal directed
(iv) parent directed
(v) in the appropriate environment
(vi) should consider ‘what the child is learning’ and
(vii) delivered at the “just right challenge”. These principles of rehabilitation are relevant globally.

**Relationship between communication skills and gross motor function in preschool aged children with cerebral palsy**


This paper explores the relationship between communication, gross motor functioning and other demographic and comorbid variables in preschool aged children with CP. We found that almost 2/3 of the children met criteria for further speech pathology evaluation or intervention. While the majority of these were in GMFCS III-V, there was a minor representation from GMFCS I-II. We found a stepwise relationship between communication ability and gross motor function, with children who have more mild gross motor impairment having better communication ability. Children who were born prematurely had better communication ability when compared to their term-born peers. This result highlights the need to screen the communication development of all children with CP.

**Changes in the integrity of thalamocortical connections are associated with sensorimotor deficits in children with congenital hemiplegia**


This study looked at the integrity of brain projections via the thalamus in 42 children with congenital hemiplegia using diffusion brain imaging. The results showed loss in the integrity of projections that connect with sensorimotor regions on the side of the brain opposite to the impaired limb. These changes were associated with deficits in sensorimotor function. The findings further enhance our understanding of the brain changes that may underpin deficits in sensorimotor function in children with unilateral cerebral palsy.

**Magnetic resonance diffusion tractography of the preterm infant brain: a systematic review**


Tractography is a relatively new technique that allows the delineation of connections in the living brain to study brain development. We conducted a systematic review of 22 studies which used tractography to study brain maturation in preterm babies. The studied tracts included the motor and sensory tracts. There is some evidence to suggest that this technique can provide useful information for the prediction of outcomes following preterm birth.
8 staff from the QCPRRC attended the meeting in 2013. These were some of their highlights.

Laura Miller: Peter Rosenbaum, MD. presented the Presidential Guest Lectureship during the first general session of the meeting. In his presentation titled "Classification in Developmental Disability: Evidence of OCD, or a Step Forward?" Prof. Rosenbaum discussed the usage of the Manual Ability Classification System (MACS) and Gross Motor Function Classification System (GMFCS) in children with Cerebral Palsy. He was pleased to report that most scientific papers involved in research with children and youth with CP, reported on the MACS and GMFCS level of children when describing participant characteristics. However, he warned of the tendency for researchers and clinicians to link the classification levels to descriptions of mild, moderate or severe levels of impairment. Prof. Rosenbaum emphasized we should avoid describing children classified as MACS and/or GMFCS I or II as having a mild to moderate impairment. Nor should we refer to a child at MACS and/or GMFCS level IV and V as having a severe impairment. Rather, we should use the classifications for the purpose for which they were developed; describing functional ability and HOW children do things in order to facilitate communication with families, between clinicians, to policy makers and to assist with goal setting and defining groups in research.

Stephanie Ross: Seth Warschausky, PhD and Jacqueline Kaufman, PhD, presented an interesting course on ‘The advances in neuropsychology of cerebral palsy’. The course covered the nature of neuropsychological assessment in children with cerebral palsy, as well as the neuropsychological risks associated with cerebral palsy. They examined the neuropathology associated with cerebral palsy and importantly, the clinical implications of a neuropsychological assessment. The course outlined the importance of neuropsychologists as school liaisons and as advocates for additional support within the school setting. Interestingly, Dr Warschausky highlighted some areas of concern with the level of support children receive at school which are also commonly seen in the Australian schooling system. Dr Kaufman highlighted the need for early intervention in children with cerebral palsy to aid with their learning and to minimise the risk of ongoing academic difficulties. Overall, this was an interesting course which reiterated the importance of examining each child’s cognitive strengths and difficulties and the value of additional support within the school environment.

Louise Mitchell: Encouraging physical activity in children and adolescents with Cerebral Palsy was frequently mentioned at the AACPDM Conference as an area that is receiving more research attention. I attended an informative session looking at setting up adaptive physical activity programs. One interesting concept being conducted in St. Louis Missori is a summer camp where participants (both with and without CP) have the opportunity to learn new sports such as wheelchair basketball or martial arts as well as working on specific skills. There is a website with information for parents and clinicians on physical activity: http://www.ncpad.org/
Felicity Brown has submitted her PhD!

Supporting parents after paediatric acquired brain injury: Evaluation of Stepping Stones Triple P combined with Acceptance and Commitment Therapy

Felicity Brown, Dr Koo Whittingham, Prof. Roslyn Boyd, Dr Lynne McKinlay, AProf. Kate Sofronoff

The aims of this research thesis were to:

1. Conduct preliminary research through literature reviews and focus groups to develop an understanding of the unique parenting experiences, challenges, and coping strategies of parents of children with an acquired brain injury (ABI).

2. With these results in mind, to conduct a randomised controlled trial (RCT) of parenting interventions for this population, comparing Stepping Stones Triple P as well as a Stress Management intervention to a waitlist control.

The RCT was conducted with 59 families of children aged 2-12 with an ABI. The key finding from the project was that, compared to the waitlist condition, the intervention consisting of an Acceptance and Commitment Therapy Workshop plus a Group Stepping Stones Triple P program led to improvements on child behaviour and emotional functioning, parent confidence, parenting style, parent anxiety and distress, family functioning, and disagreements between parents.

This project presents the first randomised controlled trial of an evidence-based parenting intervention in the ABI population. The results of this trial help to inform health professionals of effective methods of intervention in paediatric ABI. Successful early management of child behavioural and emotional problems, and parent stress and adjustment, has the potential to improve long-term outcomes and reduce future use of mental health services.

Achievements

• Felicity was awarded a Queensland Children’s Medical Research Institute Science PhD Scholarship.
• Her thesis was awarded the 2013 Australian Psychological Society ACT Interest Group Award.
• To date she has had 4 first-author papers published from her thesis, with 2 papers under review.
• The paper from her RCT was nominated for the 2013 Gayle G Arnold Award of the American Academy of Cerebral Palsy and Developmental Medicine.
• She was also awarded the Graduate Student International Travel Award in 2013, to travel to the USA to share her research findings and learn from researchers at the University of Nevada, Reno, and the Medical College of Wisconsin, Milwaukee.
• Felicity has been awarded an AusAACPDM student scholarship to present at the annual meeting in March 2014.
Laura Miller
Laura was awarded BEST PAPER at the 2013 Occupational Therapy Australia National Conference and Exhibition held in Adelaide in July 2013. The title of the paper was “Contextual factors associated with mastery motivation in children with congenital hemiplegia”.

Jo George
Joanne was awarded a Health Practitioner Researcher grant in the 2013/2014 round for her project entitled “The Relationship between brain structure and function in very preterm infants, and its ability to predict neurodevelopmental outcomes”.

Dr Lee Barber
Dr Lee Barber has received a prestigious Peter Doherty - Australian Biomedical Fellowship through the National Health and Medical Research Council of Australia. Lee is one of only five Early Career Postdoctoral Researchers at The University if Queensland to receive this award. The fellowship will enable Lee to continue his important research investigating the influence of treatment on leg muscle function in children and young adults with CP. For the next four years Lee will be busy conducting ultrasounds to understand how muscles grow, how muscles function during walking and running and how muscles are affected by treatments such as Botox and orthopaedic surgery.

In conjunction with researchers from The University of Queensland and Griffith University, Lee has also been successful in receiving funding from the CP International Research Foundation to investigate the relationship between muscle function and activity performance through the adult lifespan in CP. The research will chart and understand the loss of physical mobility in individuals with CP aged 18-65 years.

Lee will also be working with a group from The University of Western Australia after receiving a UWA-UQ Bilateral Research Collaboration Award. Lee will share his skills and knowledge regarding 3D freehand ultrasound and assist other clinicians and researchers to further our understanding of muscle growth and function in CP.

Dr Leanne Sakzewski
Leanne has been awarded a prestigious UQ Postdoctoral Fellowship for Women. Until 2017 she will be investigating the project: “Cluster randomised controlled trial to improve translation of intensive high quality upper limb rehabilitation for children with unilateral cerebral palsy”.

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www.som.uq.edu.au/cerebralpalsy
Meet our new team members…

Hans Kainz - Biomechanist, PhD Candidate

Hans completed a MSc in Sport Science and Kinesiology at the University of Salzburg, Austria and a second MSc in Healthcare and Rehabilitation Technology at the University of Applied Science Technikum Wien, Austria. Prior to moving to Australia, he completed a 5-month research project as a Marshall Plan Scholar at the Florida Gulf Coast University, USA. Since March 2013, Hans has been pursuing his PhD research within the Centre for Musculoskeletal Research, Griffith University. His research is entitled ‘Validation and use of contemporary methods in musculoskeletal modelling of cerebral palsy gait’. In January 2014, he will begin experimental work in the gait laboratory at the Royal Children’s Hospital in Brisbane, Australia.

Ayano Kusakabe - Physiotherapy Honours Student

Ayano is currently in her 3rd year studying Physiotherapy at UQ and is delighted to be able to be a part of the research team. The combination of paediatrics and neurological physiotherapy really sparks her interest and she is looking forward to the year ahead! She will be studying the reliability of the Timed Up and Go test (TUG) in children with Acquired Brain Injury with her colleague, Samantha MacNevin.

Samantha MacNevin - Physiotherapy Honours Student

During her final year of physiotherapy studies at the University of Queensland, Samantha’s honours project is investigating the validity of the Timed Up and Go (TUG) test for children with Acquired Brain Injury. Samantha has been a part of the Queensland Physiotherapy Student Association and is building her skills as a physiotherapy aid at a private practice. She is very excited to gain paediatric and research experience.

Dr Denise Brookes - Postdoctoral Research Fellow

Denise joined the QCPRRC team in July 2013 to co-ordinate the research on ‘Bone and Body composition in young children with CP’ with Dr Kristie Bell. As an Exercise Physiologist, completing a Masters and PhD from The University of Queensland, she has extensive clinical and teaching skills in bone and muscle interaction during paediatric growth. Denise shares her role with QCPRRC, the Children’s Nutrition Research centre (CNRC) and in Nuclear Medicine at RBWH.

Bernadette Shannon - Occupational Therapist, UP-BEAT Study Coordinator

Bernadette joined the team at QCPRRC in August 2013. She was previously working as a Senior Occupational Therapist leading the Paediatric OT acute team at Monash Medical Centre in Melbourne. Over the past 9 years she has specialised in assessment and treatment of infants in the neonatal nurseries both in Australia and the United Kingdom. Bernadette is happy to return to Brisbane after many years away, having graduated from a Bachelor of Occupational Therapy at the University of Queensland. She has joined both the UPBEAT team looking at Upper Limb Baby Early Action Observation Training and the PREM massage study and is busy assisting with assessments, data collection and analysis for these studies.

Alice Greenwood - Administration Assistant

Alice joined the team at QCPRRC in October 2013, bringing Administration experience from her previous roles with the University of Queensland School of Medicine, the Royal College of Obstetrics and Gynaecology and Monash University. Alice’s role provides support to the Scientific Director, staff and students at the QCPRRC.

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Farewell to team members...

Dr Zoe Cahill
Research and Operations Manager

We say farewell to Zoe Cahill who has worked as the QCPRRC Research and Operations Manager for just under 3 years. In her time with us, Zoe’s highlights included working with our team, collaborators and major donor the Merchant Charitable Foundation to achieve the Qld Government Smart Futures Co-investment Fund which supports our eBRAIN program (Mitii). She also worked closely with our students, assisting them in their progress through the milestones of their PhD and to achieve major success, including competitive scholarships and project funds, publications in high ranking journals, and conference awards. Zoe was also proud of building a strong operational and administrative support base of strongly skilled individuals to support the research team and enable them to focus on core business. Zoe leaves us for an exciting new opportunity within the University of Queensland as Deputy Director Operations for the Australian Institute of Bioengineering and Nanotechnology. We thank her for her wonderful contribution to the team and wish her the very best in her new role.

Ms Sarah Reedman and Mr Simon Beagley
Physiotherapy Honours Students

Honours students Simon Beagley and Sarah Reedman collected new normative data for the Jebsen Taylor Test of Hand Function (JTTHF) in 102 Australian typically developing children aged five to 10 years from five Outside School Hours Care Centres in Brisbane, Australia. This was the first Australian normative study of the JTTHF, and the first study to collect JTTHF norms from five-year-old children. Five-year-old children were found to have significantly different JTTHF total scores when compared to all other age groups (one year age groups); and six year old children were significantly different to nine-year-old children for the dominant hand. In Simon’s analysis, regression modelling for JTTHF total score with each hand found improvements of 0.9 and 0.89 seconds in the dominant and non-dominant hands respectively for every 12 months of maturation in six to 10 year old children. Sarah analysed the reproducibility of the JTTHF and found it to have good test-retest reliability for the total score in typically developing children aged six to 10 years of age. We bid Simon farewell as he starts full time clinical work at a musculoskeletal private practice called Alpha Physio in Sumner, Brisbane. We wish Sarah the best in her new position with the Department of Education, Training and Employment (DETE, Education QLD) as a Physiotherapist. She will be stationed in Roma (420km west of Brisbane) where she will be the sole DETE physio in an area the size of Victoria, servicing children with disabilities from about 40 schools in the region. We also congratulate them both on being awarded 1st class honours in Physiotherapy.

Congratulations

We also welcome Elina, daughter to proud parents Stina Oftedal and her partner Travis born on the 22nd November, weighing 7.7 pounds.

Welcome Charlotte Ann, born to proud parents Jo Bowden and her partner Al on the 8th Sept 2013, weighing 7.5 pounds.
Kath Benfer: Oropharyngeal Dysphagia (Feeding) in Bangladesh

Kath has traded in the spaghetti oops and Arnott’s biscuits (for the standardised feeding assessments) in favour for rice, dhal and bananas! The Oropharyngeal Dysphagia in Bangladesh substudy (part of the Qld CP Child: Growth, Nutrition and Physical Activity Study) has set out to explore feeding, dietary intake and nutritional status in a group of 80 Bangladeshi children with CP, to gain some insights into this important topic in a low income setting. This study has been based at the Centre for the Rehabilitation of the Paralysed (CRP) in collaboration with the Food and Nutrition Unit, International Centre for Diarrhoeal Disease Research Centre, in Dakha, Bangladesh.

With only a week to go and a collection of over 80 dhal recipes from all over Bangladesh (taken as part of the dietary analysis) a special thanks goes out to everyone who has made this study happen. To my research team and supervisors in Australia and Bangladesh. To Jannatul Ferdous, my research assistant who made constant trips to the unit to gather the mothers. And to all the mothers and their beautiful children in the Paediatric Unit who so willingly gave their time to tell us about their child, their home and food... and lots of wonderful chats in my ‘Banglish’.

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PPREMO: Study Prediction of PREterm Motor Outcomes

Prof Roslyn Boyd, Prof Paul Colditz, A/Prof Stephen Rose, Ms Joanne George, Ms Kerstin Pannek

Some babies that are born prematurely can have problems later in life with learning, movement or behaviour. It is difficult to know which babies will have problems and which babies won’t, delaying diagnosis and links to early intervention services.

PPREMO is investigating whether early brain scans (magnetic resonance imaging, MRI) combined with movement and behavioural assessments can help accurately identify which babies are at risk of problems later in life. This may then allow those babies and their families to be provided with the help they need earlier than previously possible.

To date we have recruited 37 preterm babies from the Royal Brisbane & Women’s Hospital Neonatal Intensive Care Unit and they will be followed up until they reach 1 year corrected age. A total of 9 healthy full term babies have also been recruited to act as a reference group.

Ms Joanne George
Ph 07 3646 9609
j.george2@uq.edu.au

Trial ID: ACTRN12613000280707

UP-BEAT: Upper limb Baby Early Action Observation Training

Prof Roslyn Boyd, Prof Jenny Ziviani, Dr Andrea Guzzetta, Prof Virginia Slaughter, Ms Micah Perez, Ms Lisa Findlay, Ms Bernadette Shannon (ARC DP110104292)

In the last six months the UPBEAT team have completed recruitment for our 40 healthy term-born babies, many of whom we have seen for their first home visit and who have started training at home. We continue to seek families whose babies were born with a unilateral or asymmetric brain injury to take part. All babies need to be younger than 9 weeks post-term or corrected age. Participating in this study may enhance the baby’s reaching and grasping skills. At the end of the study, parents will receive a summary report on their child’s development.

We continue to develop the ‘Grasping and Reaching Assessment of Brisbane’ or the ‘GRAB’, which is a measure to evaluate the early development of reaching and grasping behaviours, and to detect asymmetries between hands during reaching and grasping in babies with unilateral or asymmetric brain injury. Early detection of reaching and grasping asymmetries between hands can allow for prompt and early intervention that may help these babies to develop more complex upper limb motor skills that they will need later in life.

We welcome Bernadette Shannon, a Senior Occupational Therapist who has been working in the Neonatal Nurseries at Monash Medical Centre in Melbourne and previously at the University College London Hospital. She has recently returned to Brisbane with her family and joined the UPBEAT team in August.

For more information or if you would like to be involved in this study, please contact:
Bernadette Shannon: P) 07 3646 5540 E) bernadette_shannon@health.qld.gov.au;
Micah Perez: P) 07 3646 5372 E) m.perez1@uq.edu.au

Funding support: Australian Government Australian Research Council
Prem Baby Triple P: Supporting Parents of Preterm Infants

Prof Paul Colditz, Prof Matthew Sanders, Prof Roslyn Boyd, Dr Margo Pritchard, A/Prof Peter Gray, A/Prof Michael O’Callaghan, Prof Virginia Slaughter, Dr Koa Whittingham. (NHMRC 1024345)

Having a very preterm baby can be an extremely challenging time for parents in the NICU with the challenges often persisting as their babies are at a higher risk than term babies for many adverse outcomes including behavioural and learning difficulties.

Recruitment is now at the half way point for the Prem Baby Triple P intervention as a support for families with very preterm babies (<32 weeks gestational age) with 86 RBWH and 75 Mater Mothers’ Hospital families now participating.

The project would like to congratulate PhD students Michael Herd, Tracey Evans and Jess Ahern who have now completed the first phase of their respective data collection and we thank them for their time, work and assistance with the larger project to date.

If you would like to find out more about this project please visit our website or contact us.
Dr Leanne Winter (Project Coordinator)
Ph 07 3646 2349 Email prembabytriplep@psy.uq.edu.au Website: http://exp.psy.uq.edu.au/prembaby

PREMM Study: Massage Therapy for Premature Infants

Dr M Giulia D’Acunto, Dr Andrea Guzzetta, Prof Roslyn Boyd, Prof Paul Colditz, Ms Naoni Ngenda, Ms Penny Love, Dr Melissa Lai, Ms Bernadette Shannon, Ms Sonia Sam, Ms Kerstin Pannek

The PREterm Early Maternal Massage (PREMM) study is investigating early intervention programmes based on the manipulation of the extra-uterine environment, with the aim of improving developmental and functional outcome. Preterm infants recruited into the study are randomised into either the massage group (intervention) or into the control group (routine care). As comparison, a healthy term infant group have also been recruited. Using the MRI compatible incubator (the first available in the southern hemisphere) and dense array EEG amongst other rigorous assessments which correlate highly with long term outcomes, investigations seek to demonstrate the effects of infant massage on neurodevelopment at the clinical, electrophysiological, body composition and brain development level.

The PREMM study has been progressing well. The healthy term infants have all been successfully recruited. Recruitment of pre-term infants has progressed well over the past six months and we continue to recruit infants from 28-32+6 weeks, who are in the 10th to 90th percentile weight, stable off oxygen and who live within 100kms of the Royal Brisbane & Women’s Hospital. Infants have been recruited from RBWH and in Pisa, Italy, and we have been busy applying to expand the recruitment of infants in the study by including Redcliffe, Caboolture and the Sunshine Coast Hospitals.

For more information about the PREMM project, please contact: Melissa Lai melissa.lai@uq.edu.au
Child Study Updates

**CPChild: Gross Motor and Brain Development**

*Prof Roslyn Boyd, Dr Lynne McKinlay, Ms Megan Kentish, Ms Meredith Wynter, Ms Christine Finn, Ms Rachel Jordan (NHMRC 465128)*

The Qld CP child team has had a busy 2013, conducting assessments throughout Queensland, travelling as far afield as Cairns, Townsville, Rockhampton, Mackay and Moranbah, and often visiting children at their home, school or daycare, or co-ordinating assessments with existing hospital appointments.

As the majority of our participants who were born in 2006-2008 have now graduated from the study, 2014 will be focussed on the final assessments for the children born in 2009. We are now recruiting the final participants: children with a diagnosis of cerebral palsy born in Queensland in 2009, who will be turning 5 in 2014. Gross motor assessments are play-based and take approximately one hour to complete.

Analysis of the data continues, with a presentation made in October this year at the American Academy of Cerebral Palsy and Developmental Medicine conference in Milwaukee, USA, on the relationship between health resource costs and performance outcomes in preschool aged children with cerebral palsy. This data will be presented at Australasian Academy of Cerebral Palsy and Developmental Medicine conference in the Hunter Valley early in 2014, along with a workshop on the Early Natural History of Cerebral palsy showcasing the preliminary findings from the study.

**For more information or if you would like to be involved, please contact us:** Rachel Jordan (study co-ordinator) Ph (07) 3646 5541 or email rachel_jordan1@health.qld.gov.au

**Growth, Nutrition and Physical Activity**

*Prof Peter Davies, Prof Roslyn Boyd, Dr Kristie Bell, Prof Richard Stevenson, Ms Camilla Davenport, Ms Stina Oftedal, Ms Kelly Weir, Ms Kath Benfer (NHMRC 569605)*

The Growth, Nutrition and Physical Activity study team has been busy this year conducting assessments, visiting families on outreach and analysing data. Many of the children participating are now being seen for their final assessments. It has been wonderful catching up with families and seeing children graduate from the study after their 5 year assessment. We are now under way with the new arm of the study investigating bone health. Children who are being seen for their 5 year old assessments and who can travel to the Royal Children’s Hospital are eligible to participate in the new study. Flyers have been sent out to families, but please don’t hesitate to contact us if you would like more information.

The team has been working hard analysing data relating to feeding ability, dietary intake and body composition, physical activity, and food textures. A number of our team members presented data at the prestigious American Academy for Cerebral Palsy and Developmental Medicine in Milwaukee in October this year. We are now preparing for the Australasian Academy conference early next year in the Hunter Valley, NSW to present more results.

We are very excited to welcome the arrival of Stina’s baby, Elina. Stina will be on leave for the next few months enjoying this precious time.

**We are still recruiting for the study, and would welcome any children who are born in Qld in 2009 with a diagnosis of cerebral palsy. For more information on the study, or if you would like to participate, please contact Dr Kristie Bell (study coordinator) Ph (07) 3646 5540 or email k.bell@uq.edu.au**

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Mitii®: Move it to improve it for Children with Cerebral Palsy
Prof Roslyn Boyd, Prof Jenny Ziviani, Ms Louise Mitchell, Ms Sarah James, Ms Melinda Lewis, Dr Carly Mayberry, Dr Stephanie Ross, A/Prof Anthony Smith.

The Mitii team have completed recruitment for the study. We were excited to be able to invite children and their families from New South Wales to participate in the trial and have 102 children enrolled. Over 70 children have now had access to the Mitii program from all throughout Queensland and New South Wales. These families have been able to access up to 60 hours of a novel, multimodal internet therapy program in their home. We have been interested to hear how the children and their families have found the program and whether they have been able to achieve their goals and improve their physical, daily living and thinking/learning skills. We were excited to hear that one of our Mitii participants Sarah set a new national record for the 100m sprint! Congratulations Sarah!

Phase 1 of the Mitii trial is almost complete. The team is looking forward to analysing the data that has been collected to see if Mitii is more effective than standard care. Watch this space for information about the results of the trial as they become available throughout 2014!

For more information on Mitii, contact our Mitti team:
Phone: 07 3646 6423
Email: Louise.Mitchell@uq.edu.au; Stephanie_Ross@health.qld.gov.au; s.james2@uq.edu.au;

Mitii®: Move it to improve it for Children with Acquired Brain Injury
Prof Roslynn Boyd, Prof Jenny Ziviani, Ms Melinda Lewis, Ms Emmah Baque, Dr Carly Mayberry, Dr Stephanie Ross, Dr Lynne McKinlay, Owen Lloyd.

Mitii ABI have also finished recruitment! We were pleased to be able to increase our participant numbers to 60 earlier in the year. Many children with acquired brain injuries and their families from regional and rural Queensland have been excited to participate in the trial. The Mitii ABI study uses a newer version of the Mitii program which is run using a Microsoft Kinect. This tracks the child’s body exactly and allows them to play the games and activities on the screen by moving different parts of their body.

The virtual trainers (an occupational therapist, physiotherapist and neuropsychologist) are able to log in each week to the child’s individual program to see how they are doing. This ensures that the program is set specifically to meet the goals for each individual child.

The team at the Stand Tall Ball!

Melinda wearing her green onesie to celebrate the end of recruitment!
MiYoga: Mindfulness Yoga for Children with Cerebral Palsy and their Caregivers

Ms Catherine Mak, Dr Koa Whittingham, Prof Roslyn Boyd and A/Prof Ross Cunnington

After the success of our pilot study earlier this year, the MiYoga randomized control trial is now underway. The results of the pilot showed some children improved in their sustained attention ability, executive function in everyday life, functional leg strength and balance. We have also expanded our inclusion criteria to include children with either diplegia or hemiplegia between 6 - 16 years old to allow more children the opportunity to participate in this novel study.

Recruitment is ongoing, so if you have a child with diplegia or hemiplegia between 6 - 16 years of age and would like to be involved or if you would like to find out more about this project, please contact our Study Coordinator: Catherine Mak on (07) 3646 5539; email: c.mak@uq.edu.au or visit our website https://exp.psy.uq.edu.au/miyoga/

Come and join us on our MiYoga adventures! We have been busy exploring through yoga. We travelled in to Space, visited Santa at the North Pole and we even got to meet Superman! I wonder where MiYoga will take you?

Upcoming Events 2014

Prechtl’s Method of Qualitative Assessment of General Movements: Basic Training with Tutor: Dr Andrea Guzzetta, PhD, MD
6-9th March 2014, at CP Alliance, Sydney, QLD
www.som.uq.edu.au/cerebralpalsy
(through conferences & workshop tab)

Australasian Academy of Cerebral Palsy and Developmental Medicine
7th Biennial AusACPDM Conference
11 – 14th March 2014
Hunter Valley, NSW
Neuromuscular function across the lifespan in adults with Cerebral Palsy

The Problem
Significant functional declines occur much earlier in adults with CP than in typically developed populations, however little is known about what factors contribute. While it is known that weakness, joint contracture and neural control of muscles contribute to dysfunction, it is not known whether these factors progressively worsen with age or if this influences functional capacity and physical activity levels. However, in general, very little is known about how neuromuscular function develops with age into adulthood in Cerebral Palsy, and hence it is difficult to ascertain how to best prevent declines in function with age.

The Project
Cerebral Palsy International Research Foundation recently funded our multi-disciplinary team to conduct research into the potential degeneration in neuromuscular function that occurs into adulthood with Cerebral Palsy and the relationship between neuromuscular function and physical activity. An exciting opportunity exists for up to two PhD students to work on different aspects of this project and also implement studies to examine the effectiveness of physical activity interventions to maintain functional capacity through the lifespan.

The Team and Location
This project is a collaboration between the School of Human Movement Studies (HMS) and the Queensland Cerebral Palsy and Rehabilitation Research Centre (QCPRRC) at The University of Queensland. It is essentially a multi-disciplinary project using cutting edge biomechanical and imaging technologies to assess neuromuscular function and also clinical assessment of functional capacity and physical activity levels. PhD projects have the potential to grow into either basic science and clinical studies and be supervised by any of the following investigators – Dr Glen Lichtwark (HMS), Dr Lee Barber (QCPRRC), Prof Ros Boyd (QCPRRC), Prof Stewart Trost (HMS), Prof Rod Barrett (Griffith University).

Experience and Eligibility
We are seeking PhD candidates with a strong interest in neuromuscular development and rehabilitation sciences. Strong biomechanical and computer skills would be an advantage. The PhD candidate needs to be eligible to enrol in a full-time PhD (H1, H2A or equivalent, i.e. publications), and seek external scholarship support (APA, UQRS, NHMRC, $24-$30pa tax free). A PhD top-up scholarship will be available; the value relative to candidate calibre and external funding achieved ($5-$15). The project will be supported by funding from the Cerebral Palsy International Research Foundation.

Contact
For further information, please contact Dr Glen Lichtwark (g.lichtwark@uq.edu.au or 07 3646 5537) or Dr Lee Barber (l.barber@uq.edu.au or 07 3646 5537).

Study of Bone Health and Cerebral Palsy In Nutrition, Exercise Science or Physiotherapy

Growth Nutrition and Physical Activity in Young Children with Cerebral Palsy (NHMRC 569605)

The Position
An opportunity exists for 2 PhD students to pursue a PhD relating bone health to nutrition, physical activity and health outcomes in pre-school aged children with CP. A particular focus will be on the impact of nutrition and/or physical activity on bone health in this population.

The Project
This PhD will be conducted within the context of a larger population based longitudinal study of children with CP, aged 18 months to 5 years (funded by NHMRC). This project will provide the first comprehensive evaluation of the impact of functional attainment and lifestyle factors (dietary intake and habitual physical activity) on growth, body composition and nutritional status. The project commenced in 2009 with 190 children with CP recruited so far. Recruitment will continue until project completion. One PhD student (Nutrition and Exercise Science) has successfully completed her studies as part of this larger project. Three additional PhD students continue to be involved (Speech Pathology, Dietetics and Physiotherapy).

Eligibility & Scholarship Support:
The PhD candidate needs to be eligible to enrol in a full-time PhD or MPhil, and seek external scholarship support (APA, UQRS, NHMRC, $24k-$34k tax free p.a.) with our guidance.

Our Research Team
This is a collaborative research project between the Queensland Cerebral Palsy Rehabilitation Research Centre and the Children’s Nutrition Research Centre within The University of Queensland.

The Queensland Cerebral Palsy and Rehabilitation Research Centre (QCPRRC)
The QCPRRC is a multidisciplinary research centre based at the Royal Children’s Hospital, Royal Brisbane and Women’s Hospital, and in the School of Medicine at The University of Queensland. The QCPRRC has an international track record of research in CP including early intervention, brain structure and function, randomised trials of novel interventions and web based rehabilitation. We are closely linked with clinical services provided at the Royal Children’s Hospital, providing research leadership to the Qld Paediatric Rehabilitation Service, the Qld Cerebral Palsy Health Service, and the Qld Children’s Gait Laboratory.

Children’s Nutrition Research Centre (CNRC)
The CNRC is one of Australia’s leading paediatric nutrition research centres with a global reputation for research achievement. Renowned for its studies in growth and development, body composition and energy metabolism, the CNRC has particular expertise in basic science, clinical nutrition research and public health nutrition. The CNRC has a new in-house DEXA and adjacent PQCT for studies of bone density.

Contact
For further information, please contact Dr Kristie Bell (k.bell@uq.edu.au or 07 3636 5500) or Dr Denise Brookes (d.brookes@uq.edu.au or 07 3646 9271)
MiYoga
Mindfulness Yoga in action

For children with cerebral palsy and their caregiver

Does an 8-week mindfulness yoga program, ‘MiYoga’, enhance cognitive function such as attention, physical strength and fitness, behavior and emotional control in children with diplegia and hemiplegia? MiYoga incorporates a family-centered approach to therapy by inviting a caregiver to participate alongside their child. We will also want to see if MiYoga can relieve caregiver stress and improve parent/child relationship.

Inclusion: Children with diplegia or hemiplegia, aged 6–16 years who can walk independently or with a gait aid (GMFCS I–III) and one of their caregivers

Exclusions: Participants (child and caregiver) must not have:

- Uncontrolled seizure disorder
- Spinal instability or other spinal problems that cause pain or preclude exercise
- Participating caregivers must not be pregnant

Potential participants should have sufficient cognitive understanding and cooperation to follow instructions and perform tasks

Participation commitment:

- 3–4 assessment sessions in Brisbane over a 8–10 month period
- 6 x 90-minute sessions of MiYoga, once-a-week for six weeks followed by two once-a-week skype/phone consultations and daily home practice along with MiYoga poster/DVD for a minimum of 20 minutes a day during the whole eight week period

FOR MORE INFORMATION

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Queensland cerebral palsy & rehabilitation research centre
Prechtl’s Method of Qualitative Assessment of General Movements: Basic Training Course

Venue
Cerebral Palsy Alliance
187 Allambie Road
Allambie Heights
Sydney NSW 2100

Instructor
Dr Andrea Guzzetta, MD, PhD

Local Organisers
Professor Roslyn Boyd, PhD, PT
Cathy Morgan, PT

To coincide with
7th Biennial Conference
Australasian Academy of Cerebral Palsy & Developmental Medicine
Cypress Lakes Resort, Hunter Valley NSW, 11-14 March 2014

Registration
$1500 - Includes refreshments and lunch
Register online @ www.som.uq.edu.au/cerebralpalsy (conferences & workshops)
Limited number of places available

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