



2019
Knowledge
Without Borders



PRELIMINARY PROGRAM

Combined AACPD^M 73rd Annual
and IAACD 2nd Triannual Meeting

SEPTEMBER 18-21, 2019
ANAHEIM, CALIFORNIA USA



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AACPDM

We are excited to welcome you to Anaheim for the combined 73rd American Academy for Cerebral Palsy and Developmental Medicine (AACPDM) Annual and 2nd Triannual International Alliance of Academies of Childhood Disability (IAACD) Meeting. The theme for the meeting is "Knowledge without Borders" which is an invitation to think outside of the box so we can come up with new problem-solving approaches through collective creativity and innovation. Each year the annual meeting provides the Academy the opportunity to showcase its mission and to fulfill its vision; namely, to be a global leader in the multidisciplinary scientific education of health professionals and researchers dedicated to the well-being of people with and at risk for cerebral palsy and other childhood-onset disabilities.

The Scientific Program Committee, chaired by Dr. Veronica Schiariti and Dr. Francisco Valencia with IAACD Co-Chair Dr. Diane Damiano, put together an outstanding scientific program that represents the state-of-the-science in cerebral palsy and other childhood-onset disabilities. The committee was challenged to select the 120 scientific papers and 283 scientific posters from near record-breaking number of quality submissions received for this year's meeting.

This year's program offers you engaging keynote speakers, learning experiences, and networking opportunities. Our keynote speakers are dynamic leaders in their fields. They will be speaking about important topics from the genetic basis of Cerebral Palsy to brain-computer interfaces. A wide range of topics will be presented during the 41 Instructional Courses, 28 Breakfast Seminars, 42 Focused Symposia and 6 Debate/Current Controversies that promote translation of research into practice. Focused learning experiences are offered through our pre-conference program, which includes a neurogenetics course organized by the International Cerebral Palsy Genomics Consortium (ICPGC); a course on how to adopt the ICF through the lifespan; a course on rehabilitation and use of motion analysis for single event multi-level surgery; a clinical workshop on how to use the Hammersmith Infant Neurological Examination (HINE); a course on educational strategies for health care providers serving children with medical complexity; a CP Register congress giving the opportunity to those working on and with CP Registers and surveillance systems to come together, share results and brainstorm barriers, concerns and new initiatives; our traditional orthopaedic day and the hands-on course on how to use ultrasound guidance for chemodenervation treatments.

The interdisciplinary nature of our society makes this meeting an excellent opportunity to brainstorm, discuss clinical challenges, and form future collaborations.

Beyond educational sessions, we invite you to network during the Welcome Reception held in the Grand Plaza, Wine & Cheese Poster and Exhibit Review, and take part in the "Get Up and Go" activities hosted by the Adapted Sports and Recreation Committee between sessions. I also hope you join us for the networking dinner on Friday night in which we will have live music and lots of fun. During the meeting, please use our mobile app to navigate the program, access electronic abstracts, ask questions of our speakers, and share your insights.

We are grateful to the generosity of our sponsors and exhibitors who contribute to the success of our annual meetings. As always, the annual meeting provides a wonderful forum to learn, engage, network, and create new collaborations.

With best wishes,

Mauricio Delgado, MD
AACPDM First Vice-President

555 East Wells Street, Suite 1100, Milwaukee, WI 53202
info@aacpdm.org | +1 (414) 918-3014 | www.aacpdm.org

Tuesday, September 17, 2019

8:00 am - 5:00 pm	Orthopedic Day (TICKET)
8:00 am - 5:00 pm	International Cerebral Palsy Genomics Consortium (ICPGC) Annual Meeting (TICKET)
1:00 pm - 5:00 pm	Ultrasound Course (TICKET)

Wednesday, September 18, 2019

7:30 am - 12:00 pm	AACPDM Board & Committee Breakfast / Meetings
8:00 pm - 12:00 pm	International Cerebral Palsy Genomics Consortium (ICPGC) Annual Meeting/Neurogenetics Symposium (TICKET)
8:00 pm - 12:00 pm	Pre-Conference Sessions PC1: Rehabilitation and Use of Motion Analysis for Single Event Multi-Level Surgery (TICKET)
10:00 am - 12:00 pm	Lower Extremity Osteotomies in Pediatric Orthopaedics: Hands-On Sawbones Session
12:00 pm - 1:00 pm	AACPDM Board & Committee Luncheon
1:00 pm - 5:00 pm	Ultrasound Course (TICKET)
1:00 pm - 5:00 pm	Pre-Conference Sessions PC2: Practical Approaches to Complex Care: Building your Clinical and Teaching Toolkit (TICKET) PC3: Fourth World CO Register and Surveillance Congress (TICKET) PC4: The ICF in a Global Context: Towards a systematic adoption across settings throughout the lifespan (TICKET) PC5: Hammersmith Infant Neurological Examination Clinical Workshop (TICKET)
1:00 pm - 5:00 pm	Board of Directors Meeting
6:30 pm - 8:00 pm	Welcome Reception at the Grand Plaza (TICKET)

Thursday, September 19, 2019

7:00 am - 8:00 am	Continental Breakfast
7:00 am - 8:00 am	Breakfast Seminars 1-10 Focused Symposia 1-5 Current Controversies 1
7:00 am - 8:00 am	Advisor Support Program Meet & Greet Breakfast
8:15 am - 10:15 am	General Session Opening Address <i>Jilda Vargas-Adams, MD, MSc to Mauricio Delgado, MD</i> IAACD Update <i>Hans Forssberg, MD</i> Presidential Guest Lecture <i>Jerome Bickenbach, PhD, LL.B</i> Presidential Guest Lecture <i>Rune Simeonsson, PhD, MSPH</i> Presidential Guest Lecture <i>Jozef Gecz, PhD</i>
10:15 am - 10:45 am	Get Up and Move - Yoga
10:45 am - 12:30 pm	Free Paper Sessions A-D A: Genetics/Epidemiology B: Motion Analysis/Gait C: Global/ICF/Surveillance D: Participation
10:45 am - 12:15 pm	Focused Symposia 6-15 Current Controversies 2
12:30 pm - 1:45 pm	AACPDM Membership Business Meeting & Boxed Lunch (members only) (TICKET)
2:00 pm - 4:00 pm	General Session Corbett Ryan Pathways Pioneer Award <i>Jason Benetti</i> Presidential Guest Lecture <i>Jon R. Davids, MD</i> Mentorship Award Presidential Guest Lecture <i>Audrey Thurm, PhD</i> Mac Keith Press Basic Science Lecture <i>Elaine Y. Hsiao, PhD</i>

4:15 pm - 6:15 pm	Instructional Courses 1-14
6:30 pm - 8:00 pm	Wine & Cheese Poster and Exhibit Review in the Exhibit Hall

Friday, September 20, 2019

7:00 am - 8:00 am	Continental Breakfast
7:00 am - 8:00 am	Breakfast Seminars 11-20 Focused Symposia 16-20 Current Controversies 3
8:15 am - 9:45 am	General Session Lifetime Achievement Award Presidential Guest Lecture Leigh Hochberg, MD, PhD Presidential Guest Lecture Daniel Kraft, MD
8:15 am - 10:15 am	Lifespan SIG Meeting
10:00 am - 10:30 am	Get Up and Move - Yoga
10:30 am - 12:15 pm	Free Paper Sessions E-H E: Intervention and Assessment F: Tone Management G: Orthopaedics H: Rehab
10:30am - 12:00 pm	Current Controversies 4-5 Focused Symposia 21-27
12:30 pm - 1:30 pm	Non CME Luncheon Options International Networking Luncheon (TICKET) Ipsen Presentation Theater (TICKET)
1:30 pm - 3:30 pm	General Session Duncan Wyeth Award Presidential Guest Lecture <i>Steven Cramer, MD</i> Cathleen Lyle Murray Award <i>Judy Heumann</i> Presidential Guest Lecture <i>Tom DiBello, CPO</i> Gayle G. Arnold Lecture <i>Erik Carter, PhD</i>
1:30 pm - 3:30 pm	Complex Care SIG Meeting
3:30 pm - 4:30 pm	Poster Walk in the Exhibit Hall
3:40 pm - 3:55 pm	Get Up and Move - Latin Cardio Dance
4:30 pm - 6:30 pm	Instructional Courses 16-28
7:00 pm - 12:00 am	Networking Dinner and Celebration (TICKET)
7:00 am - 8:00 am	Continental Breakfast
7:00 am - 8:00 am	Breakfast Seminars 21-28 Current Controversies 6 Focused Symposia 28-32
8:15 am - 10:00 am	Free Paper Sessions I-L I: Imaging J: Transitions/Adult Care K: Early Development L: Sensory and Pain
8:15 am - 9:45 am	Focused Symposia 33-41
10:00 am - 10:30 am	Get Up and Move - Adapted Basketball Competition
10:00 am - 4:00 pm	AACPDM Community Forum
10:30 am - 12:00 pm	General Session CPA Update CPF Update EACD Update AusCPDM Update Mexican Academy Update Lifeshots Award Winner Lifespan Lecture 2020 Annual Meeting Introduction
12:00 pm - 1:00 pm	Board & Committee Lunch Meetings
1:00 pm - 5:00 pm	Board of Directors Meeting
1:30 pm - 3:30 pm	Instructional Courses 29-41

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American Academy for Cerebral Palsy and Developmental Medicine

Combined AACPDM 73rd Annual and IAACD 2nd Triannual Meeting

September 17-21, 2019
Anaheim, California

Future Annual Meetings

September 22-26, 2020
New Orleans, Louisiana

October 6-9, 2021

Quebec, QC, Canada

AACPDM Office

555 E Wells Street, Suite 1100
Milwaukee, WI 53202
Tel: 1.414.918.3014
Fax: 1.414.276.2146
Email: info@aacpdm.org
Website: www.aacpdm.org

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 Jan Willem Gorter, MD, PhD, FRCP(c) – Director
 Christopher D. Lunsford, MD – Director
 Golda Milo-Manson, MD, MHSc – Director
 Theresa S. Moulton, DPT, PhD – Director
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 Bernard Dan, MD, PhD – Editor, DMCN
 Wendy Sullivan
 Anniekay Erby, MBA, CAE – Executive Director

Office Staff

Anniekay Erby, MBA, CAE – Executive Director
 Erin Trimmer – Senior Meetings Manager
 Heather Schrader – Membership and Administrative Manager
 Elizabeth Mueller – Meetings Coordinator

2019 Scientific Program Committee

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 Veronica Schiariti, MD, MHSc, PhD - Co-Chair
 Diane Damiano, PhD, PT - IAACD Co-Chair
 Rachel M. Thompson, MD
 Sean Tabaie, MD
 Claire F. Beimesch, MD
 Michelle Tourne, PT DPT PCS
 Bernadette T. Gillick, PT, MSPT, PhD
 Elisabet Rodby Bousquet, PT, PhD
 Debbie Field, PhD
 Lisa Chiarello, PhD
 Jessica Kramer, PhD, OTR/L

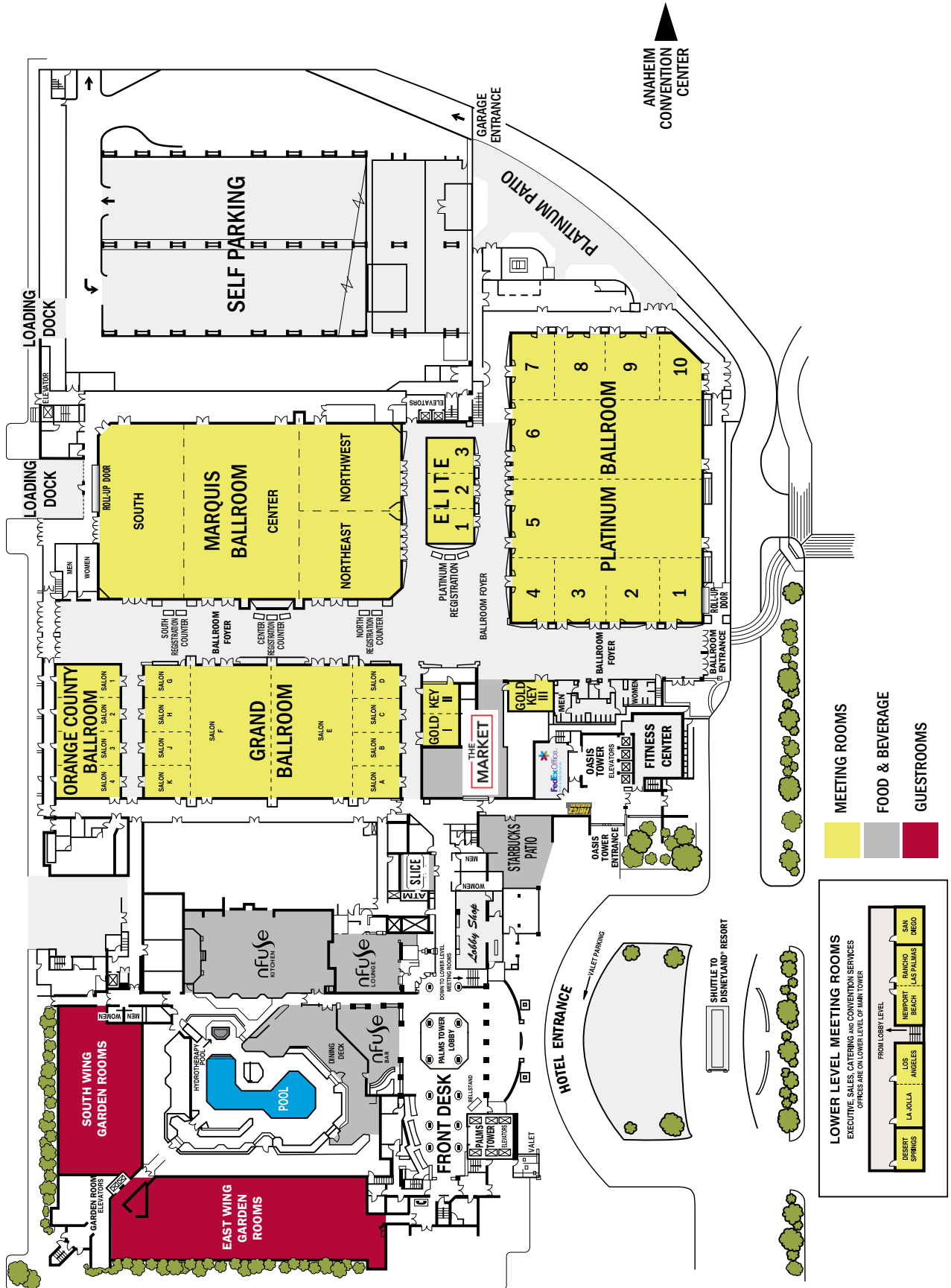
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 Roselyn Boyd, PhD, PT
 Marta Badia
 Nigar Dursun, MD
 Ana Carolina de Campos, PT, PhD
 Jorge Carranza, MD
 Xiaojie Li, MD
 Ensa Johnson
 Annemieke I. Buizer, MD, PhD
 Lena Krumlinde-Sundholm, Reg OT, PhD
 Danny M. Weigl, MD
 Tamer A. El-Sobky, MD
 Alberto Moreno, MD

2019 Local Hosts

Rachel M. Thompson, MD
 Eileen G. Fowler, PhD, PT

Winthrop Phelps, MD	1948	Robert V. Groover, MD	1985
George G. Deaver, MD	1949	Alfred L. Scherzer, MD	1986
Earl R. Carlson, MD.....	1950	Robert P. Christopher, MD	1987
Bronson Crothers, MD	1951	Leon Root, MD.....	1988
Leslie B. Hohman, MD	1952	Alfred Healy, MD.....	1989
Arnold Gesell, MD	1953	Gayle G. Arnold, MD.....	1990
Meyer A. Perlstein, MD.....	1954	James R. Gage, MD.....	1991
Lenox D. Baker, MD.....	1955	John F. McLaughlin, MD	1992
Margaret H. Jones Kanaar, MD.....	1956	Michael A. Alexander, MD.....	1993
Nicholson J. Eastman, MD.....	1957	Helen M. Horstmann, MD.....	1994
William T. Green, MD.....	1958	Charlene Butler, EdD.....	1995
Alvin J. Ingram, MD	1959	Robert K. Rosenthal, MD.....	1996
Raymond R. Rembolt, MD.....	1960	Peter L. Rosenbaum, MD.....	1997/1998
G.W.R. Eggers, MD.....	1961	Dennis C. Harper, PhD	1999
Jessie Wright, MD	1962	John F. Mantovani, MD.....	2000
Russell Meyers, MD.....	1963	Michael D. Sussman, MD	2001/2002
Eric Denhoff, MD	1964	James A. Blackman, MD.....	2003
Chester A. Swinyard, MD	1965	Robert W. Armstrong, MD.....	2004
Samuel B. Thompson, MD.....	1966	Luciano S. Dias, MD.....	2005
Sedgwick Mead, MD.....	1967	Barry S. Russman, MD	2006
William Berenberg, MD	1968	William L. Oppenheim, MD.....	2007
William J. Hillman, MD	1969	Diane L. Damiano, PhD PT.....	2008
Harriet E. Gillette, MD	1970	Hank G. Chambers, MD	2009
Henry H. Banks, MD.....	1971	Deborah J. Gaebler-Spira, MD.....	2010
Lawrence T. Taft, MD.....	1972	Scott A. Hoffinger, MD	2011
Robert L. Samilson, MD	1973	Joseph P. Dutkowsky, MD	2012
Elliott D. O'Reilly, MD	1974	Maureen E. O'Donnell, MD MSc FRCP (C).....	2013
Hans U. Zellweger, MD	1975	Richard D. Stevenson, MD.....	2014
Eugene E. Bleck, MD.....	1976	Darcy Fehlings, MD MSc FRCP (C)	2015
Leon Greenspan, MD.....	1977	Eileen Fowler, PhD PT	2016
Gerald Solomons, MD.....	1978	Unni Narayanan, MBBS MSc FRCP (C)	2017
Hyman H. Soboloff, MD	1979	Sarah Winter, MD.....	2018
Leonard F. Bender, MD	1980	Jilda Vargus-Adams, MD, MPH	2019
Fred P. Sage, MD	1981	Mauricio Delgado, MD.....	2020
Paul H. Pearson, MD.....	1982	Susan E. Sienko, PhD.....	2021
Harold B. Levy, MD.....	1983		
David H. Sutherland, MD.....	1984		



Download the AACPD M 2019 Mobile App!



This mobile app allows you to:

- View schedules, explore sessions, and find networking events.
- Curate your own personal schedule for easy conference attendance.
- Access location and speaker information at your fingertips.
- Post updates to sessions, keynotes, and exhibitor booths.
- Interact with a real-time feed of all event activity, that showcases which sessions are trending, most popular photos, and popular discussion topics.
- Earn points and badges for being active on the app and at the event.
- Expand your professional network and have fun!

Features of the App:

- Agenda - view the full agenda and related information (session time, room number, speaker info, etc)
- Update - a quick way to share photos, comments, and which session you're attending
- Activity Feed - the real-time pulse of the event. See what people are saying, view photos from the event, and find trending sessions and topics.
- Users - see who's at the event, and connect with them on the app
- Exhibitors - find exhibitors and supporters, and leave comments or ratings

Find members of the AACPD M Communications Committee identified with an **"App Helper"** ribbon onsite or visit the Registration Desk with questions!



2019
**Knowledge
Without Borders**

Purpose

The educational program of the American Academy for Cerebral Palsy and Developmental Medicine (AAPDM) is designed to provide targeted opportunities for dissemination of information in the basic sciences, prevention, diagnosis, treatment, and technical advances as applied to persons with childhood-onset disabilities. The program provides a forum for discussion of scientific developments and clinical advances in the care of people with these conditions. By presenting forums which foster interdisciplinary communication and interchange among all allied health care professionals concerned with individuals with cerebral palsy and neurodevelopmental disorders, this program's purpose is to ensure that the qualified personnel have the skills and knowledge derived from practices that have been determined through research and experience to be successful in serving children with disabilities. The purpose is also to encourage teambuilding within organizations and institutions, encourage multicenter studies, develop information for parents, and find a consensus on the optimal care of various conditions.

Objectives

To disseminate information on new developments in applied and translational sciences, prevention, diagnosis, treatment, and technology for individuals with cerebral palsy and other childhood onset disabilities. Specifically:

- Participants will increase awareness of new and emerging treatments for individuals with cerebral palsy and other developmental disabilities.
- Participants will be able to identify new modalities for the diagnosis of cerebral palsy and developmental disabilities.
- Participants will increase interprofessional collaboration to help coordinate and improve services across the continuum of care for individuals with cerebral palsy and developmental disabilities across the lifespan.

Target Audience

All health care professionals, clinicians, researchers and health administrators who are concerned with the care of patients with cerebral palsy and other childhood-onset disabilities, including: developmental and other pediatricians, neurologists, physiatrists, orthopedic and neuro-surgeons, physical and occupational therapists, speech and language pathologists, orthotists, dietitians, rehabilitation engineers, kinesthiologists, nurses, psychologists, special education teachers and educators. *Note: All levels of skill will be addressed.*

AACPDM Vision

A global leader in the multidisciplinary scientific education for health professionals and researchers dedicated to the well-being of people with childhood-onset disabilities.

AACPDM Mission

Provide multidisciplinary scientific education for health professionals and promote excellence in research and services for the benefit of people with cerebral palsy and childhood-onset disabilities.

Online Self-Reporting System for CME / CEU / CE Credits

After the Combined AAPDM 73rd Annual and IAACD 2nd Triannual Meeting, all registrants will receive an instructional

email about reporting and printing out their own continuing education certificates. The online self-reporting will be open by no later than November 2019. To verify your correct email address, please visit the registration desk before you leave the meeting. *Please note: In self-reporting, if you miss more than 15 minutes of a session/course, it is not considered full attendance, and cannot be claimed.*

Certificate of Attendance

All attendees may claim a Certificate of Attendance. Access this form at the Registration Desk.

ACCME Accreditation Statement

The American Academy for Cerebral Palsy and Developmental Medicine (AAPDM) is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

AMA Credit Designation Statement

The American Academy for Cerebral Palsy and Developmental Medicine (AAPDM) designates this live activity for a maximum of 38.75 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Physical Therapists / Physical Therapy Assistants

- The American Academy for Cerebral Palsy and Developmental Medicine is recognized as an Approval Agency by the Physical Therapy Board of California. http://ptbc.ca.gov/licensees/cc_agency.shtml
- This activity has been approved by the Texas Board of Physical Therapy Examiners for 38.75 CCUs for PTS and PTAs.
- ProCert certification is pending. CCUs are a unit of relative value of an activity based on its evaluation against a rigorous and comprehensive set of standards representing the quality of an activity. The CCU determination is a valuation applying many factors including, but not limited to, duration of the activity. No conclusion should be drawn that CCUs correlate to time (e.g. hours).

Occupational Therapists / Occupational Therapy Assistants

The American Academy for Cerebral Palsy and Developmental Medicine is an Approved Provider of Continuing Education by the American Occupational Therapy Association (AOTA) #6379. Occupational Therapists and Occupational Therapy Assistants will be able to claim a maximum of 3.875 AOTA CEU's. All sessions during the AAPDM 73rd Annual and IAACD 2nd Triannual Meeting are available for credit. *Note: The assignment of AOTA CEUs does not imply endorsement of specific course content, products, or clinical procedures by AOTA.*

Nursing Credits

The American Academy for Cerebral Palsy and Developmental Medicine (AAPDM) is a Provider approved by the California Board of Registered Nursing, Provider # CEP 14720, for 38.75 Contact Hours.

Orthotist Credits

This program has been approved for up to 38.75 credits through the American Board for Certification (ABC). Full participation in this program is required for the full amount of credits. Must sign-in daily at the registration desk.

How can you benefit from membership in the American Academy for Cerebral Palsy and Developmental Medicine?

Annual Meeting

An international forum for the dissemination and exchange of new knowledge, ideas and educational information between participants from all disciplines.

Each year, the Academy offers International Scholarships and Student Scholarships to members to assist with the cost of attending the Annual Meeting. Financial support for the creation of new international meetings that are related to cerebral palsy and developmental medicine is also available through the Development Grant.

Advisor Support Program

The AACPDM Membership Committee launched an Advisor Support Program to match veteran AACPDM members with new members to ensure they get everything they can out of their membership. Advisor areas include networking, committee involvement, research and grants, international experience and more!

eCourses

The AACPDM Education Committee launched AACPDM eCourses which are 3-4 week online, self-paced educational opportunities to earn continuing education credits (CEUs).

Networking

Membership in AACPDM facilitates making contacts with medical professionals and researchers with similar interests. This diverse group of professionals is bound together by a unified interest in improving the lives of people with cerebral palsy and developmental disabilities.

Publications

Developmental Medicine and Child Neurology (DMCN) is the official journal of the AACPDM. This peer reviewed journal is recognized internationally as the leader in the field. Fellow Members receive a FREE subscription to DMCN, or they may choose to select from a list of Clinics in Developmental Medicine series books in place of the DMCN Journal.

AACPDM creates a quarterly newsletter and periodic broadcast emails about various events and activities in the industry. Members assist in developing informational materials to keep the public informed about advances in treating cerebral palsy and other developmental disabilities.

Research

AACPDM offers the opportunity for members to apply for a Research Planning Grant. The purpose of this grant is to provide financial support to bring together investigators from geographically disparate locations, obtain statistical consultation and develop a multi-center research study plan. The goal is to provide the forum and initial planning to develop a successful grant submission for full funding through some larger agency (e.g., NIH, UCP, NIDRR, CDC, CIHR etc). The grant should focus on an important clinical question relevant to the membership of AACPDM and the involvement of a multidisciplinary team is expected.

Website

Members can visit the Members Only section of the AACPDM website for a wide variety of information not available to non-members including Sage Award Videos, membership contact information and other educational opportunities.

Committees

The heart of the Academy is our committees. These committees offer networking and opportunities to explore areas of deep interest with a wide range of professionals from the membership.

- Adapted Sports and Recreation
- Advocacy
- Awards
- * Care Pathways
- Communications
- Community Council
- Complex Care
- Education
- International Affairs
- Life Span Care
- Membership
- Nominating
- Publications
- Research
- Scientific Program

Ticketed Sessions

Various sessions and events at the Annual Meeting require a ticket for admission. This aids in controlling room capacity. Pre-registered attendees will find event tickets in their registration envelope. Additional tickets for courses and events may be obtained at the registration desk. For some events or sessions, an additional fee may apply. All tickets are distributed pending availability. Door monitors will be present for ticketed sessions.

Hours at a Glance

Registration - North Registration Counter

Tuesday, September 17

7:00 am - 7:00 pm

Wednesday, September 18

7:00 am - 7:00 pm

Thursday, September 19

6:30 am - 6:00 pm

Friday, September 20

6:30 am - 6:00 pm

Saturday, September 21

6:45 am - 1:00 pm

Exhibit Hall Hours - Marquis Center and South

Thursday, September 19

7:00am - 8:00am	Continental Breakfast
10:15am - 10:45am	Attendee Break in Exhibit Hall
4:00pm - 4:15pm	Attendee Break in Exhibit Hall
6:30pm - 8:00pm	Wine & Cheese Poster and Exhibit Review

Friday, September 20

7:00am - 8:00am	Continental Breakfast
10:00am - 10:30am	Attendee Break in Exhibit Hall
3:30pm - 4:30pm	Poster Walk and Attendee Break in Exhibit Hall

Poster Viewing - Marquis Ballroom Center and South

Thursday, September 19

7:00am - 8:00am	Continental Breakfast
10:15am - 10:45am	Attendee Break in Exhibit Hall
4:00pm - 4:15pm	Attendee Break in Exhibit Hall
6:30pm - 8:00pm	Wine & Cheese Poster and Exhibit Review

Friday, September 20

7:00am - 8:00am	Continental Breakfast
10:00am - 10:30am	Attendee Break in Exhibit Hall
3:30pm - 4:30pm	Attendee Break in Exhibit Hall

Saturday, September 21

7:00am - 8:00am	Continental Breakfast
10:00am - 10:30am	Attendee Break in Exhibit Hall

Ticketed Sessions

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Guest Attendance

AACPDM asks registered attendees to refrain from taking children, spouses, or guests to any educational sessions or functions offered at the Annual Meeting that are not included in the guest attendance registration. Please urge your guests to wear their name badges at all times.

E-Poster

An E-Poster is an electronic version of the traditional paper poster in PowerPoint format, and is displayed on a monitor. In addition to traditional paper posters on bulletin boards, Scientific and Demonstration Poster Presenters were also required to submit their poster as an E-Poster. There will be computer kiosks throughout the Anaheim Marriott dedicated to E-Posters. They will also be posted on the AACPDM website during and 2 months after the meeting. E-Posters increase exposure to the work and allow people to view the poster in the comfort of their hotel room or even at home after the meeting. Thank you to all the Poster Presenters who took on the extra work to participate in the Poster Preview and/or to submit an E-Poster!

No Smoking

Smoking is prohibited at all Annual Meeting sessions and events.

Attire

Attire for the educational sessions of the meeting is business casual. Please bring a jacket or sweater, as room temperatures may vary.

Camera/Recording Policy

It is the policy of AACPDM that no cameras are permitted in the meeting sessions, exhibit hall, or poster sessions. Please refrain from taking any photos in those locations. Audio or videotaping is strictly prohibited.

FDA Disclaimer

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SESSION EVALUATIONS

We need your feedback! As a dedicated learner during the Combined AACPDM 73rd Annual and IAACD 2nd Triannual Meeting we truly value your feedback on the individual sessions, general sessions as well as the overall meeting experience. The future leadership of the AACPDM uses this information to improve on the future educational offerings and to make your experience the most productive and realistic in bringing back practical information to your practice.

Please take a moment to provide your feedback on Combined AACPDM 73rd Annual and IAACD 2nd Triannual Meeting in the following ways:

- The Annual Meeting mobile app will include access to the online survey tool to complete various session evaluations. You will be able to access the internet on various internet café kiosks OR take time in your hotel room – all attendees receive complimentary internet in your hotel room. VISIT: <http://www.aacpdm.org/meetings/2019/>
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Disclosure

The presenting authors on the Free Papers and Posters are underlined. All corresponding authors were responsible for querying the co-authors regarding the disclosure of their work. The AACPDM does not view the existence of these disclosed interests or commitments as necessarily implying bias or decreasing the value of the author's participation in the course. To follow ACCME guidelines the Academy has identified the options to disclose as follows: a. Research or institutional support has been received b. Miscellaneous, non-income support (e.g., equipment or services), commercially derived honoraria, or other nonresearch related funding (e.g., paid travel) has been received c. Royalties have been received d. Stock or stock options held e. Consultant or employee f. Received nothing of value g. Did not respond or unable to contact

One or more of these letters appears by each author's name indicating their disclosure. Please see the Disclosure Index at the back of the program.



Presidential Guest Lectureship - Jerome Bickenbach, PhD, LL.B

The promise of ICF

Dr. Jerome Bickenbach is Professor Emeritus at Queen's University, Canada and Visiting Professor at the University of Lucerne. He is the author of *Physical Disability and Social Policy* (1993) and the co-editor of *Introduction to Disability* (1998), *Disability and Culture: Universalism and Diversity* (2000), *A Seat at the Table: Persons with Disabilities and Policy Making* (2001), *Quality of Life and Human Difference* (2003) and numerous articles and chapters in disability studies, focusing on the nature of disability and disability law and policy. He was a content editor of Sage Publications' five volume *Encyclopaedia of Disability*. His most recent book is in the Sage Disability Resource Library. From Disability to Practice (2018) is a collection of essays on his work.

Since 1995, Dr. Bickenbach has been a consultant with the World Health Organization (WHO) working on drafting, testing and implementation of the ICF, and continues to consult with WHO on international disability social policy. His research is in disability studies, using qualitative and quantitative research techniques within the paradigm of participatory action research. Most recently his research includes disability quality of life and the disability critique, disability epidemiology, universal design and inclusion, modelling disability statistics for population health surveys, the relationship between disability and wellbeing, disability and ageing issues and the application of ICF to monitoring the implementation of the UN Convention on the Rights of Persons with Disabilities.

As a lawyer, Dr. Bickenbach was a human rights litigator, specializing in anti-discrimination for persons with intellectual impairments and mental illness. Since 2007, he has headed the Disability Policy Unit at Swiss Paraplegic Research in Nottwil, Switzerland and is Professor at the Faculty of Humanities and Social Science at the University of Lucerne and director of the WHO Collaborating Centre for Rehabilitation in Global Health Systems.



Presidential Guest Lectureship - Jozef Gécz, PhD

Redefining Cerebral Palsy as a Genetic, Neurodevelopmental Spectrum Disorder

Prof. Jozef Gécz is National Health and Medical Research Council Senior Principal Research Fellow and Channel 7 Inaugural Chair for the Prevention of Childhood Disability at the University of Adelaide and South Australian Health and Medical Research Institute, Adelaide, Australia. Professor Gécz career spans 33 years of competitive research in genomics and molecular biology of childhood onset neurological disorders across Europe and Australia.

Professor Gécz discovered or contributed to the discovery of >200 disease genes. His pioneering research into the genetics of non-syndromic intellectual disabilities and X-chromosome linked forms in particular later expanded into childhood onset epilepsies, autisms and more recently cerebral palsies. His achievements have been recognised, among others, also by

his election to the Fellowship of the Australian Academy of Science, Australian Academy of Health and Medical Sciences and the Faculty of Science of the Royal College of Pathologists of Australasia.

Professor Gécz' research is patient centric and focuses on the application of genomics for precision diagnosis of childhood onset neurodevelopmental disabilities to empower early and personalised intervention, management and treatment.



Presidential Guest Lectureship - Jon R. Davids, MD

Rationale and Evolution of the Application of Quantitative Gait Analysis to the Management of Gait Disorders in Children with Cerebral Palsy

Dr. Davids is a board certified Pediatric Orthopaedic Surgeon, who is the Assistant

Chief of Orthopaedics and Medical Director of the Motion Analysis Laboratory at the Shriners Hospitals for Children Northern California; and Professor and Ben Ali Chair in Pediatric Orthopaedics in the Department of Orthopaedics at the University of California Davis Medical School in Sacramento, California, USA.

Dr. Davids has published and lectured extensively at regional, national and international levels, teaching gait analysis interpretation and clinical applications for children with cerebral palsy, myelodysplasia, and limb deficiency. He is also an active member of the American Academy of Cerebral Palsy and Developmental Medicine (AAPDM), American Academy of Orthopaedic Surgeons (AAOS), American Board of Orthopaedic Surgeons (ABOS), Pediatric Orthopaedic Society of North America (POSNA) and the American Orthopaedic Association (AOA). Jon serves on the editorial board of the Journal of Pediatric Orthopaedics and Gait & Posture.



Mac Keith Press Basic Science Lectureship - Elaine Y. Hsiao, PhD

Microbiome-Nervous System Interactions in Health and Disease

Dr. Elaine Y. Hsiao is a professor in the Department of Integrative Biology & Physiology, where she leads a laboratory studying

fundamental interactions between the microbiome, brain and behavior, and their applications to neurological disorders.

Dr. Hsiao's work on neuroimmune contributions to neurodevelopment and behavior led to the finding that postnatal modification of the microbiota improves gastrointestinal and behavioral symptoms in mouse models of genetic and environmental risk factors for autism. In addition, her laboratory identified select bacteria from the healthy human microbiome that promote host serotonin biosynthesis in the gut. Inspired by this interplay between the microbiota and nervous system, the Hsiao laboratory is mining the human microbiota for microbial modulators of host neuroactive molecules, investigating the impact of microbiota-immune system interactions on neurodevelopment and examining the microbiome as an interface between gene-environment interactions in neurological diseases.

Their work in these areas have led to several honors, including the Chan Zuckerberg Initiative Ben Barres Career Acceleration Award, Packard Fellowship in Science and Engineering, Alfred P. Sloan Fellowship in Neuroscience, Klingenstein-Simons Fellowship in Neuroscience, Kavli Fellow of the National Academy of Sciences, National Institutes of Health Director's Early Independence Award, Forbes' 30 Under 30 in Science and Healthcare and National Geographic's Emerging Explorer Award.



Presidential Guest Lectureship - Leigh Hochberg, MD, PhD
Intracortical Brain-Computer Interfaces: Toward Restoring Communication and Mobility

Dr. Leigh Hochberg is a vascular and critical care neurologist and neuroscientist. His research focuses on the development and

testing of novel neurotechnologies to help people with paralysis and other neurologic disorders, and on understanding cortical neuronal ensemble activities in neurologic disease.

Dr. Hochberg has appointments as Neurologist, Massachusetts General Hospital, where he attends in the NeurolCU and on the Acute Stroke service; Professor of Engineering, School of Engineering and Carney Institute for Brain Science, Brown University; Director, VA RR&D Center for Neurorestoration and Neurotechnology, Providence VAMC; and Senior Lecturer on Neurology at Harvard Medical School. He also directs the Center for Neurotechnology and Neurorecovery for MGH Neurology, where he is the IDE Sponsor-Investigator and Principal Investigator of the BrainGate pilot clinical trials (www.braingate.org) that are conducted by a close collaboration of scientists and clinicians at Brown, Case Western Reserve University, MGH, Providence VAMC, and Stanford University.

Dr. Hochberg is a Fellow of the American Academy of Neurology and the American Neurological Association. Dr. Hochberg's BrainGate research, which has been published *Nature*, *Science Translational Medicine*, *Nature Medicine*, *Nature Neuroscience*, the *Journal of Neuroscience*, and others, has received support from the Rehabilitation R&D Service of the U.S. Department of Veterans Affairs, NIDCD, the NIH BRAIN Initiative/NINDS, and others.



Presidential Guest Lectureship - Daniel Kraft, MD
The Future of Health & Medicine: Where Can Technology Take Us?

Dr. Daniel Kraft is a Stanford and Harvard trained physician-scientist, inventor, entrepreneur, and innovator. With over 25

years of experience in clinical practice, biomedical research and healthcare innovation, Kraft has served as Faculty Chair for Medicine at Singularity University since its inception in 2008, and is the Founder and Chair of Exponential Medicine, a program that explores convergent, rapidly developing technologies and their potential in biomedicine and healthcare.

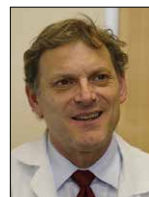
Following undergraduate degrees from Brown University and medical school at Stanford, Daniel was Board Certified in both Internal Medicine & Pediatrics after completing a Harvard

residency at the Massachusetts General Hospital & Boston Children's Hospital, and fellowships in hematology, oncology and bone marrow transplantation at Stanford. He has multiple scientific publications and medical device, immunology and stem cell related patents through faculty positions with Stanford University School of Medicine and as clinical faculty for the pediatric bone marrow transplantation service at University of California San Francisco.

Dr. Kraft is a member of the Kaufman Fellows Society (Class 13) and member of the Inaugural (2015) class of the Aspen Institute Health Innovators Fellowship. His academic research has focused on: stem cell biology and regenerative medicine, stem cell derived immunotherapies for cancer, bioengineering human T-cell differentiation, and humanized animal models. Clinical work focuses on: bone marrow / hematopoietic stem cell transplantation for malignant and non-malignant diseases in adults and children, medical devices to enable stem cell based regenerative medicine, including marrow derived stem cell harvesting, processing and delivery. He also implemented the first text-paging system at Stanford Hospital.

He is also the inventor of the MarrowMiner, an FDA approved device for the minimally invasive harvest of bone marrow, and founded RegenMed Systems, a company developing technologies to enable stem cell-based regenerative therapies. He is also the founder of IntelliMedicine, focused on data driven, precision medicine.

Dr. Kraft is an avid pilot and has served in the Massachusetts and California Air National Guard as an officer and flight surgeon with F-15 & F-16 Fighter Squadrons. He has conducted research on aerospace medicine that was published with NASA, with whom he was a finalist for astronaut selection.



Presidential Guest Lectureship - Steven C. Cramer, MD
Brain Repair After Stroke

Dr. Steven C. Cramer graduated with Highest Honors from University of California, Berkeley; received his medical degree from University of Southern California; did a residency in internal

medicine at UCLA; and did a residency in neurology plus and a fellowship in cerebrovascular disease at Massachusetts General Hospital. Dr. Cramer also earned a Masters Degree in Clinical Investigation from Harvard Medical School.

His research focuses on neural repair after central nervous system injury in humans, with an emphasis on stroke and on recovery of movement. Treatments examined include robotic, stem cell, monoclonal antibody, brain stimulation, drug, and telehealth methods. A major emphasis is on translating new drugs and devices to reduce disability after stroke, and on individualizing therapy for each person's needs.

Dr. Cramer has been awarded the Stroke Rehabilitation Award from the American Heart Association and the Barbro B. Johansson Award in Stroke Recovery from the World Stroke Organization, co-edited the book *Brain Repair after Stroke*, and is the author of over 250 manuscripts.



**Presidential Guest Lectureship -
Tom DiBello, CO, LO, FAAOP Director,
Dept. of Clinical and Scientific Affairs
Current State of the Art of Lower Limb
Pediatric Orthotic Care: Translation to the
Developing World**

Mr. DiBello holds a Bachelors of Pharmacy

Degree from Duquesne University and certificates in Orthotics and Prosthetics from Northwestern University. He has lectured extensively on Lower Extremity Orthotics throughout the United States, Central and South America, Southeast Asia, Africa and China, has authored chapters on this subject in two textbooks and authored two chapters in the American Academy of Orthopedic Surgeons, Atlas of Orthotics.

Mr. DiBello is a Fellow of the American Academy of Orthotists and Prosthetists and received the Academy's Distinguished Practitioner Award in 2007. In 2015 Tom was awarded the American Orthotic and Prosthetic Associations Lifetime Achievement Award. Tom is a Past President of the Academy and Past President for two successive years of the American Orthotics and Prosthetic Association.

Tom is Clinical Assistant Professor at the Baylor College of Medicine, Honorary Adjunct Faculty at Texas Women's University and Chairman of the Advisory Committee of the Baylor College of Medicine's Masters of Science Program in Orthotics and Prosthetics, and is a Director in the Department of Clinical and Scientific Affairs, Hanger Clinic.



**Gayle G. Arnold Lectureship -
Erik W. Carter, PhD
A Future of Flourishing: Supporting Successful
Transitions for Young People with Disabilities**

Dr. Erik Carter is Cornelius Vanderbilt Professor of Special Education at Vanderbilt University in Nashville, Tennessee. His research and

teaching focuses on evidence-based strategies for supporting inclusion and valued roles in school, work, community, and congregational settings for children and adults with developmental disabilities. He has published widely in the areas of educational and transition services, including more than 200 articles, chapters, and books. He was received research awards from the Council for Exceptional Children, the American Association for Intellectual and Developmental Disabilities, the Association of University Centers on Disabilities, and the Division on Autism and Developmental Disabilities.



**Presidential Guest Lectureship -
Rune J. Simeonsson, PhD, MSPH
ICF-CY: Added Value for
Developmental Practice?**

Rune J. Simeonsson, PhD, MSPH Professor of Education & Senior Fellow, FPG Child Development Institute, at the University of

North Carolina at Chapel Hill, USA. His academic preparation includes the disciplines of Psychology, Special Education and Public Health, converging on the study of developmental characteristics of children and youth with chronic conditions and disabilities. His teaching and research interests focus on assessment and classification of development, functioning and disability of children and the role of environments related to children's health, education and well-being. He has engaged in consultation on child development and disability with UN agencies as well as with countries in Asia, the Middle East, Latin America and Eastern and Western Europe. He served as chair of the WHO work group to develop the International Classification of Functioning, Disability and Health version for Children and Youth (ICF-CY) and served on the WHO committee to revise the diagnosis of Intellectual Developmental Disorder in ICD-11.



Cathleen Lyle Murray Award Recipient - Judy Heumann

Judith (Judy) Heumann is a lifelong advocate for the rights of disabled people. She contracted polio in 1949 in Brooklyn, NY and began to experience discrimination at 5 years old when she was denied the right to attend school

because she was a "fire hazard." Her parents played a strong role in fighting for her rights as a child. Judy determined that she, working in collaboration with other disabled people, had to play an increasing advocacy role as she and others experienced continuous discrimination because of their disabilities.

She is now an internationally recognized leader in the disability rights community and a lifelong civil rights advocate. She has been featured in numerous documentaries on the history of the Disability Rights Movement and recently her story was told on Comedy Central's Drunk History, in which she was portrayed by Ali Stroker, the first disabled woman to play on Broadway and Judy has also delivered a TED Talk. As a Senior Fellow at the Ford Foundation, she is currently working to help advance the inclusion of disability in the Foundation's work and is leading a project to advance the inclusion of disabled people in the media. She also currently serves on a number of non-profit boards of directors and is an Ambassador for Leonard Cheshire based in London.

President Obama appointed Judy as the first Special Advisor for International Disability Rights at the U.S. Department of State, where she served from 2010-2017. Mayor Fenty, District of Columbia, appointed her as the first Director for the Department on Disability Services, where she was responsible for the Developmental Disability Administration and the Rehabilitation Services Administration. From June 2002- 2006, Judy served as the World Bank's first Adviser on Disability and Development. In this position, she led the World Bank's disability work to expand the Bank's knowledge and capability to work with governments and civil society on including disability in the global conversation. From 1993 to 2001, Judy served in the Clinton Administration as the Assistant Secretary for the Office of Special Education and Rehabilitative Services in the Department of Education.

She was also responsible for the implementation of legislation at the national level for programs in special education, disability research, vocational rehabilitation and independent living, serving more than 8 million youth and adults with disabilities. 1982-1993 she cofounded the World Institute on Disability with Ed Roberts and Joan Leon. WID was the think tank run by disabled people focused on research to advance the Independent Living Movement. 1973-1993 Served as a founding member of the Berkeley Center for Independent Living and then on it's Board of Directors. CIL Berkeley was the first Center in the United States and helped to launch the Independent Living Movement in the US and around the World.

Over the course of her life, Judy has been involved on the national and international front working with disabled people's organizations and governments in the US and around the world to advance the human rights of disabled people. She has traveled using her motorized wheelchair to countries on every continent, in urban and rural communities. She has

played a role in the development and implementation of major legislation including the IDEA, Section 504, the Americans with Disability Act and the Convention on the Rights of Persons with Disabilities and the Convention on the Rights of Persons with Disabilities.

Judy graduated from Long Island University in Brooklyn, NY in 1969 and received her Master's in Public Health from the University of California at Berkeley in 1975. She has received numerous awards including being the first recipient of the Henry B. Betts Award in recognition of efforts to significantly improve the quality of life for people with disabilities and the Max Starkloff Lifetime Achievement Award from the National Council on Independent Living. She has also been awarded an Honorary Doctorate of Education from Middlebury College (May 2019), Honorary Doctorate of Humane Letters from Long Island University in Brooklyn, an Honorary Doctorate of Public Administration from the University of Illinois, Champaign, and an Honorary Doctorate of Public Service from the University of Toledo, Ohio and an Honorary Degree of Doctor of Humane Letters from Brooklyn College.

Judy's goal in life is to continue to advance the rights and empowerment of ALL disabled people around the world.



Corbett Ryan Pathways Pioneer Award Winner - Jason Benetti

Jason Benetti is a TV play-by-play announcer for ESPN and the Chicago White Sox. He joined ESPN in 2011 and has called college football and basketball for the network along with Major League Baseball, including the 2018 National League Wild Card game. His assignments for ESPN Radio include NFL and MLB games along with college football.

Benetti joined the White Sox in 2016 and just finished his third season with the team.

In addition, Benetti has called the NCAA Men's Basketball Tournament for Westwood One radio in each of the past two seasons.

He has had broadcasting jobs with Fox Sports 1, the Syracuse Chiefs (Washington Nationals Triple-A affiliate), Time Warner Cable Sports, and High Point University, among others.

Benetti graduated from Syracuse University in 2005 with bachelor's degrees in broadcast journalism, economics and psychology. He then earned his Juris Doctor at Wake Forest School of Law in 2011.

The Illinois native is a spokesperson for the Cerebral Palsy Foundation, including a new animated campaign he and CPF launched in 2018, entitled Awkward Moments.

He has taught sports broadcasting and sports interviewing as an adjunct professor at the S.I. Newhouse School of Public Communications at Syracuse University.



Duncan Wyeth Award Winner - Kyle Pease

A four-time IRONMAN triathlete, Kyle Pease has a career total of more than 75 races. Since 2011, he and his brother, Brent, have competed in races across the country, most recently becoming the first brother duo in

history to complete the grueling IRONMAN World Championship in Kona, Hawaii. Born with Cerebral Palsy, Kyle has strived for life beyond his wheelchair. Through his work with the Kyle Pease Foundation, he's focused on creating opportunities for inclusion in sports for athletes with disabilities. A motivational speaker and greeter at Piedmont Hospital in Atlanta, Kyle graduated from Kennesaw State University with a B.S. in Sports Management.

Tuesday, September 17, 2019: 8:00am – 5:00pm

ORTHOPEDIC DAY

M. Wade Shrader, MD; Robert M. Kay, MD

Learning Objectives:

1. Be able to describe typical pathology of dysplastic hips in children with Down Syndrome, and appropriate orthopedic management.
2. Understand the new advancements in medical care of children with SMA and the orthopedic ramifications, due to the changing natural history of SMA.
3. Be familiar with the approach to lower and upper extremity challenges in children with arthrogyrosis.
4. Describe the rationale behind growth friendly instrumentation for children with significant neuromuscular spine curves.
5. Be familiar with the importance of hip surveillance in children with CP, and learn some practical guidelines for such surveillance.

Agenda:

8:00am

Welcome and Introduction

Wade Shrader, MD and Bob Kay, MD

Orthopedic Aspects of Down Syndrome

Cervical-Spine – Anthony Scaduto, MD

Hip Dysplasia and Periacetabular Osteotomies

Rachel Goldstein, MD, MPH

Lower Extremity Challenges

Oussama Abousamra, MD

Panel Discussion

10:00-10:15am

Break

Orthopedic Care of Children with Arthrogyrosis

Upper Extremity Treatment

Carley Vuillermin, MBBS, MPH, FRACS

Upper and Lower Extremity Care, UE/LE

Eva Pontén, MD, PhD

Lower Extremities

Reid Nichols, MD

Panel Discussion

11:30am-12:30pm

Lunch Break

Treatment of Children with Spinal Muscular Atrophy

Breakthroughs in Neurological Care of Children with SMA

Leigh Ramos-Platt, MD

Use of a Catheter to Deliver Nusinersen

Freeman Miller, MD

Treatment of Lower Extremity and Spine Problems in Children with SMA

Matthew Halansky, MD

Treatment of Hip Problems in Children with SMA

Luis Moraleda Novo

Panel Discussion

2:00-2:15

Break

Orthopedic Issues in Children with Rett Syndrome

Orthopedic Challenges in the Lower Extremities and Feet in Children with Rett Syndrome

Uri Givon, MD

Treatment of Spine Deformity in Children with Rett Syndrome

David Skaggs, MD

Minimally-Invasive Growth-Friendly Management of Severe Neuromuscular Scoliosis

Michael B. Johnson

Treatment of Lower Extremity and Foot Problems in Children with Rett Syndrome

Kristan Pierz, MD

Panel Discussion

International Perspectives on Hip Surveillance in Children with Cerebral Palsy

Australia – H. Kerr Graham, MD

Scandinavia – Elizabet Rodby Bousquet, PT, PhD

Canada – Dr. Kishore Mulpuri

USA – Jon Davids, MD

AACPDM and POSNA Guidelines

Benjamin Shore, MD, MPH, FRCSC

Panel Discussion

5:00pm

Adjourn

International Cerebral Palsy Genomics Consortium (ICPGC) Annual Meeting PART I

Michael C. Krueger, MD; Michael C. Krueger, MD; Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Richard F. Wintle, PhD; Jan Friedman, MD, PhD; Qinghe Xin, PhD; Andres Moreno De Luca, MD; Hao Hu, PhD; Francisca Millan Zamora, MD; Peter Jin, PhD; Mark Corbett, PhD; Sara Lewis, PhD; Clare van Eyk, PhD

8:00am

Welcome Address to New and Existing Members: Structure and Composition, Accomplishments, Opportunities and Challenges

Michael Krueger, MD

1st Session: Clinical Aspects of Genetic CP

8:30am

Report from the ICPGC Phenomics Working Group: Delphi Results Lead to Essential Data Elements

Sara McIntyre, PhD, and Yana Wilson, MIPH

9:00am

Molecular Basis of Orthopedic Conditions in CP

Lucas Smith, PhD

9:30am

Networking Break

2nd Session: Worldwide Updates and Breaking Genomic Findings

10:00am

Assessing CP etiology in Uganda

Angelina Kakooza, MBChB, PhD

10:20am

Whole Genome Sequencing Findings from Toronto, Canada

Richard Wintle, PhD

10:40am

Updates from British Columbia, Canada

Jan Friedman, PhD

11:00am

Whole Exome Sequencing Findings from New York, USA

Jason Carmel, MD, PhD

11:20am

Whole Exome-based Insights from Pennsylvania, USA

Andres Moreno De Luca, MD

11:40am

Findings from Guangzhou, China using Whole Genome Sequencing

Hao Hu, PhD

12:00pm

Lunch Break

3rd Session: Pathways, Models, and Mechanisms

1:00pm

Wnt Pathway Mutations in CP

Mark Corbett, PhD

1:20pm

Stress Response Pathways: Implications for Neurodevelopment and Motor Function in CP

Sara Lewis, PhD

1:40pm

Converging Pathways in CP Implicated by Complementary Genomics and Transcriptomics

Clare van Eyk, PhD

2:00pm

Biomarkers and Exosomes in CP

Nanbert Zhong, MD, PhD

2:30

Networking Break

3:00pm

Mini-Symposium: Neuroimaging and CP Genetics

Roslyn Boyd, PhD, Andres Moreno de Luca, MD, Michael Fahey, MBBS, PhD, and Alex Pagnozzi, PhD

4:30pm

Panel Discussion: Gene by Environment Interactions

Haley Smithers-Sheedy, PhD, Sara Lewis, PhD, Peter Jin, PhD, Bhooma Aravamuthan, MD, DPhil, Nadia Badawi, MD, and Changlian Zhu, MD, PhD

Tuesday, September 17, 2019: 1:00pm - 5:00pm

ULTRASOUND SYMPOSIUM: NEUROMUSCULAR ULTRASOUND: HANDS ON ULTRASOUND TRAINING COURSE PART I

Katharine E. Alter, MD

Learning Objectives:

1. Be proficient in the basic physics and scanning techniques of ultrasound
2. Be proficient with the basics of US imaging
3. Identify clinical applications of US for procedural guidance and in Neuromuscular medicine
4. Identify key muscles in the neck, upper/lower limbs, parotid/submandibular glands. Identify sonoacoustic properties of relevant tissues and the benefits and limitations of incorporating US into clinical practice

Wednesday, September 18, 2019: 8:00am – 12:00pm

International Cerebral Palsy Genomics Consortium (ICPGC) Annual Meeting/Neurogenetics Symposium PART II

Michael C. Kruer, MD; Michael C. Kruer, MD; Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Richard F. Wintle, PhD; Jan Friedman, MD, PhD; Qinghe Xin, PhD; Andres Moreno De Luca, MD; Hao Hu, PhD; Francisca Millan Zamora, MD; Peter Jin, PhD; Mark Corbett, PhD; Sara Lewis, PhD; Clare van Eyk, PhD

8:00am

What Constitutes CP in the Genomic Age (i.e. what isn't CP?!)

Bhooma Aravamuthan, MD

8:30am

A Major Role for Genes that Control Developmental Neuritogenesis in CP

Peter Jin, PhD

9:00am

Cerebral Palsy Clinical Genomic Testing: Initial Results from Whole Exome Sequencing >1200 Cases

Francisca Millan, MD

9:30am

Are We There Yet? Implications of Genomics for Clinical Practice: Considerations within the International Classification of Function (ICF) Framework

Darcy Fehlings, MD

10:00am

When Should a Single Gene Form of CP be Considered?

Ali Fatemi, MD, and Julie Cohen, MS

1530

Panel discussion

Revisiting the Practice Parameter: What Workup Should be Performed in a Child Diagnosed with CP?

Maryam Oskoui, MD, Sid Srivastava, MD, and Darcy Fehlings, MD

11:00am

Developmental vs Degenerative Motor Disorders (cerebral palsy vs. hereditary spastic paraplegia)

Michael Kruer MD

11:30

Roll up Your Sleeves! Ways to Get Involved with Ongoing CP Genomics Research

Yana Wilson, MPH, and Paul Gross, BA

12:00pm

Closing Remarks and Adjourn

Michael Kruer MD

PC1 - REHABILITATION AND USE OF MOTION ANALYSIS FOR SINGLE EVENT MULTI-LEVEL SURGERY

Christina Bickley, PT, PhD, BOCO, C/NDT; Melissa Howard, PT, DPT, NCS; Douglas A. Barnes, MD; H Kerr Graham, MD, FRCS(Ed), FRACS; Melanie Lux, MD; Pam Thomason, B Pty, M Physio

Learning Objectives:

1. Describe SEMLS and the assessment process using Motion Analysis to determine surgical candidacy
2. Become familiar with patient interventions included in the stages of rehabilitation after SEMLS intervention
3. Understand the benefits of early postoperative mobilization for children following SEMLS and the research supporting early mobilization
4. Understand orthotic management and rationale for orthotic prescription in the post-operative period.
5. Understand which SEMLS procedures and hardware selections are candidates for an early mobilization rehabilitation program and which procedures still require a period non-weightbearing
6. Gain understanding of the pharmacological management (pain and spasm management) associated with an early mobilization rehabilitation SEMLS program
7. Become familiar with the use of Motion Analysis and the various measures used for outcome assessment

Wednesday, September 18, 2019: 10:00am - 12:00pm

Lower Extremity Osteotomies in Pediatric Orthopaedics: Hands-On Sawbones Session

Oussama Abousamra, MD; Haleh Badkoobehi, MD; Rachel Goldstein, MD; Professor H. Kerr Graham; Freeman Miller, MD; Robert Kay, MD; Selina Poon, MD; Benjamin Shore, MD; Vineeta Swaroop, MD; Rachel Thompson, MD

Learning Objectives:

1. Attendees will learn the approach to, and techniques for, VDROs in children.
2. Participants will understand the rationale and approach to performing distal femoral extension osteotomies in children with crouch gait.
3. Learners will be able to explain the importance of lever arm dysfunction in children, and how tibial osteotomies can be used to fix such dysfunction.

Wednesday, September 18, 2019: 1:00pm – 5:00pm

ULTRASOUND SYMPOSIUM: NEUROMUSCULAR ULTRASOUND: HANDS ON ULTRASOUND TRAINING COURSE PART II

Katharine E. Alter, MD

Learning Objectives:

1. Be proficient in the basic physics and scanning techniques of ultrasound
2. Be proficient with the basics of US imaging
3. Identify clinical applications of US for procedural guidance and in Neuromuscular medicine
4. Identify key muscles in the neck, upper/lower limbs, parotid/submandibular glands. Identify sonoacoustic properties of relevant tissues and the benefits and limitations of incorporating US into clinical practice

PC2 - PRACTICAL APPROACHES TO COMPLEX CARE: BUILDING YOUR CLINICAL AND TEACHING TOOLKIT

Holly Roach, OTR, ATP; Irene Cihon. Dietz, MD; Emily Goodwin, MD; Kathleen Huth, MD MMSc; Lisa Letzkus, PhD RN CPNP-AC; James Plews-Ogan, MD; Roopa Srinivasan, DNB (Pediatrics)

Learning Objectives:

1. Participants will apply the ICF framework to guide and lead difficult discussions such as consideration for a tracheostomy or gastrostomy in a child with medical complexity
2. Participants will review the the AACPDMS Sialorrhea Care Pathway and utilize it as a teaching tool to serve as a model for educating learners at the participant's home institution
3. Participants will learn and practice strategies to evaluate feeding safety from a patient and family centered approach.
4. Participants will develop proactive action plans which include anticipatory guidance for sick day management
5. Participants will identify key team members and identify their unique and complementary roles in the care and evaluation of CMC in their home institutions.

PC3 - FOURTH WORLD CP REGISTER AND SURVEILLANCE CONGRESS

Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Kate Himmelmann, MD, PhD; Maryam Oskoui, MDCM, FRCPC, MSc, FAAN; Gulam Khandaker, MBBS, MPH, PhD, FAFPHM

Learning Objectives:

1. Current rates and trends, and an opportunity to discuss differences/similarities seen across the world and contributing factors for these differences
2. Opportunity to meet those involved in well-established registers and new and emerging registers primarily from low and middle income countries
3. Discuss barriers to maintaining registers; new data points for registers to consider; impact of CP Registers and measuring their impact

PC4 - THE ICF IN A GLOBAL CONTEXT: TOWARDS A SYSTEMATIC ADOPTION ACROSS SETTINGS THROUGHOUT THE LIFESPAN

Verónica Schiariti, PhD; Jerome Bickenbach; Rune Simeonsson, PhD, MSPH; Jen Lyman, MS

Learning Objectives:

1. Participants will apply the ICF framework to guide and lead case scenarios involving children and young adults with chronic health conditions and/or disabilities.
2. Participants will review the pediatric ICF educational e-tool and utilize it as a teaching tool to serve as a model for educating learners at the participant's practices and institutions
3. Participants will discuss and develop strategies to incorporate the ICF to build capacity and set functional goals in different settings, promoting a functional-based approach.
4. Participants will identify key leaders and team members and identify their unique and complementary roles in the adoption, teaching, and implementation of the ICF in their communities, practices and institutions.

PC5 - HAMMERSMITH INFANT NEUROLOGICAL EXAMINATION CLINICAL WORKSHOP

Nathalie Maitre, MD; Rachel Byrne, BA; Joanne M. George, PhD; Mary Ann Nelin, MD; Sai Ayers

Learning Objectives:

1. Discuss the uses and limitations of the HINE
2. Utilize optimality scores and cut-off to aid in clinical practice
3. Perform the elements of the HINE at a basic level of proficiency
4. Score HINE elements with 90% reliability

Thursday, September 19, 2019: 7:00am – 8:00am

Breakfast Seminars 1-10

BRK01 - ADDRESSING INEQUITIES IN HEALTH OUTCOMES FOR CHILDREN WITH CEREBRAL PALSY ACROSS THE WORLD.

Sue Woolfenden, MBBS MPH FRACP PhD; Maryam Oskoui, MDCM, FRCPC, MSc, FAAN; Kate Milner, MBBS MPH FRACP; Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM

Learning Objectives:

1. Define what a health inequity is
2. Describe current health inequities for children with cerebral palsy in high, low and middle income countries including Australia, Canada and Bangladesh
3. Demonstrate an understanding of research to policy and practice gaps and opportunities to address the health inequities experienced by children with cerebral palsy worldwide
4. Join a collaborative global alliance formed with the specific purpose to advocate, conduct research and change practice in order to reduce inequities in health for children with cerebral palsy

BRK02 - COGNITION IN CHILDREN WITH CEREBRAL PALSY

Ann I. Alriksson-Schmidt, PhD; Kristine Stadskleiv, PhD; Marit Helene Gullien

Learning Objectives

1. Describe the importance of cognition in CP.
2. Describe why it is important that cognition is assessed in individuals with CP.
3. Describe how hospitals and user organizations can collaborate to further knowledge about cognitive functioning in children with CP to parents and kindergartens/schools.
4. Describe how a systematic program to assess cognition in this population has been implemented, and what the results are thus far.

BRK03 - POSTURE AND MOBILITY INTERVENTION FOR INFANTS AND TODDLERS

Ginny Paleg, DScPT; Elisabet Rodby-Bousquet, PT, PhD

Learning Objectives:

- 1: Identify posture and mobility trajectories of infants and toddlers with CP.
- 2: Design an evidence based intervention to address posture and mobility impairments and limitations.
- 3: Implement three evidence based interventions to address posture and mobility impairments and limitations.
- 4: Use three valid and reliable outcome measures for posture and mobility.

BRK04 - ENGAGEMENT OF FATHERS: REFLECTIONS ON LESSONS LEARNED FROM PARENT GROUP INTERVENTIONS FOR CHILDREN WITH COMPLEX MULTIPLE IMPAIRMENTS

Tracey Smythe, MPH, PhD; David A. Achuroa, MA Anthropology in Development Studies; Rachel D. Lindoewood, BMedSci, BMBS, MSc Paediatric Neurodisability

Learning Objectives:

1. Understand a framework to assess effective engagement of fathers in health care
2. Identify challenges and opportunities to engage fathers in parent group interventions
3. Interpret and apply principles from international practice to their own context in order to improve the engagement of fathers
4. Recognise new avenues of engaging fathers in their interactions with children, families, and other health professionals

BRK05 - ENVISIONING THE F-WORDS FOR CHILDREN WITH CEREBRAL PALSY OF GROSS MOTOR FUNCTION CLASSIFICATION SYSTEM LEVELS IV AND V.

Cindy B. Dodds, PT, PhD; Gina R. Rempel, MD, FRCPC; Holly Roach, OTR, ATP

Learning Objectives:

- 1: List and describe the F-words in childhood disability and environmental factors for promoting participation in children with cerebral palsy (levels IV and V).
- 2: Understand evidence, global perspectives, and operational definitions of the F-words in the context of children with CP of GMFCS levels IV and V.
- 3: Translate F-words knowledge into practical applications across global home and community settings for children with CP of GMFCS levels IV and V.
- 4: Discuss environmental strategies for supporting F-word participation of children with CP of GMFCS levels IV and V across a variety of settings.

BRK06 - POSTOPERATIVE URINARY RETENTION IN CHILDREN WITH CEREBRAL PALSY UNDERGOING MUSCULOSKELETAL SURGERY: PREVALENCE, RISK FACTORS AND MANAGEMENT.

Mohan Belthur, MD; Jon R. Davids, MD; Loren Davidson, MD

Learning Objectives:

- 1: Describe the pathophysiology of urinary dysfunction in children with cerebral palsy.
- 2: Describe the prevalence rate of POUR in children with CP undergoing elective orthopedic surgery.
- 3: List the patient and surgery specific risk factors associated with POUR.
- 4: Describe the management of POUR and discuss development and implementation of one management protocol for POUR.

BRK07 - MULTI-DISCIPLINARY SCHOOL-BASED CLINICS FOR CHILDREN WITH CEREBRAL PALSY: AN INTERNATIONAL DISCUSSION

Wade Shrader, MD; Daniel M. Weigl, MD; Laura Owens, MD; Laura M. Boyd, MSW, LSW

Learning Objectives:

1. Identify the components of a successful multi-disciplinary orthopedic clinic in the setting of a school designed for children with special health care needs.
2. Discuss international differences in school-based models for the education of children with CP.
3. To recognize how differences in models and home-countries impact health-care delivery in the context of the school system.
4. Understand the current level of evidence supporting improved clinical outcomes and care coordination when using an integrated school-clinic model in the care of children with CP.

BRK08 - PERIOPERATIVE ANESTHESIA/SURGICAL COLLABORATION: WORKING TOGETHER TO MAXIMIZE OUTCOMES AND ENHANCE THE PATIENT/FAMILY SURGICAL EXPERIENCE

Francisco Valencia, MD; Peter Lichtenthal, MD; Paul Samuels, MD

Learning Objectives:

1. Develop a better understanding of co-morbidities and their impact on perioperative anesthetic/surgical management
2. Identify factors that can be used to decrease perioperative complications, including blood conservation
3. Promote the use of regional pain management strategies which can diminish the postoperative need for narcotics and enhance the patient and family surgical experience
4. Promote the perioperative team approach for children with special needs

BRK09 - PROMOTING PHYSICAL ACTIVITY AND REDUCING SEDENTARY BEHAVIOUR IN INDIVIDUALS WITH CEREBRAL PALSY OVER THE LIFECOURSE THROUGH THE DEVELOPMENT OF AN AACPDM CARE PATHWAY

Jan Willem Gorter, MD PhD; Julia (Shi-Peng) Xiong, BHSc; Patrick McPhee, PhD; Sarah E. Reedman, PhD, BPhy (Hons)

Learning Objectives:

1. Learn current PA promotion strategies and understand the importance of targeting PA participation and reducing sedentary behavior.
2. Understand the AACPDM Care Pathway development process.
3. Learn and discuss assessment criteria of baseline PA levels and decision-points for making PA management plans, based on empirical evidence, end-user experiences, and opinions from an international, multidisciplinary expert team.
4. Relate the Care Pathway development process to the attendees' own expertise.

BRK10 - TELEREHABILITATION: NEW MODELS FOR INFANTS, CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY

Francesca Tinelli, PhD; Giuseppina Sgandurra, MD, PhD; Giovanni Cioni, MD

Learning Objectives:

1. Describe the known literature about telerehabilitation during developmental age. Upon completion, participant will be able to know recent literature on this topic.
2. Demonstrate the efficacy of telerehabilitation also in developmental age. Upon completion, participant will be able to know new technologies useful for rehabilitation.
3. Describe CARETOY and demonstrate its efficacy. Upon completion, participant will be able to know the mechanisms of this new system.
4. Describe AVDESK and demonstrate its efficacy. Upon completion, participant will be able to know to which subjects this rehabilitation program is addressed.

Thursday, September 19, 2019: 7:00 AM - 8:00 AM

Debate/Current Controversies

CC01 - ABILITIES-ORIENTED APPROACH TOWARDS DISABILITY: RESEARCH AND CLINICAL PROJECTS MODELLING A POSITIVE LANGUAGE

Verónica Schiariti, PhD; Anne Berndt, MD, MSc, FRCSC; Hayley Lipworth, BScH, BEd

Learning Objectives:

- 1: To introduce research initiatives highlighting an abilities-oriented approach to disability service provision
- 2: To demonstrate the impact of creating positive clinical programs for pregnant women living with a chronic health condition or disabilities
- 3: To describe vocational rehabilitation programs empowering individuals with disabilities to live independently
- 4: To promote collaboration between professionals working with pediatric and young adult populations facilitating successful transition to adult care

Thursday, September 19, 2019: 7:00 AM - 8:00 AM

Focused Symposia

SYMP01 - BUILDING ACADEMIES IN LOW RESOURCE SETTINGS: CHALLENGES AND OPPORTUNITIES

Robert W. Armstrong, MD PhD; Hans Forsberg, MD; Pauline W. Samia, MPhil Paediatric Neurology; Peter L. Rosenbaum, MD CM FRCPC; Bernard Dan, MD PhD

Learning Objectives:

- 1: Demonstrate a good understanding of the value and contribution that IAACD can make to development of national or regional academies, particularly in low resource settings.
- 2: Identify and be able to address challenges that professionals face in setting up new academies in low resource settings.
- 3: Describe the importance of context-specific research in impacting practice and policy and the strategies for developing this capacity in low resource settings.
- 4: Identify ways in which low resource countries can contribute to the global literature on child disability.

SYMP02 - EVIDENCE-INFORMED CARE PATHWAYS AND CLINICAL PRACTICE GUIDELINES FOR CHILDHOOD-ONSET DISABILITIES: PERSPECTIVES ON THEIR USEFULNESS FROM STAKEHOLDERS, CLINICIANS, HEALTH CARE ADMINISTRATORS, AND RESEARCH METHODOLOGISTS

Darcy L. Fehlings, MD; Laurie Glader, MD; Maureen O'Donnell, MD MSC FRCPC; Michele Shusterman; Iona Novak, PhD

Learning Objectives:

- 1: Upon completion, participant will be able to understand the definitions of Care Pathways and Clinical Practice Guideline (CPG) and find websites where they can be accessed.
- 2: Upon completion, participant will be able to highlight how Care Pathways/CPGs for Childhood Onset Disabilities(COD) can shape care and services for Childhood Onset Disabilities within the ICF Framework.
- 3: Upon completion, participant will be able to explore and discuss the potential and relevance of Care Pathways/CPG to inform care at an international level inclusive of lower-middle income countries.
- 4: Upon completion, participant will be able to discuss differing views on the usefulness of Care Pathways/CPG to enhance evidence informed care for Childhood Onset Disabilities.

SYMP03 - SMALL COHORT INTERVENTIONS SUPPORT THE USE OF NATIONAL, MULTICENTRE, COLLABORATIVE CLINICAL ADVISORY GROUPS: THE AUSTRALIAN EXPERIENCE OF SDR, ITB AND DBS

Adam Scheinberg, MBBS, FRACP, FAFRM, MMED; Kirsty Stewart, PhD; Jenny Lewis, PT; Simon P. Paget, MA (Cantab), MBBS MRCPCH(UK), FAFRM, FRACP; Jordan Sheriko, BSc (Hons), MD; Lisa Copeland, MBBS, FAFRM, FRACP

Learning Objectives:

- 1: Upon completion, participants will have an understanding of the current state of the evidence around paediatric ITB, SDR and DBS
- 2: Upon completion, participants will have an understanding of approaches in developing ITB, SDR and DBS collaborative clinical research groups
- 3: Upon completion, participants will have a comprehensive overview of outcome measures, representing all domains of the ICF, that can be utilised for ITB, SDR and DBS intervention
- 4: Upon completion, participants will be able to determine the benefits of collaborative research groups for specialist interventions: knowledge translation; pooling of outcome data: adverse event reporting and outcomes.

SYMP04 - SPASTIC MUSCLE IN CEREBRAL PALSY: CONTRACTURE, BOTULINUM TOXIN A, AND FUTURE DIRECTIONS

Jason J. Howard, BEng, MD, FRCSC; Kerr Graham, MD, MD, FRCS (Ed), FRACS; Tandy Hastings-Ison, PhD, BAppSci(Physio); Walter Herzog, PhD

Learning Objectives:

- 1: To understand the pathophysiology of spastic muscle contractures in CP.
- 2: To synthesize and interpret the best evidence regarding the functional outcomes of spastic muscle contractures treated with BoNT-A in children with CP.
- 3: To synthesize and interpret the pertinent animal and human studies investigating the impact of BoNT-A on skeletal muscle.
- 4: Based on the best available basic science/clinical evidence, to consider revised recommendations and changes to protocols regarding the use of BoNT-A in CP.

SYMP05 - THE AUSTRALASIAN CEREBRAL PALSY CLINICAL TRIALS NETWORK A MODEL FOR INTERNATIONAL COLLABORATION

Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech); Iona Novak, PhD; Michael Fahey, PhD, MD; Catherine Elliott, PhD

Learning Objectives:

- 1: Understand the key components of developing a collaborative national Cerebral Palsy Clinical Trials Network and it is informed by consumer engagement.
- 2: Be informed on a translational pipeline of preclinical to clinical research.
- 3: Understand how to set up collaborative multisite national clinical trials to test current and develop new interventions to improve outcomes for children with Cerebral Palsy.
- 4: Be informed on methods to generate knowledge translation from research into clinical practice through implementation trials and development of international clinical practice guidelines.

Thursday, September 19, 2019 8:15am - 10:15am

OPENING GENERAL SESSION

Opening Address and Exchange of Gavel

Jilda Vargus-Adams, MD, MSc to Mauricio Delgado, MD

IAACD Update

Hans Forssberg, MD

Presidential Guest Lecture

The promise of ICF

Jerome Bickenbach, PhD, LL.B.

Presidential Guest Lecture

ICF-CY: added value for developmental practice?"

Rune Simeonsson, PhD, MSPH

Presidential Guest Lecture

Redefining Cerebral Palsy as a Genetic, Neurodevelopmental Spectrum Disorder

Jozef Gecz, PhD

10:15am - 10:45am

Get Up and Move - Yoga

Instructor: Jennifer Lyman

Activity Description: Yoga postures will work on balance, strength, and flexibility. A great way to focus and refresh your mind and body and start the morning off right!

Thursday, September 19, 2019 - 10:45am - 12:30pm

FREE PAPER SESSION

A. Genetics/Epidemiology -

10:45 am - 10:52 am -

A1. CURRENT PHYSICIAN REFERRAL PRACTICES FOR DIAGNOSIS AND REHABILITATION FOR CHILDREN SUSPECTED OF HAVING CEREBRAL PALSY: A NATIONAL ENVIRONMENTAL SCAN

Zachary Boychuck, OT, PhD(c); John Andersen, MD; Darcy L. Fehlings, MD; Adam Kirton, MD MSc FRCPC; Maryam Oskoui, MDCM, FRCPC, MSc, FAAN; Michael Shevell, MDCM, FRCPC, FCAHS; Annette Majnemer, PhD, OT

10:53 am - 11:00 am -

A2. CAN SHIFTS IN GMFCS-SPECIFIC CP-INCIDENCE MIRROR CHANGES IN PERINATAL CARE?

Ann L. Alriksson-Schmidt, PhD; Lena Westbom, PhD; Gunnar Häggglund, PhD; Philippe Wagner, PhD

11:01 am - 11:08am -

A3. A COMPREHENSIVE INVESTIGATION OF MAJOR CONGENITAL ANOMALIES IN CHILDREN WITH POST-NEONATALLY ACQUIRED CEREBRAL PALSY: AN INTERNATIONAL DATA LINKAGE STUDY

Shona Goldsmith, BPhy(Hons); Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD; Guro L. Andersen, PhD; Kate Himmelmann, MD, PhD; Eve Blair, PhD; Catherine S. Gibson, PhD; Heather Scott, BMgmt; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Guiomar Garcia Jalon, PhD, BSc(Hons)Physiotherapy; Ester Garne, MD

11:09 am - 11:16 am -

A4. ASSOCIATED IMPAIRMENTS INCREASED FROM PRESCHOOL AGE TO SCHOOL AGE IN A POPULATION-BASED STUDY OF CHILDREN WITH CEREBRAL PALSY

Magnus Pählman, MD; Kate Himmelmann, MD, PhD

11:30 am - 11:37 am -

A5. PREDICTION OF COGNITIVE AND MOTOR OUTCOME OF PRETERM INFANTS FROM DIFFUSION MR BRAIN IMAGES USING A DEEP LEARNING CONVOLUTIONAL NEURAL NETWORK (CNN) MODEL

Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Susmita Saha, PhD; Joanne M. George, PhD; Paul Colditz, PhD, MD; Stephen Rose, PhD; Jurgen Fripp, PhD; Kerstin Pannek, PhD

11:38 am - 11:45 am -

A6. EXPANDING THE GENETIC SPECTRUM OF CEREBRAL PALSY: TRIO WHOLE GENOME SEQUENCING OF 38 FAMILIES IDENTIFIES GENETIC CAUSES IN 18 DIFFERENT GENES

Kishore Mulpuri, MBBS, MS, MHSc; Madeline Couse, MS; Colleen Guimond, MSc; Patricia Birch, MSc RN; Elisa Lau, BS; Nicole S. Liang, Bachelor of Science; Gabriella A. Horvath, MD, PhD; Suvina To, MS; Clara van Karnebeek, MD, PhD; Anna Lehman, FRCPC; Jan Friedman, MD, PhD

11:46 am - 11:53 am -

A7. GENETIC VARIATION ASSOCIATED WITH DIMINISHED DOPAMINE NEUROTRANSMISSION PREDICTS DELAY IN MOTOR DEVELOPMENT IN EXTREMELY LOW BIRTH WEIGHT INFANTS.

Gordon Worley, MD; Stephen Erickson, PhD; Kathryn Gustafson, PhD; Yuliya Nikolova, PhD; Daniel Belsky, PhD; Ricki Goldstein, MD; Joshua Levy, PhD; Scott McDonald, PhD; Greer Page, PhD; Allison Ashley-Koch, PhD; Michael Cotten, MD

11:54 am - 12:01 pm -

A8. INTRAUTERINE DRUG EXPOSURE (IUDE) AS A RISK FACTOR FOR CP

Jessica Purnell, BS; Nancy Batterson, OT/L, SCFES; Dennis Lewandowski, PhD; Katelyn D. Levengood, DPT; Megan Lightfoot, Bachelor's; Kristen Benninger, MD; Mary Lauren M. Neel, MD; Julia Less, MPH; Stephanie Burkhardt, MPH; Brianna Sowers; Nathalie Maitre, MD

12:02 pm - 12:09 pm -

A9. ETIOLOGY OF DYSKINETIC CEREBRAL PALSY IN JAPAN AND ITS RELATIONSHIP TO FUNCTIONAL OUTCOMES

Yukihiko Kitai, MD; Satori Hirai, MD; Kaeko Ogura, MD; Naomi Okuyama, MD; Mika Hirotsune, MD; Satoshi Mizutani, MD; Hiroshi Arai, MD

12:10 pm - 12:17 pm -

A10. EPILEPSY PREVALENCE, TREATMENT AND INTRACTABILITY IN THE CEREBRAL PALSY RESEARCH NETWORK COHORT

Adam Ostendorf, MD; Lindsey Morgan, MD; Erin Fedak Romanowski, DO; Erika Axeen, MD; Krista Eschbach, MD; Howard P. Goodkin, MD PhD; Paul Gross, BA

B. Motion Analysis/Gait -

10:45 am - 10:52 am -

B1. CLASSIFICATIONS OF MOTOR LEVEL IN MYELOMENINGOCELE: ARE THEY INDICATIVE OF AMBULATORY FUNCTION?

Susan Rethlefsen, DPT; Nicole Mueske, MS; Tishya Wren, PhD

10:53 am - 11:00 am -

B2. LOWER EXTREMITY STRENGTH AND CONTRACTURES AS DETERMINANTS OF WALKING ACTIVITY IN CHILDREN AND ADOLESCENTS WITH MYELOMENINGOCELE

Brett Lullo, MD; Nicole Mueske, MS; Carmel Diamant, BS; Alexander Van Speybroeck, MD; Deirdre Ryan, MD; Tishya Wren, PhD

11:01 am – 11:08 am –

B3. INDICATIONS, BENEFITS AND POTENTIAL SHORTCOMINGS OF LOWER LIMB ORTHOSES IN THE MANAGEMENT OF CHILDREN WITH HYPOTONIA: CLINICAL PRACTICE GUIDELINES

Phillip M. Stevens, MEd, CPO; Thomas DiBello, CPO

11:09 am – 11:16 am –

B4. STRENGTH, MOTOR COMPETENCE AND PHYSICAL ACTIVITY IN VERY PRETERM AND TERM-BORN PRESCHOOL AGE CHILDREN

Tara L. FitzGerald, BPhysio(Hons); Jennifer McGinley, PhD; Jeanie Cheong, MD; Lex Doyle, MD; Alicia Spittle, PhD

11:30 am – 11:37 am –

B5. WALKING SPEED IN CHARCOT-MARIE-TOOTH DISEASE: IMPLICATIONS OF DISEASE PROGRESSION DURING CHILDHOOD AND ADOLESCENCE

Sylvia Ounpuu, MSc; Tishya Wren, PhD; Kristan Pierz, MD; Gyula Acsadi, MD, PhD

11:38 am – 11:45 am –

B6. CHANGES AT KINEMATICS PARAMETERS AFTER SINGLE-EVENT MULTILEVEL SURGERY IN CEREBRAL PALSY: WHAT DO EXPECT AT SPECIFIC LOWER LIMBS JOINTS AND SEGMENTS?

Mauro C. de Moraes Filho, MD, MSc, PhD; Francesco Blumetti, MD, MSc, PhD; Cátia Kawamura, PT; Kamila Freitas, MD; Marcelo H. Fujino, MD; José Augusto Lopes, MSc; Daniella Neves, MD

11:46 am – 11:53 am –

B7. ALTERED SYNERGIES CAN PREVENT AN UNIMPAIRED WALKING PATTERN

Katherine M. Steele, PhD; Naser Mehrabi, PhD; Michael H. Schwartz, BS, MS, PhD

11:54 am – 12:01 pm –

B8. EVALUATING THE VALIDITY OF A PROMIS DEPRESSION DOMAIN IN PATIENTS WITH CEREBRAL PALSY AND IDENTIFICATION OF AT-RISK PATIENTS

Hiroko Matsumoto, PhD; Gerard F. Marciano, BS; Heakyung Kim, MD; David Roye, MD; Joshua Hyman, MD

12:02 pm – 12:09 pm –

B9. ABERRANT BETA SENSORIMOTOR CORTICAL OSCILLATIONS ARE RELATED WITH THE ALTERED GAIT KINEMATICS SEEN IN ADOLESCENTS WITH CEREBRAL PALSY

James E. Gehringer, B.S.; Rashelle Hoffman, DPT; Sarah E. Baker, MS; Tony Wilson, PhD; Max Kurz, PhD

12:10 pm – 12:17 pm –

B10. RISK FACTORS FOR ACCURATE CEREBRAL PALSY GAIT EVALUATION WITH EDINBURGH VISUAL GAIT SCORE

Sabina Brazevic, MS; Marek Józwiak, MD; Anna Krzyżańska, PT; Joanna Kraśny, MD; Magdalena Ratajczyk, MD; Aleksandra Sadecka, MD

C. Global/ICF/Surveillance –

10:45 am – 10:52 am –

C1. HOW CAN DATA FROM THE SURVEILLANCE OF CEREBRAL PALSY IN EUROPE BE USEFUL FOR SUPPORTING HEALTH POLICIES?

Sandra J. Hollung, MSc; Monica Lanzoni, PhD; Malika Delobel, MD; Virginie Ehlinger, MSc; Agnieszka Kinsner-Ovaskainen, MD, PhD; Kate Himmelmann, MD, PhD; Mary Jane Platt, MBBS, MPH, MD; Catherine Arnaud, MD, PhD

10:53 am – 11:00 am –

C2. CEREBRAL PALSY IN TERM BORN INFANTS HAS DECLINED: FINDINGS FROM THE AUSTRALIAN CEREBRAL PALSY REGISTER 1995-2012

Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD; Emma Waight, BA; Claire Galea, MEd; B.Ed; Linda Watson; Sue Reid, PhD MCLinEpi BAppSc; Michael DeLacy; Catherine S. Gibson, PhD; Heather Scott, BMgmt; Eliza Maloney; Shona Goldsmith, BPhy(Hons); Dinah S. Reddihough, MD BSc FRACP FAFRM; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Eve Blair, PhD; Kirsty Bartlett-Clark

11:01 am – 11:08 am –

C3. CEREBRAL PALSY AND COMORBIDITIES, A NATIONAL REGISTRY STUDY IN NORWAY

Sandra J. Hollung, MSc; Inger Johanne Bakken, PhD; Torstein Vik, PhD; Robert Wiik, MA; Stian Lydersen, PhD; Guro L. Andersen, PhD

11:09 am – 11:16 am –

C4. COMPARISON OF CEREBRAL PALSY DIAGNOSES BETWEEN THE AUSTRALIAN CEREBRAL PALSY REGISTER AND A LARGE CLINICAL TRIAL

Emily Shepherd, BHLthSc(Hons); Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Pat Ashwood, BSc(Hons), BAppSc(MLS), CertPH; Philippa Middleton, BSc(Hons), GradDipLibSt, MPH, PhD; Maria Makrides, BSc, BNutDiet, PhD; Caroline Crowther, FRANZCOG

11:30 am – 11:37 am –

C5. EARLY FUNCTIONAL MOTOR PROFILE OF INFANTS AT HIGH RISK OF CEREBRAL PALSY IN A LOW-MIDDLE INCOME COUNTRY

Sayak Chowdhury, MPT; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Asis Kumar Ghosh, MPT, BPT; Katherine Benfer, PhD, MPH, BSpPath

11:38 am – 11:45 am –

C6. ACUTE AND CHRONIC PAIN IN CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY: PREVALENCE, INTERFERENCE AND MANAGEMENT

Katarina Ostojic, Bsci MPH; Simon P. Paget, MA (Cantab), MBBS MRCPCH(UK), FAFRM, FRACP; Maria Kyriagis, MBBS, FRACP, FAFRM; Angela M. Morrow, MRCPI FRACP FAFRM PhD

11:46 am – 11:53 am –

C7. FREQUENCY AND NATURE OF COMORBID DIAGNOSES IN CHILDREN WITH CEREBRAL PALSY: A REGISTER-BASED STUDY

Karen McConnell, BSc (Hons), PhD; Josephine Egbon, BSc (Hons); Oliver Perra, BSc (Hons), PhD; Claire Kerr, BSc (Hons), PhD

11:53 am – 12:00 pm –

C8. EPILEPSY IN CHILDREN WITH CEREBRAL PALSY ASSOCIATED WITH CONGENITAL ZIKA VIRUS INFECTION

Alessandra L. Carvalho, MD; Paloma Ventura, BS; Adriana Fernandes, BS; Carlos Brites, PhD; Rita Lucena, PhD

12:01 pm – 12:08 pm –

C9. POST-NEONATAL CEREBRAL PALSY 1995-2012: FINDINGS FROM THE AUSTRALIAN CEREBRAL PALSY REGISTER.

Emma Waight, BA; Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD; Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Michael De Lacy; Catherine S. Gibson, PhD; Heather Scott, BMgmt; Kirsty Bartlett-Clark; Eliza Maloney; Sue Reid, PhD MCLinEpi BAppSc; Dinah S. Reddihough, MD BSc FRACP FAFRM; Shona Goldsmith, BPhy(Hons); Claire Galea, MEpi; B.Ed; Eve Blair, PhD; Linda Watson

12:09 pm – 12:16 pm –

C10. CEREBRAL PALSY (CP) AMONGST CHILDREN BORN <37 WEEKS (1995-2012): FINDINGS FROM THE AUSTRALIAN CEREBRAL PALSY REGISTER.

Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD; Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD; Emma Waight, BA; Linda Watson; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Sue Reid, PhD MCLinEpi BAppSc; Catherine S. Gibson, PhD; Claire Galea, MEpi; B.Ed; Michael DeLacy; Heather Scott, BMgmt; Kirsty Bartlett-Clark; Eliza Maloney; Dinah S. Reddihough, MD BSc FRACP FAFRM; Shona Goldsmith, BPhy(Hons); Eve Blair, PhD

D. Participation –

10:45 am – 10:52 am –

D1. AN EXAMINATION OF THE FACTORS THAT INFLUENCE PARTICIPATION IN SOCIAL ACTIVITIES AND ACTIVITIES OF DAILY LIVING (ADLS), FOR YOUNG PEOPLE WITH CEREBRAL PALSY (CP)

Grace Lavelle, PhD; Marika Noorkoiv, PhD; Nicola Theis, PhD; Jennifer Ryan, PhD

10:53 am – 11:00 am –

D2. INTRINSIC MOTIVATION FOR PHYSICAL ACTIVITY PARTICIPATION PREDICTS RESPONSE TO A PARTICIPATION-FOCUSED THERAPY INTERVENTION IN CHILDREN WITH CEREBRAL PALSY

Sarah E. Reedman, PhD, BPhy (Hons); Jenny Ziviani, OT; Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech); Leanne Sakzewski, PhD, BOccThy

11:01 am – 11:08 am –

D3. DEVELOPMENT CURVES OF COMMUNICATION AND SOCIAL INTERACTIONS OF INDIVIDUALS WITH CEREBRAL PALSY

Marloes van Gorp, MSc; Siok Swan Tan, PhD; Jeanine M. Voorman, MD PhD; Johanna J. Geytenbeek, PhD; Heleen A. Reinders-Messelink, PhD; Marjolijn Ketelaar, PhD; Annet J. Dallmeijer, PhD; Marij E. Roebroek, PhD

11:09 am – 11:16 am –

D4. DEVELOPING AN INTERVENTION TO SUPPORT PARTICIPATION IN LEISURE OF CHILDREN AND YOUNG PEOPLE WITH NEURODISABILITY.

Jennifer McAnuff, MSc; Tim Rapley, PhD; Allan Colver, PhD; Niina Kolehmainen, PhD

11:30 am – 11:37 am –

D5. POTENTIAL PREDICTORS FOR PARTICIPATION IN VARIOUS AREAS IN PRESCHOOL CHILDREN WITH CEREBRAL PALSY: A FOLLOW-UP STUDY

Chia-Ling Chen, MD, PhD; Chia-Hui Chen, MS; Chia-Ying Chung, MD; Katie P. Wu, MD; Yi-ting Hsiao, PhD; Hsieh-Ching Chen, PhD

11:38 am – 11:45 am –

D6. INCREASING PHYSICAL ACTIVITY IN YOUTH WITH PHYSICAL DISABILITIES VIA A SUMMER CAMP PROVIDING EXPOSURE TO ADAPTED SPORTS AND RECREATION PROGRAMS

Elizabeth G. Condliffe, PhD, MD; Shane Esau, M.Kin.; Leticia Janzen, MSc; Elysa F. Sandron, BS; Gregor Kuntze, PhD; Carolyn A. Emery

11:46 am – 11:53 am –

D7. A RANDOMIZED CONTROLLED TRIAL OF A NOVEL TASK-SPECIFIC APPROACH FOR ATTAINING TWO-WHEEL BIKE RIDING GOALS IN CHILDREN WITH CEREBRAL PALSY

Rachel A. Toovey, PT; Adrienne Harvey, PhD; Jennifer McGinley, PhD; Katherine Lee, PhD; Sophy T. Shih, PhD; Alicia Spittle, PhD

11:54 am – 12:01 pm –

D8. LET'S RIDE A BIKE! PILOT RANDOMIZED CONTROLLED TRIAL OF FUNCTIONAL ELECTRICAL STIMULATION CYCLING AND ADAPTED CYCLING IN CHILDREN WITH CEREBRAL PALSY.

Ellen L. Armstrong, MPT, MSc (APA), BExSc; Megan J. Kentish, B.Phy; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Sean A. Horan, BExSc, MPhy, PhD; Christopher Carty, PhD

12:02 pm – 12:09 pm –

D9. PARTICIPATION AND LIFE SATISFACTION IN YOUNG ADULTS WITH CEREBRAL PALSY

Nancy Lennon, MS, PT; Chris Church, MPT; Wade Shrader, MD; Faithe R. Kalisperis, DPT; Allison Wickham, BS; John Henley, PhD; Tim Niiler, PhD; Freeman Miller, MD

12:10 pm – 12:17 pm –

D10. LONG-TERM FOLLOW-UP STUDY ON LEVEL OF ACTIVITY, PARTICIPATION AND SATISFACTION IN ADULTS WITH CEREBRAL PALSY AND SPASTIC DIPLEGIA

Maaïke M. Eken, PhD; Robert Lamberts, Prof.; Jacques du Toit, MBChB(Stell), FC Orth(SA), MScClinEpi; Nelleke Langerak, PhD

Thursday, September 19, 2019: 10:45 AM - 12:15 PM

Focused Symposia

SYMP06 - COLLABORATIVE STRATEGIES FOR IMPROVING EVIDENCE BASED PRACTICE IN DEVELOPING COUNTRIES

Marcia Greenberg, MS, PT; Perth Rosen, MA; Abhay Khot, MBBS, FRACS; Alaric Aroojis, MS, D'Ortho, DNB; Oleksandra Kalandyak, BS

Learning Objectives:

- 1: Describe strategies implemented in developing countries to provide wheeled mobility and build local capacities to insure continued clinical service and maintenance of equipment.
- 2: Describe strategies implemented in Ukraine to teach evidence-based physical therapy practice and train local clinicians to insure sustainability.
- 3: Describe a collaborative program between Australia and India to provide training in the assessment and treatment of gait deformities in children with cerebral palsy.
- 4: Describe problems and solutions used by clinicians from various developing countries to address the needs of children with developmental disabilities and their families.

SYMP07 - USING IMPLEMENTATION SCIENCE TO ACCELERATE THE ADOPTION OF EVIDENCE-BASED PRACTICES RELATED TO RESISTANCE TRAINING IN CEREBRAL PALSY (CP)

Nicole Harris, MPT, PCS, BOCO; Noelle G. Moreau, PhD, PT; Michelle Roy, BScPT; James B. Hedgecock, PT, DPT, PCS; Matthew Prowse, MD, FRCPC

Learning Objectives:

- 1: Evaluate recent evidence regarding the effects of resistance training for children with CP across the ICF.
- 2: Integrate the knowledge of dosing parameters from evidence-based research with clinical expertise for practical application for patients with CP and other neuromotor diagnoses.
- 3: Evaluate the success of current resistance training programs after presentation of case studies and combined data of participants.
- 4: Identify how Implementation Science can be used to accelerate the adoption of evidence-based resistance training at a rehabilitation center or hospital.

SYMP08 - ETIOLOGY, DIAGNOSIS AND TREATMENT OF CEREBRAL PALSY IN HIGH INCOME VS LOW/MIDDLE INCOME COUNTRIES - KNOWLEDGE ACROSS BORDERS

Annemieke I. Buizer, MD PhD; Shaheen Akhter, MD; Laura A. van de Pol, MD, PhD; R. Jeroen Vermeulen, MD, PhD; Nelleke G. Langerak, PhD

Learning Objectives:

- 1: Discern how environmental factors, like attitudes and available equipment influence goal setting and treatment options for CP in high vs low/middle income countries.
- 2: Describe differences in etiology of CP in high and low resource settings around the world.
- 3: Describe the environmental factors in their setting, that determine possibilities and limitations for their own practice in diagnosing and treating children with CP.
- 4: Participants will have learnt from evidence and experience in other settings (differences as well as similarities), some pointers to improve their own practice for children with CP.

SYMP09 - GLOBAL INITIATIVES IMPROVING LIFE CONDITIONS FOR CHILDREN WITH DEVELOPMENTAL DISABILITIES

Hans Forssberg, MD; Diane Damiano, MD; Raoul Berjemo, MD; Chiara Servili, MD; Alarcos Cieza

Learning Objectives:

- 1: Understand the global situation for children with developmental disability.
- 2: Understand the UNICEF- Early detection and intervention systems approach.
- 3: Understand the WHO initiative for parent skill training.
- 4: Understand the WHO Package for Rehabilitation Intervention project.

SYMP10 - ISSUES AND CHALLENGES IN GLOBALLY ADAPTING MEASURES OF CHILDREN'S PARTICIPATION AND ENVIRONMENT

Roopa Srinivasan, DNB (Pediatrics); Dana Anaby, PhD; Mary A. Khetani, ScD; Rachel Teplicky, MSc

Learning Objectives:

- 1: Participants will learn about the key components of Participation and Environment Measures and their various uses in both research and clinical practice
- 2: Participants will learn how results of PEM measures can 1.be interpreted 2. inform practice across cultures at the micro (child/youth), meso (family, school, program evaluation) and macro (re-shaping policies) levels
- 3: Participants will learn the process for adapting and validating the tool in different settings
- 4: Participants will learn possible challenges of using the measures in different contexts and cultures (especially low and middle income countries) and ways to mitigate them.

THURSDAY

SYMP11 - ROBOTICS FOR TRAINING OF BALANCE, POSTURE, AND GAIT: EMERGING TECHNOLOGIES, POSSIBILITIES AND CHALLENGES

Sunil K. Agrawal, PhD; Diane Damiano, MD; Andrew Gordon, PhD; Joseph Dutkowsky, MD; Heakyung Kim, MD

Learning Objectives:

- 1: Upon completion, participants will be able to get an overview of how technology can enhance rehabilitation of mobility and posture.
- 2: Upon completion, participants will be able to appreciate how motor learning needs to be integrated within robotic rehabilitation.
- 3: Upon completion, participants will be able to see examples of robotic rehabilitation and clinical evidences to improve mobility and posture.
- 4: Upon completion, participants will be able to appreciate the challenges in transitioning robotic technologies to clinic.

SYMP12 - ADAPTIVE SPORTS PANEL: HOW CAN WE MAKE SPORTS ACCESSIBLE TO KIDS?

Phoebe Scott-Wyrd, DO; Carolina Schaber, RN, BSN, MBA

Learning Objectives:

- 1: Describe ways to support participation in adaptive sports for children with disabilities.
- 2: List organizations and resources for adaptive sports participation that are available for children worldwide.
- 3: Describe obstacles to participation in adaptive sports and methods of overcoming them.
- 4: List the benefits of participation in adaptive sports for children with disabilities and their families.

SYMP13 - INTERNATIONAL PERSPECTIVES ON THE IMPLEMENTATION OF HIP SURVEILLANCE FOR CHILDREN WITH CEREBRAL PALSY: PEARLS, PITFALLS AND PROCESSES.

Stacey D. Miller, PT; Kate L. Willoughby, BPhysio, DPhysio; Laura Yeo, M Arts, Grad Dip PT; Pam Thomason, B Phty, M Physio; Kerr Graham, MD, MD, FRCS (Ed), FRACS

Learning Objectives:

- 1: Upon completion, participants will be able to describe the evidence for hip surveillance in children with cerebral palsy.
- 2: Upon completion, participants will be able to describe models for the implementation of hip surveillance that have been developed in multiple countries.
- 3: Upon completion, participants will be able to list barriers and potential solutions to implementing hip surveillance within varying health systems.
- 4: Upon completion, participants will be able to identify strategies to initiate the implementation of hip surveillance in the absence of state or country wide surveillance.

SYMP15 - UNPACKING THE BLACK BOX OF PARTICIPATION-FOCUSED INTERVENTIONS

Sarah E. Reedman, PhD, BPhy (Hons); Leanne Sakzewski, PhD, BOccThy; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Catherine Elliott, PhD; Keiko Shikako-Thomas, PhD; Annette Majnemer, PhD, OT

Learning Objectives:

- 1: List and describe theoretical frameworks for participation for youth with disabilities.
- 2: Demonstrate knowledge of the different ways to measure participation in youth with disabilities and apply this knowledge to their own context.
- 3: Describe current evidence-based practice for strategies and intervention frameworks aimed to promote participation in youth with disabilities.
- 4: Identify programs or changes at the environmental level that may have a role in creating an inclusive society that promotes children's participation.

SYMP16 - ASSISTIVE TECHNOLOGY INNOVATIONS FOR COMMUNICATION AND MOBILITY IN CEREBRAL PALSY

Alistair McEwan, BE, BComm, MEng (Res); Zachery Lerner, PhD; Leigh Hochberg, MD, PhD; James Bowen; William Richards

Learning Objectives:

1. Determine the needs of mobility in cerebral palsy over the next 5 years
2. Determine the needs of communication in CP of the next 5 years
3. Further understand direct thought to speech implanted technology
4. Understand the perspectives from families and people with CP

Thursday, September 19, 2019: 10:45 AM - 12:15 PM

Debate/Current Controversies

CC02 - DIFFERENCES IN PRACTICE PATTERNS AROUND THE WORLD FOR CEREBRAL VISUAL IMPAIRMENT: FINDING A COMMON GROUND

Corinna M. Bauer, Ph.D.; Linda Lawrence, MD; Karen Harpster, PhD, OTR/L; Belinda J. Deramore Denver, OT; Els Ortibus, MD, PhD

Learning Objectives:

- 1: Describe some of the current controversies surrounding the evaluation, diagnosis, and care of children with Cerebral Visual Impairment around the world.
- 2: Demonstrate knowledge of care practices implemented across different parts of the world, including commonalities and differences.
- 3: Understand the current roadblocks preventing advancements in the care of children with Cerebral Visual Impairment.
- 4: Identify potential action points towards creating a common framework and language with the goal of developing a global research initiative to improve the care of children with Cerebral Visual Impairment.

Thursday, September 19, 2019: 2:00pm-4:00pm

GENERAL SESSION

Corbett Ryan Pathways Pioneer Award Presentation
Jason Benetti

Presidential Guest Lecture

Rationale and Evolution of the Application of Quantitative Gait Analysis to the Management of Gait Disorders in Children with Cerebral Palsy
Jon R. Davids, MD

Mentorship Award Presentation

Presidential Guest Lecture
Motor Milestones, Intellectual Disability and Autism
Audrey Thurm, PhD

Mac Keith Press Basic Science Lecture
Microbiome-Nervous System Interactions in Health and Disease
Elaine Y. Hsiao, PhD

Thursday, September 19, 2019: 4:15pm-6:15pm

Instructional Courses

IC01 - FACILITATORS AND BARRIERS TO ENGAGING CHILDREN AND PARENTS IN PEDIATRIC REHABILITATION

Lisa A. Chiarello, PT, PhD, FAPTA; Roger Ideishi, JD, OT/L, FAOTA

Learning Objectives:

- 1: Communicate with children and families about their engagement in therapy sessions.
- 2: Identify intervention strategies that can be used to support engagement.
- 3: Create solutions to address barriers to engagement.
- 4: Collaborate with children and families to co-create meaningful intervention plans.

IC02 - INCLUSION: AT EVERY AGE AND ACROSS THE COMMUNITY!

Rachel Byrne, BA; Peter L. Rosenbaum, MD CM FRCPC; Tracy Pickar, BA; Laurie Glader, MD

Learning Objectives:

- 1: Define different models of inclusion in educational settings and across the lifespan.
- 2: Identify and describe barriers to inclusion including attitudes/bias towards individuals with impairments.
- 3: Have a working knowledge of an inclusion curriculum for school age children.
- 4: Identify strategies on how to support inclusion in your setting.

IC03 - INVITING THE LIVED EXPERIENCES AND PERSPECTIVES OF CHILDREN LIVING WITH PHYSICAL DISABILITY AND THEIR FAMILIES AS A BASIS FOR ICF APPLICATIONS IN REHABILITATION PROCESSES

Sheryl L. Holt, PhD; Liz Gaut, SPT; McKayla Linz, SPT

Learning Objectives:

- 1: Identify clear parental perspectives and lived experiences associated with rearing a child with a disability, including participation in rehabilitation.
- 2: Identify child perspectives and lived experiences of the processes of therapies, home, school, and community participation and mobility.
- 3: Identify applications within rehabilitation processes that can empower families and children to face the challenges of living with a disability first and second hand.
- 4: Problem-solve what is missing in common rehabilitation processes that limit the ICF related assessments, interventions, and outcomes.

IC04 - MANAGEMENT OF PAIN AND FUNCTION IN ADULTS WITH CEREBRAL PALSY

Joshua E. Hyman, MD; David Roye, MD; Wade Shrader, MD; Henry G. Chambers, MD; Philip Nowicki, MD

Learning Objectives:

- 1: Participants will understand the musculoskeletal impact of aging on individuals with cerebral palsy.
- 2: Participants will learn to recognize the causes of pain and loss of function and participation in people with cerebral palsy.
- 3: Participants will understand the orthopaedic surgical procedures utilized to improve function and decrease pain in adults with cerebral palsy.
- 4: Participants will develop an appreciation for the complex issues around consent, medical management, and postoperative complications.

IC05 - NEUROINFLAMMATION AND PERINATAL BRAIN INJURY: BASIC SCIENCE TO EMERGING THERAPIES

Eric M. Chin, MD; Lauren Jantzie, PhD; Shenandoah Robinson, MD; Alexander Hoon, MD, MPH

Learning Objectives:

- 1: Identify roles (both beneficial and disruptive) of inflammation in early brain injury.
- 2: Describe the pro- or anti- inflammatory effects of opioids and other perinatal exposures.
- 3: Describe links between inflammatory risk factors and neurodevelopmental outcomes.
- 4: Describe the role of immunomodulatory therapies in developmental brain injury.

IC06 - NINDS CEREBRAL PALSY COMMON DATA ELEMENTS: UPDATES, RELATIONSHIP TO THE INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY, AND HEALTH (ICF); APPLICATIONS FOR INTERNATIONAL RESEARCH, AND CLINICAL UTILITY.

Joline Brandenburg, MD; Verónica Schiariti, PhD; Carolina Mendoza-Puccini, MD; Robin Feldman, BS MBA; Sarah McIntyre, BAppSc(OT)Hons, MPS, PhD

Learning Objectives:

- 1: Understand the purpose and impact of the NINDS CDEs, including the CP CDEs.
- 2: Define the relationship of the ICF framework to the current content of the CP Common Data Elements.
- 3: Describe updates in the CP CDEs.
- 4: Develop an understanding and skills in using the CP CDE in national and international research and clinical practice.

IC07 - OPTIMIZING HEALTH AND FUNCTION IN CHILDREN WITH CEREBRAL PALSY WITH THE NEW AACPDM CARE PATHWAY FOR MAJOR MUSCULOSKELETAL SURGERY

Jay Berry, MD; Mohan Belthur, MD; Gina R. Rempel, MD, FRCPC

Learning Objectives:

- 1: Understand how to access and navigate the new AACPDM care pathway on preparing children with CP for major musculoskeletal surgery.
- 2: Use the pathway to identify opportunities for improvement of participants' local perioperative care.
- 3: Design an implementation plan for participants to revise and improve their preoperative care processes.
- 4: Share, discuss, and collaborate with other attendees to optimize plans.

IC08 - ORAL SENSORIMOTOR DISORDERS IN CHILDREN: FROM EVALUATION TO MANAGEMENT

Amber Newell, CPNP, OTR/L; Ellen Quinn, MS, CCC-SLP; Heakyung Kim, MD

Learning Objectives:

- 1: To develop strategies to identify children with neuromuscular disorders at risk of swallowing dysfunction.
- 2: To understand physiological swallowing process and common swallowing difficulties leading to dysphagia.
- 3: To delineate between sensory-based oral motor difficulties versus pathological swallowing dysfunction.
- 4: To formulate appropriate treatment plan for children with oral sensorimotor dysfunction.

IC09 - PREP: AN INNOVATIVE THERAPY INTERVENTION FOR IMPROVING PARTICIPATION OF CHILDREN AND YOUTH WITH DISABILITIES AROUND THE WORLD

Dana Anaby, PhD; Hazel Killeen Hughes, PhD; Melanie Burrough, MSc; Rachel Teplicky, MSc; Anat Golos, PhD; Laura Turner, MSc

Learning Objectives:

- 1: Describe the rationale for environment-focused approaches to improving participation.
- 2: Understand the research evidence to support PREP, including perspectives and experiences from international research projects in Canada, Ireland, and the United Kingdom.
- 3: Demonstrate knowledge of the PREP approach by participating in an interactive activity using the PREP Intervention forms, guided by the presentation of video clips and client stories.
- 4: Identify the most common barriers for successful implementation of environmental-focused interventions in various clinical contexts and discuss ways to mitigate them.

IC10 - ROLES OF DISTAL FEMORAL EXTENSION OSTEOTOMY AND PATELLAR TENDON ADVANCEMENT IN THE TREATMENT OF SEVERE PERSISTENT CROUCH GAIT IN ADOLESCENTS AND YOUNG ADULTS WITH CEREBRAL PALSY

Tom Novacheck, MD; Elizabeth Boyer, PhD; Jean L. Stout, PT, MS; Katie Walt, DPT; Libby Weber, MD

Learning Objectives:

- 1: Discuss the indications for DFEO+PTA surgery for severe crouch gait in adolescents & young adults with cerebral palsy.
- 2: Describe the role of the hamstrings, rectus femoris, patella position and moment arm and insights from musculoskeletal modeling in severe crouch gait.
- 3: Explain the components of post-surgical rehabilitation.
- 4: Compare long-term case vs. control functional outcomes of DFEO+PTA surgery across the entire spectrum of the ICF domains.

IC11 - SOONER THAN LATER: INNOVATIONS TO THE EARLY DIAGNOSIS OF CEREBRAL PALSY

Iona Novak, PhD; Andrea Guzzetta, MD, PhD; Michael Fahey, MBBS PhD FRACP; Anna te Velde, BAppSc (Hons); Lynda McNamara, PhD Candidate; Bernadette Gillick, PhD, MSPT, PT

Learning Objectives:

- 1: Identify infants at high-risk for developing cerebral palsy.
- 2: Describe the neurophysiological mechanisms of adaptive neuroplasticity and use genetic algorithmic differential diagnostic decision-making.
- 3: Outline novel interventions that optimize neuroplasticity and participation.
- 4: Discuss stakeholder perspectives on research participation impact.

IC12 - THE INTERNATIONAL CEREBRAL PALSY HEALTH PROMOTIONS GROUP: PURPOSE AND COLLABORATIVE WORK

Edward A. Hurvitz, MD; Mark Peterson, PhD; Patrick McPhee, PhD; Deborah E. Thorpe, PT, PhD; Nelleke G. Langerak, PhD; Patricia C. Heyn, PhD, FGSA, FACRM

Learning Objectives:

- 1: Describe the purpose and benefits of a group like the ICPHPG for collaborative research in the field.
- 2: Explain the issues relating to health outcomes and risk of chronic disease in CP across the lifespan.
- 3: Review several of the areas of research of the ICPHPG.
- 4: Evaluate the collaborative model of the ICPHPG and how it might apply to the research of others.

IC13 - THERAPEUTIC ACTIVATION AND INHIBITION OF MOTOR SKILLS VIA MOTOR LEARNING AND OPERANT CONDITIONING

Dory Wallace, MS, OTR/L; Jessie E. Mann, MS; Mary Rebekah Trucks, MS, OTR/L; Stephanie C. Deluca, PhD

Learning Objectives:

- 1: Participants will be describe the history of intensive therapies.
- 2: Participants will be able to describe presentation of developmental delays and needs of children with microcephaly.
- 3: Participants will be able to demonstrate the successful use of operant conditioning techniques to simultaneously limit interfering movements and behaviors while successfully activating skills in children with hyperkinetic movement disorders.
- 4: Participants will be able to facilitate discussion of strategies to integrate these highly specific and complex techniques into clinical settings.

IC14 - UTILIZING SOCIAL DETERMINANTS OF HEALTH FRAMEWORK-CEREBRAL PALSY

Margaret Salzbrenner Hoopes, MSN; Kirk Dabney, MD; Tirzah Spencer, PhD; Valerie Aptt, MSW

Learning Objectives:

- 1: Participants will articulate the definitions of social determinates of health according to the newest national healthcare research and quality agencies.
- 2: Participants will verbalize understanding of delivering equity in healthcare
- 3: Participants will understand the rationale for social determinates of health in reference to quality and equity of care, family experience, healthcare costs, and patient outcomes.
- 4: Participants will take home specific strategies that can help to implement social determinants of health data into their own clinical setting.

6:30 pm - 8:00 pm

**Wine and Cheese Poster and Exhibit Review
Sponsored by Medtronic**

Location: Marquis Center and South

Friday, September 20, 2019: 7:00 AM - 8:00 AM

Breakfast Seminars

BRK11 - BOTULINUM NEUROTOXIN UPDATES

Mark Gormley, MD; John Fox, DO; Kathleen M. Vonderhaar, MD

Learning Objectives:

- 1: Understand the biological differences in the current botulinum neurotoxin serotypes.
- 2: Describe the potency and duration of effect of botulinum neurotoxin subtypes.
- 3: Develop knowledge of botulinum toxin serotype E and other new toxins being developed and how they differ from other botulinum neurotoxin serotypes.
- 4: Describe the evolving clinical indications for botulinum neurotoxins.

BRK12 - CREATING CAPACITY FOR ROBOTIC TECHNOLOGY USE IN PEDIATRIC REHABILITATION : A MULTI-CENTER INTERNATIONAL PERSPECTIVE

Anna M. McCormick, MD, FRCPC (Pediatrics/Rehabilitation); Hubertus J. van Hedel, PhD PT; Deborah Gaebler-Spira, MD, FRCP; Virginia Wright, BSc (PT), MSc, PhD

Learning Objectives:

- 1: Define a robotic device and give 3 examples of robotic devices used in gait neurorehabilitation.
- 2: Describe the international collaboration that facilitates the application of rehabilitation technologies and emerging datasets.
- 3: Appreciate the growing experience of robotic technology in neurorehabilitation from a variety of international pediatric rehabilitation centers.
- 4: Participate in conversations regarding the potential use of robotics to enhance function, activity and participation.

BRK13 - EXERCISE TESTING IN PEDIATRIC REHABILITATION: APPLICATION IN CHILDREN WITH WALKING PROBLEMS

Annet J. Dallmeijer, PhD; Annemieke I. Buizer, MD PhD

Learning Objectives:

- 1: Describe the physiological background of clinical exercise tests in youth with developmental disability.
- 2: Interpret results of energy cost and maximal exercise tests in youth with developmental disability.
- 3: Use clinical exercise test outcomes in treatment of walking problems.
- 4: Understand the value of energy cost and fitness testing for the treatment of walking problems in youth with developmental disability.

BRK14 - INTERPRETING HIP SURVEILLANCE X-RAYS WITH THE HIPSCREEN APP: A PRIMER FOR THE RADIOLOGY NOVICE

Vedant A. Kulkarni, MD; Jon R. Davids, MD; Pam Thomason, B Phyt, M Physio; Lisa Wiedeman, MPT

Learning Objectives:

- 1: Be able to use the HipScreen App to measure a hip's migration percentage.
- 2: Identify important landmarks on a hip surveillance radiograph used for quantifying hip displacement.
- 3: Recognize features of poor patient positioning on radiographs that could cause inaccuracy of the migration percentage measurement.
- 4: Understand protocols for proper positioning of children to obtain accurate hip surveillance radiographs.

BRK15 - MUSCLE SYNERGIES: FROM NEUROSCIENCE TO THE CLINIC

Katherine M. Steele, PhD; Meghan Munger, MPH; Andrew Georgiadis, MD; Rocio Riveros-Charry, PT

Learning Objectives:

- 1: Describe the theory of synergy-based control of movement.
- 2: Detail the process used to calculate synergies from electromyography data.
- 3: Demonstrate how synergies and other measures of motor control may be useful for diagnosis and treatment planning.
- 4: Identify limitations of using synergies to evaluate motor control and opportunities for future research.

BRK16 - HEALTH ISSUES IN CEREBRAL PALSY WITH AGEING EPIDEMIOLOGY AND INTERVENTIONS.

Wilma M. van der Slot, MD PhD; Jennifer Ryan, PhD

Learning Objectives:

- 1: Upon completion, participant will be able to describe current evidence on co-morbidities in adults with CP.
- 2: Upon completion, participant will be able to identify risk factors for co-morbidity in adults with CP.
- 3: Upon completion, participant will be able to understand chronic disease surveillance.
- 4: Upon completion, participant will have knowledge on interventions to treat clustered symptoms and to reduce chronic disease risk in adults with CP.

BRK17 - COMMUNICATION IN CHILDREN WITH COMPLEX COMMUNICATION NEEDS: IMPLEMENTATION OF THE C-BILLT: HOW TO CROSS (LANGUAGE) BORDERS AND FACILITATE AAC.

Johanna J. Geytenbeek, PhD; Kim J. Oostrom, PhD; Kristine Stadsleiv, PhD; Jael N. Bootsma, MSc SLP

Learning Objectives:

1. Understand why and how the C-BiLLT was developed.
2. Describe how spoken language comprehension in these children relates to various developmental domains.
3. Define facilitators for a successful implementation and innovation of the C-BiLLT into (clinical) practice.
4. List linguistic and/or cultural issues encountered in the translation, adaptation and validation process of the C-BiLLT.

BRK18 - RELATIONSHIPS AND SEXUALITY: IMPORTANT ISSUES TO ADDRESS FOR QUALITY OF LIFE, IN PROVIDING TRANSITION SERVICES TO YOUNG ADULTS AND FAMILIES AFFECTED WITH CHILD-ONSET CONDITIONS

Susan C. Labhard, MSN

Learning Objectives:

- 1: To elevate understanding of the importance of friends, relationships and sexuality for emerging adults with child-onset conditions and explore a variety of resources for future reference.
- 2: Learn how to apply evidence-based practice guidelines for teaching youth with disabilities, and the people that care about them, the importance of social success in developing healthy relationships and sexuality.
- 3: Explore options to traditional sexual expression and learn that dealing with the sexual consequences of disabilities can offer unique challenges, but need not be an obstacle to sexual fulfillment.
- 4: To encourage the inclusion and attention to sexuality as a topic in health care.

BRK19 - USING IMPLEMENTATION SCIENCE TO EMBED THE F-WORDS IN CHILDHOOD DISABILITY AT AN ORGANIZATIONAL LEVEL

Kim Hesketh, BKIH, MScPT; Andrea Cross, PhD; Rachel Teplicky, MSc; Peter L. Rosenbaum, MD CM FRCPC

Learning Objectives:

- 1: Describe the F-words in Childhood Disability and their importance in children's rehabilitation.
- 2: Understand how Implementation Science can contribute to changing culture at an organizational and systems level.
- 3: Outline a multi-level, multi-year plan to embed the F-Words into CTN' organizational culture.
- 4: Identify barriers and facilitators to implementation and possible strategies to address the challenges.

BRK20 - HEALTH OUTCOMES IN CEREBRAL PALSY ACROSS THE LIFESPAN: INSIGHTS FROM THE BENCH, THE CLINIC, AND LARGE POPULATION-REPRESENTATIVE COHORTS.

Mark Peterson, PhD; Edward A. Hurvitz, MD; Daniel G. Whitney, PhD

Learning Objectives:

- 1: Develop a set of common data elements useful for clinical screening of the adult with CP that includes greater attention to aging-related chronic disease risk.
- 2: Describe the longitudinal trends of chronic cardiometabolic, psychological, and musculoskeletal morbidity in adults with CP, and risk factors that contribute to increased risk.
- 3: Discuss the need for surveillance of health risks in adults with cerebral palsy, with a priority focus on psychological, metabolic and musculoskeletal systems.
- 4: Discuss relevant pathophysiologic mechanisms linking early frailty and long-term health outcomes among persons with CP.

Friday, September 20, 2019: 7:00 AM - 8:00 AM

Debate/Current Controversies

CC03 - A CURRENT CONTROVERSY: DOES SELECTIVE DORSAL RHIZOTOMY IMPROVE LONG-TERM FUNCTION

Freeman Miller, MD; Tom Novacheck, MD; Kristina Tedroff, MD, PhD

Learning Objectives:

- 1: Upon completion, participant will be able to evaluate the long term effects of SDR when performed in early childhood in children with CP.
- 2: Upon completion, participant will be able to describe some ethical aspects of parental decision making.
- 3: Upon completion, participant will be able to describe current knowledge of the evolution of spasticity in children with CP.
- 4: Upon completion, participant will be able to describe the current evidence base evaluating long term effects of selective dorsal rhizotomy.

Friday, September 20, 2019: 7:00 AM - 8:00 AM

Focused Symposia

SYMP17 - CROSSING THE BORDER FROM THE NICU TO HOME: WHEN SHOULD REHABILITATION BEGIN?

Stacey C. Dusing, PhD; Alicia Jane Spittle, PhD, MPhysio, BPhysio; Cathy Morgan, PhD, BAppSc; Gunn Kristin Oeberg, PhD

Learning Objectives:

- 1: List reasons to consider starting early rehabilitation in the first months of life.
- 2: List challenges or barriers to starting early rehabilitation or transitioning services from the NICU to home.
- 3: Discuss the view of parents in understanding the need for services and navigating access.
- 4: Discuss the role of medical providers, policy makers, and health care workers in engaging families in planning early rehabilitation services.

SYMP18 - HIP HEALTH IN CHILDREN WITH CP - IS AN OUNCE OF PREVENTION WORTH A POUND OF CURE?

Ginny Paleg, DScPT; Elisabet Rodby-Bousquet, PT, PhD; Wade Shrader, MD; Unni G. Narayanan, MBBS, MSc, FRCS(C); Jan Willem Gorter, MD PhD

Learning Objectives:

- 1: The participant will be able to formulate rationale for postural management and surgical intervention, when discussing it with colleagues in their own setting.
- 2: The participant will be able to describe when the management and intervention for contracture and deformity should happen.
- 3: The participant will be able to describe the evidence for surgical intervention and postural management.
- 4: The participant will be able to list 5 expected outcomes of surgical and postural management.

SYMP19 - PEARLS AND PITFALLS OF EARLY INTERVENTION FOR INFANTS WITH UNILATERAL CP

Ann-Christin Eliasson, PhD; Anna P. Basu, BMBCh MA FRCPC PhD; Giovanni Cioni, MD; Susan Greaves, OT, PhD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad

Learning Objectives:

- 1: To learn more about the theories and interpretation of different treatment approaches.
- 2: To learn more about the possible effect of early intervention in unilateral CP.
- 3: To understand how the research can be implemented in clinical practice.
- 4: To understand the consequences for families in daily life.

SYMP20 - THE GLOBAL EDUCATION AND TRAINING INITIATIVE OF IAACD: AN UPDATE ON THE WORK BEING DONE BY THE GLOBAL PROFESSIONAL EDUCATION COMMITTEE OF THE INTERNATIONAL ALLIANCE OF ACADEMIES OF CHILDHOOD DISABILITY

Arnab Seal, MD, DCH, FRCPC; Peter L. Rosenbaum, MD CM FRCPC; Jenny J. Carroll, MA, MCSP, PGC(HE); Katherine Benfer, PhD, MPH, BSpPath; Marcia Greenberg, MS, PT; Bernadette Gillick, PhD, MSPT, PT

Learning Objectives:

- 1: Know about the creation of and the goals of the IAACD as a collaborative international, interconnected group of Academies of childhood disability.
- 2: Know why the Global Professional Education Committee (GPEC) of the IAACD was formed and what has been achieved so far, including the story of a pilot training programme in Georgia
- 3: Illustrate how the current development of a 'Knowledge Hub' resource website will aggregate the resources the GPEC are obtaining and curating in order to offer people a one-stop resource
- 4: Explore how the GPEC can link and help with existing or planned collaborations . To help recognize the opportunities to be involved and influence further development of this initiative.

Friday, September 20, 2019: 8:15am-9:45am

GENERAL SESSION

Lifetime Achievement Award Presentation

Barry S. Russman, MD

Presidential Guest Lecture

Intracortical Brain-Computer Interfaces: Toward Restoring Communication and Mobility

Leigh Hochnerg, MD, PhD

Presidential Guest Lecture

The Future of Health & Medicine: Where Can Technology Take Us?

Daniel Kraft, MD

8:15am-10:15am

Lifespan Committee Adult Care and Aging SIG

Purpose: To bring together a multidisciplinary group of health professionals and researchers with a focus on optimizing lifespan care for adults with CP and other childhood onset disabilities (CODs). This Adult Care and Aging SIG will attract researchers, clinicians and other allied healthcare providers to facilitate and foster connections for ongoing collaboration.

10:00am - 10:30am

Get Up and Move

Instructor: Jennifer Lyman

Activity Description: Yoga postures will work on balance, strength, and flexibility. A great way to focus and refresh your mind and body and start the morning off right!

Friday, September 20, 2019 – 10:30 am – 12:15 pm

FREE PAPER SESSIONS

E. Intervention and Assessment

10:30 am – 10:37 am –

E1. INTENSIVE MOTOR SKILL LEARNING INTERVENTIONS HAVE A STRONG IMPACT ON THE COGNITIVE CONTROL OF CHILDREN WITH CEREBRAL PALSY

Rodrigo Aranedo, PhD; Daniela Ebner-Karestinos, PT; Geoffroy Saussez, PT; Julie Paradis, PhD; Yannick Bleyenheuft, PhD

10:38 am – 10:45 am –

E2. EFFECTIVENESS OF CO-OP IN IMPROVING MOTOR SKILLS OF CHILDREN WITH DCD +/- ADHD

Jill G. Zwicker, PhD, OT; Cassandra Gunton; Zara Dureno, OT; Sara Izadi-Najafabadi, MS

10:46 am – 10:53 am –

E3. PLAY LIFESTYLE AND ACTIVITY ASSESSMENT IN CHILDREN WITH CEREBRAL PALSY

Amy Rabatin, MD; dai Sugimoto, PhD; Rebecca Zwicker, MPH; Jodie Shea, BS; Eric Nohelty, BS; Benjamin J. Shore, MD, MPH, FRCSC; Andrea Stracciolini, MD

10:54 am – 11:01 am –

E4. THE IMPACT OF CONTEXT-BASED INTERVENTIONS ON PARTICIPATION OF CHILDREN WITH DISABILITIES: A SYSTEMATIC REVIEW

Paul Y. Yoo, MScA,OT

11:02 am – 11:09 am –

E5. 'PRIORITY ACCESS' - VALIDITY OF THE AGES AND STAGES QUESTIONNAIRE (3RD ED.) TO PRIORITISE CHILDREN AGED 0-5 YEARS FOR PHYSIOTHERAPY ASSESSMENT OF GROSS MOTOR DIFFICULTIES

Leanne M. Johnston, PhD; John Fauls, PT; Bronwyn Thompson, PT

11:25 am – 11:32 am –

E6. HOW MUCH CHANGE IS IMPORTANT? CALCULATING THE MINIMAL CLINICALLY IMPORTANT DIFFERENCE OF THE GMFM, PODCI, AND CPCHILD AFTER ORTHOPEDIC SURGERY IN CHILDREN WITH CEREBRAL PALSY

Benjamin J. Shore, MD, MPH, FRCSC; Jodie Shea, BS; Rachel Tombeno, DPT; Patricia Miller, MS; Maria Fragala-Pinkham, MS, PT, DPT; Brian Snyder, MD, PhD; Travis Matheney, MD

11:33 am – 11:40 am –

E7. MACHINE LEARNING ALGORITHMS FOR ACTIVITY RECOGNITION IN CHILDREN WITH CEREBRAL PALSY WHO RELY ON MOBILITY AIDS FOR AMBULATION

Benjamin L. Goodlich, MPT; Ellen L. Armstrong, MPT, MSc (APA), BExSc; Sean A. Horan, BExSc, MPhty, PhD; Chris Carty, PhD; Stewart G. Trost, PhD; Matthew Ahmadi, MS; Emmah Baque, PhD

11:41 am – 11:48 am –

E8. LOW-INTENSITY VERSUS HIGH-INTENSITY HOME-BASED TREADMILL TRAINING AND WALKING ATTAINMENT IN YOUNG CHILDREN WITH CEREBRAL PALSY

Katrin Mattern-Baxter, DPT; Julia Looper, PhD; Kristie F. Bjornson, PhD, PT, PCS

11:49 am – 11:56 am –

E9. FEASIBILITY AND ACCEPTABILITY OF A PROGRESSIVE RESISTANCE TRAINING PROGRAM FOR ADOLESCENTS WITH CEREBRAL PALSY.

Jennifer M. Ryan, PhD; Grace Lavelle, PhD; Marika Noorkoiv, PhD; Nicola Theis, PhD; Adam Shortland, PhD; Tom Korff, PhD; Wendy Levin, PT; Cherry Kilbride, PhD

11:57 am – 12:04 pm –

E10. THE EFFECT OF SELECTIVE DORSAL RHIZOTOMY ON SPINAL DEFORMITIES IN CHILDREN WITH CEREBRAL PALSY: A LONG TERM FOLLOW UP STUDY

Stacey D. Miller, PT; Jonathan Lau, MD; Maria Juricic, PT; Bejaan Jivraj, MBBS; Paul Steinbok, BSc, MBBS, FRCS(C); Firoz Miyanjii, MD, FRCS(C); Kishore Mulpuri, MBBS, MS, MHS

F. Tone Management –

10:30 am – 10:37 am –

F1. THE EFFECT OF INTRATHECAL BACLOFEN IN DYSKINETIC CEREBRAL PALSY: FINDINGS OF THE IDYS TRIAL

Laura A. Bonouvrié, MD; Jules G. Becher, MD PhD; Johan S. Vles, MD PhD; R. Jeroen Vermeulen, MD PhD; Annemieke I. Buizer, MD PhD

10:38 am – 10:45 am –

F2. DO SHORT-TERM FUNCTIONAL OUTCOMES OF SDR DIFFER BASED ON SURGICAL TECHNIQUE: COMPARING CONUS TO CAUDA EQUINA

Elizabeth A. Duffy, MPH; Alexander L. Hornung, BS; Meghan Munger, MPH; Brian Po-Jung Chen, PT, MD; Nanette Aldahondo, MD; Linda E. Krach, MD; Michael H. Schwartz, BS, MS, PhD; Tom Novacheck, MD

10:46 am – 10:53 am –

F3. NON-PHARMALOGICAL, NON-SURGICAL (NPNS) INTERVENTIONS IN CHILDREN WITH DYSKINETIC CEREBRAL PALSY: A SYSTEMATIC REVIEW

Miranda Kneebone, B Occ Thy; Kirsty Stewart, PhD; Leanne M. Johnston, PhD

10:54 am – 11:01 am –

F4. SARCOPENIA, BOTULINUM TOXIN A AND CEREBRAL PALSY: A SYSTEMATIC REVIEW.

Kerr Graham, MD, MD, FRCS (Ed), FRACS; Iqbal Multani, MD; Tandy Hastings-Ison, PhD, BAppSci(Physio); Jason J. Howard, BEng, MD, FRCSC; Walter Herzog, PhD

11:02 am – 11:09 am –

F5. BOTULINUM TOXIN-A FOR CHRONIC PAIN IN SPASTIC CEREBRAL PALSY: A RANDOMIZED PLACEBO-CONTROLLED DOUBLE-BLINDED TRIAL

Dan N. Jacobson, MD; Kristina Löwing, PhD; Kjell Kullander, MD; Britt-Marie Rydh-Berner, PT; Malin Ljung, RN; Kristina Tedroff, MD, PhD

11:33 am – 11:40 am –

F7. BOTULINUM TOXIN-A TREATMENT IN CHILDREN WITH SPASTIC CEREBRAL PALSY: DIFFERENTIAL EFFECTS ON GAIT KINEMATICS BASED ON AGE AND LEVEL OF SEVERITY

Annet J. Dallmeijer, PhD; Kim van Hutten, MSc; Marjolein van der Krogt, PhD; Annemieke I. Buizer, MD PhD

11:41 am – 11:48 am –

F8. RETROSPECTIVE SURVEY OF PREDICTING FACTORS FOR SPASTICITY REDUCING INJECTIONS WITH BOTULINUMNEUROTOXIN IN THE UPPER LIMBS IN CHILDREN WITH CP.

Jenny Hedberg-Graff, MSc; Lena K. Krumlinde-Sundholm, PhD; Nicklas Philström, BS

11:49 am – 11:56 am –

F9. OUTCOMES OF THE FIRST-IN-HUMAN STUDY WITH A RECOMBINANT BOTULINUM TOXIN E (RBONT-E): SAFETY AND PHARMACODYNAMIC PROFILE OF RBONT-E COMPARED WITH ABOBOTULINUMTOXINA

Laurent Pons, PhD; Claire Vilain, MD; Philippe Picaut, PharmD

11:57 am – 12:04 pm –

F10. LONG-TERM SAFETY AND EFFICACY OF OPEN-LABEL ONABOTULINUMTOXINA FOR THE TREATMENT OF LOWER LIMB SPASTICITY IN CHILDREN WITH CEREBRAL PALSY

Jill Meilahn, DO; Heakyung Kim, MD; Brad Racette, MD; Fatma Gul, MD; Henry G. Chambers, MD; Emily McCusker, PhD; Kayla Chen, PhD; Rozalina Dimitrova, MD, MPH

FRIDAY

G. Orthopaedics –

10:30 am – 10:37 am

G1. A SYSTEMATIC REVIEW OF REHABILITATION PRACTICES FOLLOWING LOWER LIMB ORTHOPAEDIC SURGERY IN CHILDREN WITH CEREBRAL PALSY

Claire Kerr, BSc (Hons) Physio, PhD; Clare McKeaveney, BSc, PhD

10:38 am – 10:45 am –

G2. ISOLATED CALF LENGTHENING SURGERY REDUCES KNEE RECURVATUM IN CHILDREN WITH SPASTIC DIPLEGIC CEREBRAL PALSY

Jeremy Bauer, MD; Patrick Do; Jing Feng, PhD; Michael Aiona, MD

10:46 am – 10:53 am –

G3. RECTUS FEMORIS TRANSFER VS. RESECTION IN CHILDREN WITH CEREBRAL PALSY WITH STIFF KNEE GAIT

Julieanne Sees, MD; Chris Church, MPT; Kathleen Maguire, MD; Geovanny Oleas-Santillan, MD; John Henley, PhD; Nancy Lennon, MS, PT; Freeman Miller, MD; Jose J. Salazar Torres, PhD

10:54 am – 11:01 am –

G4. IMPACT OF HIP DISPLACEMENT ON HEALTH RELATED QUALITY OF LIFE IN CHILDREN WITH CEREBRAL PALSY

Unni G. Narayanan, MBBS, MSc, FRCS(C); Menal Huroy, BS, (MD); Clarissa Encisa, MSc; Ashley Ferkul, BA; Kerr Graham, MD, MD, FRCS (Ed), FRACS; Kishore Mulpuri, MBBS, MS, MHSc; Darcy L. Fehlings, MD

11:02 am – 11:09 am –

G5. IS OPEN REDUCTION DURING HIP RECONSTRUCTIVE SURGERY NEEDED FOR TREATMENT OF NEUROMUSCULAR HIP DYSPLASIA?

Brandon Marshall, BS; Jason B. Malone, DO; Gary Kiezbak, PhD

11:25 am – 11:32 am –

G6. PRE-OPERATIVE STAPHYLOCOCCUS AUREUS SCREENING LOWERS EARLY INFECTION RATES IN PEDIATRIC SPINAL DEFORMITY SURGERY

Christina Hardesty, MD; Connie Poe-Kochert, CNP; Jochen Son-Hing, MD; George Thompson, MD

11:33 am – 11:40 am –

G7. SCOLIOSIS AND BACK PAIN IN CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY

Ann I. Alriksson-Schmidt, PhD; Tomasz Czuba, MS; Gunnar Hägglund, PhD

11:41 am – 11:48 am –

G8. THE USE OF TRANEXAMIC ACID (TXA) IN NEUROMUSCULAR HIP RECONSTRUCTION, SIGNIFICANT TRANSFUSION REDUCTION OR FAKE NEWS?

Laura A. Lins, MPH, ATC; Aneesh V. Samineni; Patricia Miller, MS; Colyn Watkins, MD; Travis Matheney, MD; Brian Snyder, MD, PhD; Benjamin J. Shore, MD, MPH, FRCSC

11:49 am – 11:56 am –

G9. THE IMPACT OF SCOLIOSIS SURGERY ON PULMONARY FUNCTION IN SPINAL MUSCULAR ATROPHY: A SYSTEMATIC REVIEW

Jason J. Howard, BEng, MD, FRCSC; Abduljabber Alhammoud, MD; Yahya Othman; Ron El-Hawary, MD

11:57 am – 12:04 pm –

G10. CLINICAL IMPROVEMENT FOLLOWING VITAMIN D3 SUPPLEMENTATION IN CHILDREN WITH CHRONIC TIC DISORDERS

Honghua Li, MD; Zhi-Da Xu, PhD; Bing Wang, MD; Jun-Yan Feng, MD; Han-Yu Dong, MD; Jia Feiyong, MD, PhD

H. Rehab Training and Dose –

10:30 am – 10:37 am –

H1. EFFECTS OF A PROGRESSIVE RESISTANCE TRAINING PROGRAMME FOR ADOLESCENTS WITH CEREBRAL PALSY: A RANDOMISED CONTROLLED TRIAL.

Jennifer M. Ryan, PhD; Marika Noorkoiv, PhD; Nicola Theis, PhD; Cherry Kilbride, PhD; Tom Korff, PhD; Adam Shortland, PhD; Wendy Levin, PT; Grace Lavelle, PhD

10:38 am – 10:45 am –

H2. EFFECTS OF MODIFIED CONSTRAINT-INDUCED MOVEMENT THERAPY IN REAL-WORLD ARM USE IN YOUNG CHILDREN WITH UNILATERAL CEREBRAL PALSY: A SINGLE-BLIND RANDOMIZED TRIAL

Young Sub Hwang, MA

10:46 am – 10:53 am –

H3. RCT OF A PARENT-ADMINISTERED SENSORIMOTOR INTERVENTION SAFELY IMPROVES UPPER EXTREMITY FUNCTION AND SOMATOSENSORY PROCESSING.

Nathalie Maitre, MD; Arnaud Jeanvoine, PhD; Stephanie Burkhardt, MPH; Lindsay Pietruszewski, DPT; Ashley Miller, MM, MT-BC; Mary Ann Nelin, MD; Jill C. Heathcock, MPT, PhD

10:54 am – 11:01 am –

H4. INTERVENTIONS TO IMPROVE BALANCE IN CHILDREN AND ADOLESCENTS WITH DOWN SYNDROME: A SYSTEMATIC REVIEW

Ricardo Rodrigues de Sousa, Jr., MSc Student; Lorena Costa Ferreira, PT; Andressa Campos Ferreira, PT; Carolina Paisante Vieira de Barros, PT; Ana Paula Bensemann Gontijo, PhD

11:02 am – 11:09 am –

H5. QUANTIFYING DOSE IN UPPER EXTREMITY PEDIATRIC NEUROREHABILITATION

Megan Metzler, MSc; Kathleen O'Grady, OT; Linda Fay, OT; Darcy L. Fehlings, MD; John Andersen, MD; Shannon Harvey, OT; Mia Herrero, OT; Adam Kirton, MD

11:25 am – 11:32 am –

H6. DEVELOPMENTAL TRAJECTORIES OF HAND-USE AMONG CHILDREN WITH SPASTIC UNILATERAL CEREBRAL PALSY - A POPULATION-BASED STUDY FROM THE NORWEGIAN CEREBRAL PALSY FOLLOW-UP PROGRAM

Gunvor L. Klevberg, PhD; Sonja Elkjær, MS; Manuela Zucknick, PhD; Reidun B. Jahnsen, PhD

11:33 am – 11:40 am –

H7. CAN MIRROR THERAPY OPEN A NEW WINDOW IN THE REHABILITATION OF CHILDREN WITH HEMIPLEGIC CEREBRAL PALSY?

Mintaze Kerem Günel, PhD; Duygu Korkem, PhD; Arzu Ceylan Has, MS; Hatice Kader Karlı Oğuz, Prof.

11:41 am – 11:48 am –

H8. A MULTISITE BLINDED COMPARATIVE EFFICACY TRIAL OF CIMT DOSE LEVELS AND CONSTRAINT VARIATIONS FOR 2 - 8 YEAR OLDS WITH HEMIPARETIC CEREBRAL PALSY

Sharon L. Ramey, PhD; Stephanie C. Deluca, PhD; Richard D. Stevenson, MD; Amy Darragh, PhD; Warren Lo, MD; Mark Conaway, PhD

11:49 am – 11:56 am –

H9. EARLY INTENSIVE LEG TRAINING TO ENHANCE WALKING IN CHILDREN WITH PERINATAL STROKE: RESULTS OF A RANDOMIZED CONTROLLED TRIAL

Caitlin Hurd, MSc, MPT; Donna Livingstone, PT; Kelly Brunton, PT; Allison Smith, MSc; Ephrem Zewdie, PhD; Monica Gorassini, PhD; Adam Kirton, MD MSc FRCPC; Man-Joe Watt, MD, FRCPC; John Andersen, MD, FRCPC; Jerome Yager, PhD; Jaynie F. Yang, PhD, PT

11:57 am – 12:04 pm –

H10. WHAT DOSE OF UPPER LIMB FUNCTIONAL TRAINING IS NEEDED TO ACHIEVE CLINICALLY SIGNIFICANT IMPROVEMENTS? A SYSTEMATIC REVIEW INCLUDING ROC CURVE ANALYSIS

Iona Novak, PhD; Michelle Jackman, PhD; Claire Galea, MEd; B.Ed; Natasha A. Lannin, PhD; Leanne Sakzewski, PhD, BOccThy; Laura Miller, PhD

Friday, September 20, 2019: 10:30 AM - 12:00 PM

Debate/Current Controversies

CC04 - ADVANCEMENTS IN NEUROREHABILITATION TECHNOLOGY FOR FUNCTION, ACTIVITY AND PARTICIPATION: HYPE OR HOPE?

Anna M. McCormick, MD, FRCPC (Pediatrics/Rehabilitation); Elaine Biddiss, Ph.D, PEng; Adam Scheinberg, MBBS, FRACP, FAFRM, MMED; Eduardo Rocon, Ph.D, PEng; Hana Alazem, BSc PT, MD, FRCPC (C); Alistair McEwan, BE, BComm, MEng (Res)

Learning Objectives:

- 1: Describe why technology advancement is important in rehabilitation.
- 2: Describe what makes technology development meaningful and impactful in pediatric rehabilitation.
- 3: List 5 examples of newly developed high tech devices utilized in pediatric rehabilitation.
- 4: List possible impacts of technology development on function, activity and participation.

CC05 - WE NEED TO TALK ABOUT BOTULINUM TOXIN

Kerr Graham, MD, MD, FRCS (Ed), FRACS; Tandy Hastings-Ison, PhD; Anja Van Campenhout, MD, PhD

Learning Objectives:

- 1: Understand the current evidence for the efficacy of BoNT-A therapy in ambulant children with CP, in the ICF domains: body structure and function.
- 2: Understand the current evidence for the efficacy of BoNT-A therapy in ambulant children with CP, in the ICF domains: activities and participation.
- 3: Understand current evidence for the safety and adverse events profile of BoNT-A therapy for an ambulant child, GMFCS I-III, with CP.
- 4: Understand the risks of BoNT-A therapy to the injected muscle, including the risks of weakness, long-term muscle atrophy and fibrosis.

Friday, September 20, 2019: 10:30 AM - 12:00 PM

Focused Symposia

SYMP21 - CEREBRAL PALSY IN LATINO AMERICA: WHAT WE KNOW AND WHAT WE DON'T KNOW

Verónica Schiariti, PhD; Roselyn Valerin, MD; JORGE Carranza-del Río, MD; Fabiola Barron, MS; Maria Jose Martinez Caceres, MD; Hugo Galvez Quiñonez, MD

Learning Objectives:

- 1: To learn an epidemiological scope of CP in pediatric populations in Latino America.
- 2: To review common tools used to collect information on functioning and disability of children.
- 3: To identify gaps in health data collection related with CP across Latin-American countries.
- 4: To propose feasible strategies to harmonize data collection regarding prevalence and incidence of CP in Latino America.

SYMP22 - TRANSFORMING OUTCOMES IN CEREBRAL PALSY THROUGH GLOBAL CLINICAL PARTNERSHIPS

Samanmali P. Sumanasena, MD; Brian Hoare, OT; PhD; James Rice, MBBS; Nimisha Muttiyah, PhD

Learning Objectives:

- 1: Plan and carry out collaborative projects with global partners.
- 2: Identify and overcome challenges to carrying out transformation in practices.
- 3: Culturally adopt interventions for children with communication difficulties.
- 4: Undertake training programs across the borders.

SYMP23 - DEVELOPING A CLINICAL PRACTICE GUIDELINE REGARDING FUNCTIONAL THERAPY IN CEREBRAL PALSY: UTILISING THE GRADE AND AGREE II FRAMEWORK

Iona Novak, PhD; Leanne Sakzewski, PhD, BOccThy; Michelle Jackman, PhD; Cathy Morgan, PhD, BAppSc; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad

Learning Objectives:

- 1: Understand the key components of developing high-quality, reliable Clinical Practice Guidelines, based on recommendations from the World Health Organisation.
- 2: Understand the key components of developing high-quality, reliable Clinical Practice Guidelines, based on Grading of Recommendations Assessment, Development and Evaluation (GRADE) framework.
- 3: Upon completion, participants will be able to experience applying GRADE to assess the quality of evidence relating to functional therapy.
- 4: Upon completion, participants will be able to experience applying GRADE to formulate recommendations relating to functional therapy.

SYMP24 - HOME-BASED ASSESSMENT AND REHABILITATION OF THE UPPER LIMB IN CHILDREN WITH UNILATERAL CEREBRAL PALSY

Giuseppina Sgandurra, MD, PhD; Giovanni Cioni, MD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad

Learning Objectives:

- 1: Describe the different technological approaches to deliver at home assessment and rehabilitation of upper limb in children with Unilateral Cerebral Palsy.
- 2: Define the main platforms available for delivering at home rehabilitation of upper limb in children with Unilateral Cerebral Palsy.
- 3: Demonstrate the use of wearable sensors for assessing and evaluating asymmetries in children with typical and atypical development.
- 4: Plan new evidence-based studies on upper limb rehabilitation.

SYMP25 - THE SWINGS AND ROUNDABOUTS OF REGISTERS AND SURVEILLANCE PROGRAMS FOR CHILDHOOD DISABILITY RESEARCH.

Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD; Paul Gross, BA; Sue Reid, PhD MCLinEpi BAppSc; Lena Westbom, PhD; Shona Goldsmith, BPhy(Hons)

Learning Objectives:

- 1: List examples of some of the many and varied ways that register/surveillance data can be used in childhood disability research.
- 2: Describe some of the ways that registers can be used to improve quality of care.
- 3: List examples of different register/surveillance programs from Europe, the United States of America and Australia.
- 4: Describe some of the challenges in developing and maintaining a register/surveillance program.

SYMP26 - INNOVATIONS IN IMPLEMENTATION OF THE GENERAL MOVEMENTS ASSESSMENT

Colleen Peyton, DPT; Alicia Spittle, PhD; Andrea Guzzetta, MD, PhD

Learning Objectives:

- 1: Understand the neurophysiological bases of spontaneous motility and why it is a powerful biomarker of CNS function.
- 2: Discuss the state of the art on the use of GMs to predict long-term outcomes in young infants.
- 3: Discuss current research and future perspectives surrounding automatization of GMs.
- 4: Describe translational strategies for implementation of GMs research into clinical practice.

SYMP27 - GAIT ANALYSIS WITHOUT A GAIT LAB: USING TECHNOLOGY TO ENHANCE OBSERVATIONAL GAIT ASSESSMENT IN RESOURCE-CHALLENGED ENVIRONMENTS

Vedant A. Kulkarni, MD; Jon R. Davids, MD; Abhay Khot, MBBS, FRACS; Alaric Aroojis, MS, D'Ortho, DNB

Learning Objectives:

- 1: Understand the phases and sub-phases of the normal gait cycle in the sagittal and coronal planes.
- 2: Identify the most common gait deviations seen in children with unilateral and bilateral cerebral palsy.
- 3: Understand the principles of accurate mobile device video acquisition and analysis of those videos using the Edinburgh Visual Gait Score.
- 4: Understand methods of improving assessment of gait and functional outcome in resource-challenged environments using low-cost and emerging technology.

12:15pm - 1:15pm

Non CME Luncheon Options

International Networking Luncheon

Location:

IPSEN Presentation Theatre:

Dysport® (abobotulinumtoxinA) in the Treatment of Lower Limb Spasticity in Pediatric Patients 2 Years of Age and Older

Location:

12:30pm-1:30pm

NMES Network Luncheon

Friday, September 20, 2019: 1:30pm-3:30pm

GENERAL SESSION

Duncan Wyath Award Presentation
Kyle Pease

Presidential Guest Lecture
Brain Repair After Stroke
Steven Cramer, MD

Cathleen Lyle Murray Award Presentation and Lecture
Judith Heumann

Presidential Guest Lecture
Current State of the Art of Lower Limb Pediatric Orthotic Care: Translation to the Developing World
Thomas DiBello, CPO

Gayle G. Arnold Lecture
A Future of Flourishing: Supporting Successful Transitions for Young People with Disabilities
Erik Carter, PhD

1:30pm-3:30pm

AACPDM Complex Care Committee – Complex Care SIG
 Purpose: To promote advancement of clinical care, education, research, and advocacy for children with medical complexity. Available to all clinical and research professionals who focus on the care of children with medical complexity.

3:30pm-4:30pm

Poster Walk in the Exhibit Hall

3:40pm-3:55pm

Get Up and Move - Latin Cardio Dance

Friday, September 20, 2019: 4:30pm-6:30pm

Instructional Courses

IC15 - COMPREHENSIVE MULTIDISCIPLINARY MANAGEMENT OF SPINA BIFIDA
Vineeta T. Swaroop, MD; Luciano Dias, MD; Elizabeth Yerkes, MD; Robin Bowman, MD

- Learning Objectives:
- 1: Describe a successful model for multidisciplinary care of spina bifida patients, including who should be involved, team evaluation, collaborative decision making.
 - 2: Define neurosurgical manifestations of spina bifida and understand treatment approaches.
 - 3: Define urological manifestations of spina bifida and understand treatment approaches.
 - 4: Define orthopaedic manifestations of spina bifida and understand treatment approaches.

IC16 - EARLY DIAGNOSIS OF CEREBRAL PALSY (CP): TRANSLATING THE 2017 INTERNATIONAL GUIDELINES INTO CLINICAL PRACTICE

Rachel Byrne, BA; Nathalie Maitre, MD; Andrea Duncan, MD

- Learning Objectives:
- 1: Identify discrete components of the guidelines.
 - 2: Describe current processes for diagnosis and intervention of CP in your setting.
 - 3: Identify strengths, weaknesses, opportunities, and threats (SWOT) to implementing the guidelines in your program.
 - 4: Develop a process flow to adapt guidelines to your own setting.

IC17 - EVALUATION AND MANAGEMENT OF PAIN IN PEOPLE WITH CEREBRAL PALSY

Hiroko Matsumoto, PhD; Heakyung Kim, MD; Daniel F. Linhares, MD; Joshua Hyman, MD

- Learning Objectives:
- 1: Discuss the current state of pain assessment in verbal and non-verbal patients, and describe ongoing research in improving pain evaluation.
 - 2: Understand causes of pain and associated symptoms.
 - 3: Discuss current modalities of operative, non-operative & pharmacologic management of pain for pediatric and adult patients with CP.
 - 4: Discuss successful and unsuccessful management of pain.

IC18 - WORKSHOP ON TRANSITION PLANNING FOR YOUTH WITH NEURODEVELOPMENTAL DISABILITIES

Veronica M. Meneses, MD, MSHS; Cory E. Nourie, MSS, MLSP; Yanin Rivera, MD; Carrie Sewell-Roberts, MSW

- Learning Objectives:
- 1: Understand the core elements and foundational principles of the transition, as expounded by expert health professionals and associated organizations in the USA and Mexico, and within the ICF-CY framework.
 - 2: Recognize the biopsychosocial dimensions of transition and the role of multiple disciplines, including clinicians, social workers, administrators, therapists, educators, recreational specialists, lawyers/advocates, in facilitating the transitional plan of care.
 - 3: Identify barriers to successful transition and how these vary based on clinical context, youth and family characteristics and regional/country differences.
 - 4: Develop a standardized template for the transitional process that incorporates the core elements, foundational principles, and the ICF-CY that can be applied to diverse cases.

IC19 - HIP HEALTH IN CEREBRAL PALSY: EVIDENCE-INFORMED MANAGEMENT OF HIP DISPLACEMENT FROM SURVEILLANCE TO SURGERY AND BEYOND

Kate L. Willoughby, BPhysio, DPhysio; Pam Thomason, B Phty, M Physio; Giuliana C. Antolovich, BSc, PhD, MBBS, FRACP; Abhay Khot, MBBS, FRACS; Erich Rutz, MD; Kerr Graham, MD, MD, FRCS (Ed), FRACS

Learning Objectives:

- 1: describe the epidemiology of hip displacement and its relation to gross motor function.
- 2: be familiar with the evidence for hip surveillance and clinical guidelines to support its implementation.
- 3: evaluate the evidence for interventions for hip displacement and understand their rationale and timing in the context of the child and family and in relation to severity of motor disorder.
- 4: understand and evaluate hip morphology at skeletal maturity in youth with CP using the MCPHCS.

IC20 - MANAGEMENT OF DIFFICULT CLINICAL PRESENTATIONS OF HYPERTONIA AND COMPLEX MOVEMENT DISORDERS IN CHILDREN WITH DISABILITIES

Mark Gormley, MD; Tim Feyma, MD; Peter D. Kim, MD

Learning Objectives:

- 1: Be able to better understand difficult hypertonic and complex movement disorders and possible treatment options, including the importance of a team approach in patient management.
- 2: Understand when a deep brain stimulator can be useful in managing severe dystonic and dyskinesic conditions.
- 3: Be able to understand which patients may be successfully treated with a ventral-dorsal rhizotomy or a selective dorsal rhizotomy.
- 4: Understand when intrathecal baclofen, phenol neurolysis, and botulinum toxin injections may be useful in treating hypertonic conditions.

IC21 - MUSCULOSKELETAL ADAPTATIONS TO SPASTICITY - IMPLICATIONS FOR CLINICIANS

N. Susan Stott, MBChB PhD FRACS; Jane Valentine, FRACP; Sian Williams, PhD; Richard L. Lieber, PhD

Learning Objectives:

- 1: Define the features of early declining musculoskeletal health in adults with CP and the effect on chronic disease risk.
- 2: Understand the growth of muscle in typically developing children and children with cerebral palsy at a biologic and biomechanical level.
- 3: Critique evidence around long-term use of onabotulinum toxin A injections and effect on muscle structure / function in both animal and human studies.
- 4: Develop an integrated approach to maintaining muscle health through spasticity reduction and therapy interventions.

IC22 - NEURO-ORTHOPAEDIC JOURNAL CLUB: TOP 10 ARTICLES IN THE LAST YEAR RELATING TO THE ORTHOPAEDIC MANAGEMENT OF CHILDREN WITH NEUROMUSCULAR DISORDERS

Amanda T. Whitaker, MD; Jon R. Davids, MD; Benjamin J. Shore, MD, MPH, FRCSC

Learning Objectives:

- 1: Introduction to a standardized format for the critical analysis of scientific articles from the medical literature.
- 2: Be familiar with the most significant recent advances in the orthopaedic management of children with neuromuscular disorders.
- 3: Incorporate new techniques and technologies into clinical practice.
- 4: Appreciate current research trends in this area and be inspired to make a contribution to the body of knowledge!

IC23 - ORTHOPAEDIC SURGERY FOR THE UPPER AND LOWER LIMB IN CHILDREN WITH CEREBRAL PALSY

Robert M. Kay, MD; Nina Lightdale-Miric, MD

Learning Objectives:

- 1: Accurately identify the most common upper and lower extremity problems in children with CP.
- 2: Identify common pitfalls in surgery to the upper and lower extremity
- 3: Define one or more ways to avoid common treatment errors.
- 4: Gain perspective on the complexity of surgical planning for children with CP.

IC24 - SURGEON AND PT PARTNERSHIPS IN THE CARE OF YOUTH WITH CEREBRAL PALSY

Nancy Lennon, MS, PT; Wade Shrader, MD; Faithe R. Kalisperis, DPT; Freeman Miller, MD

Learning Objectives:

- 1: Describe the natural progression of musculoskeletal deformities in youth with spastic CP.
- 2: Identify indications and surgical methods to address hip subluxation in youth with CP.
- 3: Engage in treatment planning for gait dysfunction alongside pediatric orthopedic surgeons.
- 4: Adopt clinical practices to support positive musculoskeletal outcomes for youth with CP.

IC25 - LONG-TERM EFFECTS OF SELECTIVE DORSAL RHIZOTOMY (SDR) FOR INDIVIDUALS WITH CEREBRAL PALSY IN DEVELOPED (USA) AND DEVELOPING (SOUTH AFRICA) COUNTRIES

Tom Novacheck, MD; Nelleke G. Langerak, PhD; Robert P. Lamberts, PhD, FECSS; Marcie Ward, MD

Learning Objectives:

- 1: To understand what SDR entails: aim, selection criteria, surgical technique, and additional care and treatment needed pre-and post-surgery.
- 2: To get insight in the long-term outcomes of SDR in a developed country (Gillette, USA).
- 3: To get insight in the long-term outcomes of SDR in a developing country (Cape Town, South Africa).
- 4: Understand how management and long-term function might be affected if a child who was a candidate for SDR lived in a developed as opposed to a developing country.

IC26 - TRANSLATING YOUR PRESCRIPTION INTO AN ORTHOTIC INTERVENTION: INSIGHTS INTO THE INTERPRETATION, DESIGN, FABRICATION, FITTING, FOLLOW-UP, AND ADJUSTMENT OF LOWER LIMB ORTHOSES.

Tom V. DiBello, BS; Phillip M. Stevens, MEd, CPO; Sally A. DiBello, MPO, CPO

Learning Objectives:

- 1: Upon Completion, attendees will have a more complete understanding of the process associated with the design, fabrication and fitting of a lower limb orthosis (AFO).
- 2: Upon Completion, attendees will make more informed decisions related to the bio-mechanical capabilities of an AFO.
- 3: Upon completion, attendees will write more complete prescriptions for orthotic devices including and appreciation of the limitations of the devices.
- 4: Upon Completion, attendees will more effectively communicate their goals and expectations to the orthotists on their team.

IC27 - TREATMENT WITH INTRATHECAL BACLOFEN IN DYSKINETIC CEREBRAL PALSY: EVIDENCE, INDICATIONS AND EVALUATION

Laura A. Bonouvrié, MD; Annemieke I. Buizer, MD PhD; R. Jeroen Vermeulen, MD PhD; Jules G. Becher, MD PhD

Learning Objectives:

- 1: Use the knowledge about the current evidence on the effect ITB in cerebral palsy in clinical practice.
- 2: Describe the indications for ITB in dyskinetic cerebral palsy.
- 3: Evaluate the effect of ITB in an individual patient in clinical practice.
- 4: Put the different possibilities of dosing into practice to provide the optimal effect of treatment for the individual patient.

IC28 - FEEDING, EATING AND SWALLOWING TEAM (FEAST) BOOT CAMP: A SKILLS LAB ADDRESSING KNOWLEDGE GAPS IN ORAL AND ENTERAL FEEDING FOR CHILDREN WITH CEREBRAL PALSY

Gina R. Rempel, MD, FRCPC; Marianne E. Gellert-Jones, MA, CCC/SLP; Heidi H. Kecskemethy, MS Ed, RDN, CSP, CBDT; James Plews-Ogan, MD; Jodi Wolff, MS, RDN, LD

Learning Objectives:

- 1: Integrate nutritional assessments and oral feeding strategies into clinical assessment and practice for children with CP.
- 2: Decide on appropriate assessment and family readiness in approaching the topic of enteral nutrition with families.
- 3: Appreciate the challenges involved in the care of gastrostomy and jejunostomy tubes.
- 4: Describe the advantages of different food choices in enteral nutrition.

Saturday, September 21, 2019: 7:00 AM - 8:00 AM

Breakfast Seminars

BRK21 - A CROSS-CULTURAL EXAMINATION OF STRESS AND PROMOTING COUPLE RELATIONSHIP HEALTH FOR CAREGIVERS OF CHILDREN WITH DEVELOPMENTAL DISABILITIES

Carrie Sewell-Roberts, MSW; Tetsuo Sato, PhD; Carol Shrader, BA; Wade Shrader, MD

Learning Objectives:

- 1: To understand the body of evidence surrounding caregiver stress and its effect on couple relationships from a cross-cultural perspective.
- 2: To understand from a first-person perspective how stress can affect a caregiver's ability to cope and maintain healthy relationships.
- 3: To appreciate why mitigating caregiver stress and promoting parent relationship health is important for achieving best outcomes for children with developmental disabilities.
- 4: To identify evidence-based tools for assessing caregiver stress and intervention strategies to reduce psychosocial risk and promote relationship health.

BRK22 - CHARACTERIZING DEVELOPMENTAL STAGES IN INDIVIDUALS WITH CEREBRAL PALSY: FROM MOBILITY TO SOCIAL INTERACTIONS

Marloes van Gorp, MSc; Marij E. Roebroek, PhD; Jan Willem Gorter, MD PhD; Annet J. Dallmeijer, PhD

Learning Objectives:

- 1: Be able to understand the stages and timing of development of capacity of mobility and capability of mobility and self-care in individuals with CP.
- 2: Understand the stages and timing of development of performance of communication, mobility, daily activities and social interactions of individuals with CP.
- 3: Understand differences in development of activity and participation for individuals with CP with or without intellectual disability and different levels of gross motor functioning.
- 4: Be able to differentiate development of several domains and qualifiers of activity and participation.

BRK23 - USING WEARABLE SENSORS TO MEASURE INFANT LIMB MOVEMENTS AND PREDICT NEURODEVELOPMENTAL OUTCOMES: CURRENT EVIDENCE, OPPORTUNITIES, AND CHALLENGES.

Beth A. Smith, PT, PhD; Rujuta B. Wilson, MD

Learning Objectives:

- 1: List 2 validated wearable sensor metrics of infant limb movement.
- 2: Describe 1 wearable sensor metric that could be created and how it could be validated.
- 3: Identify 1 potential opportunity for clinical use of wearable sensor measurement of infant limb movement.
- 4: Identify 1 challenge and potential solution for use of wearable sensor measurement of infant limb movement.

BRK24 - HOW TO ENGAGE PATIENTS IN RESEARCH AND GARNER PATIENT-REPORTED OUTCOMES USING THE CPRN COMMUNITY REGISTRY.

Paul Gross, BA; Mary E. Gannotti, PhD

Learning Objectives:

- 1: 'Upon completion, participant will be able to articulate the patient populations accessible through the CPRN Community Registry'.
- 2: 'Upon completion, participant will be able to describe how to propose a concept and develop a study for use with the CPRN Community Registry.
- 3: 'Upon completion, participant will be able to understand how individuals with CP and their caregivers can be engaged in research discussions to help shape hypotheses and recruit community investigators.
- 4: 'Upon completion, participant will be able to describe how the CPRN Community Registry will be used to gather longitudinal information on outcomes for adults with CP.

BRK25 - RECENT PRACTICE CHANGING PUBLICATIONS FOR THE PEDIATRIC COMPLEX CARE PROVIDER

Kristie Malik, MD

Learning Objectives:

- 1: Discuss current topics and advances in the care of children with medical complexity.
- 2: Understand the multidisciplinary implication for each recent development.
- 3: Integrate new findings into daily practice.
- 4: Discuss commonalities and variations in care internationally.

BRK26 - RESULTS AND IMPACT OF A SCREENING TO IDENTIFY INFANTS AT RISK FOR CORTICAL VISUAL IMPAIRMENT

Christine Roman, PhD; Hillary S. Thomas, M. Ed.

Learning Objectives:

- 1: To consider the early signs of CVI in infants.
- 2: To consider the use of a 5-point protocol used to identify the presence of early signs of potential signs of CVI
- 3: To recognize the rationale for early identification of infants with CVI
- 4: To increase awareness of the services and supports used to facilitate improvements in functional vision in infants and children with CVI

BRK27 - SUPPORTING MENTAL HEALTH IN CHILDREN AND YOUTH WITH DISABILITIES.

Mats Granlund, PhD; Christine Imms, PhD; Rob Brooks, PhD; Ai-Wen Hwang, PhD

Learning Objectives:

- 1: Demonstrate state of the art knowledge in how mental problems can be assessed in children and adolescents with disability.
- 2: Discuss definitions on the constructs mental health, mental health problems and participation.
- 3: Analyze methodology for assessing longitudinal trajectories of mental health.
- 4: Demonstrate knowledge about possible interventions for strengthening mental health in children and adolescents with disabilities.

BRK28 - LOWER LIMB ORTHOTIC MANAGEMENT IN CEREBRAL PALSY - AN INTERACTIVE DISCUSSION.

Tom V. DiBello, BS

Learning Objectives:

- 1: Be exposed to the evidence surrounding the use of lower limb orthoses in Cerebral Palsy.
- 2: Be exposed to varying opinions and positions of other attendees regarding the use of this modality in this population.
- 3: Leave with a heightened awareness of other perspectives and views on this topic.
- 4: Be better informed as to the most effective designs for use in this population.

Saturday, September 21, 2019: 7:00 AM - 8:00 AM

Debate/Current Controversies

CC06 - BRAIN CIRCUITRY IN CEREBRAL PALSY: DOES WIRING INFLUENCE FIRING?

Bernadette Gillick, PhD, MSPT, PT; Kathleen Friel, PhD; Adam Kirton, MD MSc FRCPC; Andrew Gordon, PhD

Learning Objectives:

- 1: Analyze the current evidence on the characterization of circuitry in pediatric unilateral cerebral palsy.
- 2: Debate the merits and limitations of current techniques of assessment.
- 3: Evaluate the influence of corticospinal tract connectivity and other bioindicators on response to intensive therapies for children with UCP.
- 4: Discuss challenges of developing, researching and implementing precise early interventions to optimize function and reduce impairment.

Saturday, September 21, 2019: 7:00 AM - 8:00 AM

Focused Symposia

SYMP28 - DANCE, DANCE, DANCE- UNIVERSAL LANGUAGE OF EXPRESSION AND MOVEMENT

Bernard Dan, MD PhD; Tara Egan, DPT; Deborah J. Gaebler-Spira, MD; Dido Green, PhD, MSc; Min Shen, MD; Citlali López-Ortiz, PhD, MA

Learning Objectives:

- 1: Discuss influences of the local cultural and sociodemographic environments on the implementation of dance programs for rehabilitation.
- 2: Identify the attributes of western classical ballet training that may be harnessed for enhanced functional outcomes in movement rehabilitation.
- 3: Discuss the evidence based benefits of dance programs from the ICF perspective with emphasis on activities and participation outcomes using the ICF paradigm.
- 4: Identify various logistical elements for implementing sustainable dance programs in international sites for children with CP, autism, and intellectual disability.

SYMP29 - IMPACT OF CONGENITAL INFECTIONS INCLUDING ZIKA VIRUS ON NEURODEVELOPMENTAL OUTCOMES AND FAMILIES: WHAT ARE WE MEASURING?

Verónica Schiariti, PhD; Melissa Gladstone, PhD; Egmar Longo, PhD; Antonio Rizzoli Córdoba, MD MSc PhD

Learning Objectives:

- 1: To review the epidemiology of Zika/TORCH infections and reported neurodevelopmental outcomes – literature review of recent evidence
- 2: To apply the ICF as a guiding framework to address needs of pediatric populations affected by congenital infections in studies in LMIC settings
- 3: To describe what areas of functioning and disability are relevant to parents and caregivers of children affected by congenital infections – ongoing studies in Brazil and Mexico
- 4: To share lessons learned on ICF-based initiatives for children with CP - due to ZIKV and other aetiologies -modelling interdisciplinary collaboration across different fields (developmental pediatrics, epidemiology, global health)

SYMP30 - KNOWINGLY OR UNKNOWINGLY COMPLICIT? STIGMATISING HEALTH-CARE PRACTICES RELATED TO FAMILIES AND CHILDREN WITH DISABILITIES.

Bridget E. O'Connor, BAppSci (Physio); Peter L. Rosenbaum, MD CM FRCPC; Tracey Smythe, MPH, PhD; Virginia Wright, BSc (PT), MSc, PhD

Learning Objectives:

- 1: Define terms and frameworks used that relate to stigmatising practice.
- 2: Critique the parent-child-professional relationship, relationships among professionals, and discipline-specific practices to which stigmatising attitudes and behaviours contribute.
- 3: Identify individualised approaches to support each person in their situation with ways of addressing 'status reducing' health practices
- 4: Be able to bring a new awareness of stigmatising practice into their day-to-day interactions with children, families, and other health professionals.

SYMP31 - PRENATAL CLOSURE FOR SPINA BIFIDA: A MULTIDISCIPLINARY EXAMINATION OF THE PROS AND CONS

Vineeta T. Swaroop, MD; Robin Bowman, MD; Elizabeth Yerkes, MD

Learning Objectives:

- 1: Understand the factors essential to evaluating a patient's candidacy for prenatal closure of spina bifida.
- 2: Define the expected outcomes of prenatal closure from a neurosurgical perspective.
- 3: Define the expected outcomes of prenatal closure from a urological perspective.
- 4: Define the expected outcomes of prenatal closure from an orthopaedic surgical perspective.

SYMP32 - SEVERE NEUROLOGICAL IMPAIRMENT - THE CHALLENGES OF DEFINITION, HEALTHCARE PLANNING AND END OF LIFE CARE

Denise McDonald, MD; John Allen, MD; Julie Hauer, MD

Learning Objectives:

- 1: Recognise children with severe neurological impairment as a distinct group.
- 2: Understand the need for a consensus definition to identify the population, to inform need and improve medical decision making.
- 3: Understand the current challenges to optimal care for this group, particularly in relation to QoL and end of life experience.
- 4: Appreciate the common themes central to the definition of SNI, which will inform participants in identifying this cohort within their own clinical practice.

Saturday, September 21, 2019: 8:15am-9:45am

Focused Symposia

SYMP33 - EARLY INTERVENTION FOR INFANTS AND YOUNG CHILDREN AT HIGH RISK OF CEREBRAL PALSY IN LOW-MIDDLE INCOME COUNTRIES

Katherine Benfer, PhD, MPH, BSpPath; Cathy Morgan, PhD; Gulam M. Khandaker, PhD, FAFPHM; Asis Kumar Ghosh, MPT, BPT; Kate Milner, MBBS MPH FRACP; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad

Learning Objectives:

- 1: Describe early intervention studies currently underway in Low-Middle Income Countries (LMICs); including LEAP-CP (India), Getting to Know CP Early (Uganda), Centre and community-based intervention (Sri Lanka), Early Intervention Network (Afghanistan).
- 2: Identify underlying principles for early intervention based on the literature, and how these need to be adapted for low-middle income countries.
- 3: List common barriers for accessing traditional developmental care in LMIC (prevalence of medical model, stigma, physical access); from the literature, qualitative interviews, and lived experiences.
- 4: Identify a range of facilitators, barriers and opportunities for various models of intervention in LMIC (home-based individual, community-based group, and therapist lead models) including scaling-up.

SYMP34 - FROM MOTION TO COGNITION: WHAT ARE THE BEST INGREDIENTS FOR EARLY INTERVENTION TO OPTIMIZE THE TRANSITION TO SCHOOL ENTRY FOR INFANTS WITH NEUROMOTOR DYSFUNCTION?

Regina T. Harbourne, PhD, PT; Stacey C. Dusing, PhD; Cathy Morgan, PhD, BAppSc; Andrea Guzzetta, MD; Michele A. Lobo, PT, PhD

Learning Objectives:

- 1: Describe existing evidence supporting (or not supporting) early intervention for infants with neuromotor dysfunction.
- 2: Define three constructs of learning that encompass both motor learning and cognition.
- 3: List 5 key ingredients of approaches to early intervention in infancy with neuromotor dysfunction which are supported by evidence.
- 4: Create a scenario using 2 key ingredients that would advance learning to use within an intervention session for an infant with neuromotor dysfunction.

SYMP35 - STAYING OUT OF TROUBLE IN HIP AND SPINE SURGERY IN NON-AMBULATORY CHILDREN WITH CEREBRAL PALSY: A COMPARISON OF INTERNATIONAL PERIOPERATIVE MEDICAL MANAGEMENT STRATEGIES AND SURGICAL INTERVENTIONS.

Benjamin J. Shore, MD, MPH, FRCSC; Wade Shrader, MD; Jay Berry, MD; Kerr Graham, MD, MD, FRCS (Ed), FRACS; Giuliana C. Antolovich, BSc, PhD, MBBS, FRACP; Laurie Glader, MD

Learning Objectives:

- 1: Demonstrate an evidenced based understanding of the epidemiology and natural history of hip displacement and spinal deformity in non-ambulant children with CP.
- 2: Understand the prevalence of medical co-morbidities in non-ambulant children with CP, and apply strategies to optimize health, outcomes and the patient/family experience through surgery.
- 3: Demonstrate strategies to address pain, movement disorder and tone management before, during and after surgery, for non-ambulant children with CP.
- 4: Describe an evidenced based understanding of the risks, benefits and outcomes of orthopaedic surgery for hip displacement and correction of spinal deformity.

SYMP36 - INTEGRATED MANAGEMENT USING BOTULINUM TOXIN-A FOR HYPERTONIA IN CHILDREN WITH CEREBRAL PALSY

Nigar Dursun, MD; JORGE Carranza-del Río, MD; Martin Bonikowski, MD

Learning Objectives:

- 1: To understand the level of evidence for the use of BoNT-A in children with CP.
- 2: To delineate the complexity of the process with highly variable treatment response among patients, and the importance of optimal BoNT-A treatment strategy.
- 3: To develop skills and knowledge in making clinical decisions on who and how to treat and follow-up.
- 4: To discuss safety issues.

SYMP37 - LIFELONG MANAGEMENT FOR CHILDREN WITH CEREBRAL PALSY

Min Shen, MD; Xiaojie Li, MD; Bing Liang, MD; Yong Liu, NA; Guorong Wei, DPT

Learning Objectives

- 1: Know how to combine the education and medical rehabilitation together in China.
- 2: Learn the growth process of Chinese CP sufferer.
- 3: Know the obtain of the CP children(4-10Y) from the program of Shanghai CP Ballet Camp.
- 4: Learn how to motivate the children activity with CP.

SYMP38 - OPTIMIZATION OF OUTCOMES FOLLOWING SINGLE EVENT MULTI-LEVEL SURGERY (SEMLS): INTERNATIONAL PERSPECTIVES ON A TEAM APPROACH TO IMPROVE GAIT IN CHILDREN WITH CEREBRAL PALSY

Vedant A. Kulkarni, MD; Jon R. Davids, MD; Pam Thomason, B Phty, M Physio; Alaric Aroojis, MS, D'Ortho, DNB; Kerr Graham, MD, MD, FRCS (Ed), FRACS

Learning Objectives

- 1: Define the unique challenges and priorities of the four phases of recovery after Single Event Multi-level Surgery (SEMLS) – inpatient, early post-operative, early rehabilitation, and late rehabilitation.
- 2: Understand the principles of effective multi-modal post-operative pain management and physical therapy following SEMLS.
- 3: Tailor a child's post-operative casting and orthotics based on gait optimization goals.
- 4: Identify strategies to create a "SEMLS Team" for effective post-operative rehabilitation in a diverse set of practice environments.

SYMP39 - SUPPORTING PARENTS OF INFANTS IDENTIFIED AS AT RISK OF CEREBRAL PALSY THROUGH PARENTING AND MINDFULNESS-BASED APPROACHES

Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Koa Whittingham, PhD; Catherine K. Mak, PhD

Learning Objectives:

- 1: Understand the current need to support parents of children with disability and to understand how parenting impacts on child development.
- 2: Understand how Mindfulness-based practices and Acceptance and Commitment Therapy (ACT) may be beneficial to parents and how simple ACT strategies can be adopted by all clinicians.
- 3: Recognise possible challenges clinicians may experience in supporting parents.
- 4: Recognise and take opportunities to support parents and the connection between parents and children in a manner that promotes parental resilience.

SYMP40 - SURGICAL DECISION MAKING IN LIFE LIMITING ILLNESSES: MEDICAL, SURGICAL, ETHICAL, AND PALLIATIVE PERSPECTIVES

Garey Noritz, MD; Lisa Humphrey, MD; Prashant S. Malhotra, MD; Amanda T. Whitaker, MD

Learning Objectives:

- 1: Recognize areas of uncertainty in regards to surgical decision making for children with severe neurologic impairment.
- 2: Construct an ethical analysis of a surgical decision using the "Four Topics" model.
- 3: Partner with a family in shared decision making when proposing surgical procedures for children with severe neurological impairment.
- 4: Distinguish the concept of surgical "futility" from "poor prognosis" or "poor quality of life".

SYMP41 - VISION IMPAIRMENT AND VISUAL ABILITY IN CHILDREN WITH CEREBRAL PALSY: A MULTIDISCIPLINARY PERSPECTIVE

Karen Harpster, PhD, OTR/L; Belinda J. Deramore Denver, OT; Corinna M. Bauer, Ph.D.; Andrea Guzzetta, MD, PhD; Michele Shusterman; Lindsay Hillier, M.Ed.

Learning Objectives:

- 1: Reflect on how vision is broader than impairment at the eye level of the body function and structure domain of the ICF
- 2: Understand the importance and impact of impairments (vision, cognitive and motor) on the functioning of a child with cerebral palsy
- 3: Consider currently available interventions, and intervention gaps, including early intervention, environmental modification and the importance of the parent and family
- 4: Consider priorities and approaches for future optimization of visual functioning in children with cerebral palsy.

SYMP42 - CULTURAL VARIATIONS IN THE IMPLEMENTATION OF PEDIATRIC CONSTRAINT-INDUCED THERAPY IN DEVELOPING COUNTRIES

Stephanie C. Deluca, PhD; Patty Coker-Bolt, PhD, OTR/L, FAOTA; Sharon L. Ramey, PhD; Angela Shierk, OTR, PhD; Heather Roberts, PhD, OT

Learning Objectives:

- 1: To learn challenges to implementing P-CIMT in developing countries.
- 2: To learn adaptations used in Ethiopia & Vietnam to implement P-CIMT.
- 3: To learn adaptations used in Mexico to implement P-CIMT.
- 4: To learn common adaptations to P-CIMT in multiple developing countries.

Saturday, September 21, 2019 – 8:15 am – 10:00 am

Free Paper Sessions

I. Imaging –

8:15 am – 8:22 am –

11. SPONTANEOUS SOMATOSENSORY CORTICAL ACTIVITY IS DIMINISHED IN ADOLESCENTS WITH CEREBRAL PALSY

Michael P. Trevarrow, BS; James E. Gehringer, B.S.; Tony Wilson, PhD; Max Kurz, PhD

8:23 am – 8:30 am –

12. CLINICAL CORRELATES OF IMPAIRED WHITE MATTER TRACTS IN CHILDREN WITH SPASTIC BILATERAL CEREBRAL PALSY

Andy Vuong, MS; Eileen G. Fowler, PT, PhD; Joyce H. Matsumoto, MD; Loretta A. Staudt, MS, PT; Marcia Greenberg, MS, PT; Hajime Yokota, MD, PhD; Shantanu Joshi, PhD

8:31 am – 8:38 am –

13. BRAIN CONNECTIONS ASSOCIATED WITH CO-OP FOR CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER

Jill G. Zwicker, PhD, OT; Sara Izadi-Najafabadi, MS

8:39 am – 8:46 am –

14. FIXEL-BASED MORPHOMETRY REVEALS ASSOCIATIONS BETWEEN BRAIN MICRO- AND MACROSTRUCTURE OF PRETERM INFANTS AT TERM AND NEURODEVELOPMENTAL OUTCOMES AT 2 YEARS

Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Kerstin Pannek, PhD; Joanne M. George, PhD; Paul Colditz, PhD, MD; Stephen Rose, PhD; Jurgen Fripp, PhD

8:47 am – 8:54 am –

15. STRUCTURAL BRAIN MRI AT TERM-EQUIVALENT AGE (TEA) IS ASSOCIATED WITH HAMMERSMITH INFANT NEUROLOGICAL EXAM (HINE) AND GENERAL MOVEMENT ASSESSMENT IN VERY PRETERM INFANTS

Karen Harpster, PhD, OTR/L; Stephanie Merhar, MD, MS; VenkaSitaPriyanka Illapani, MS; Beth Kline-Fath, PhD; Nehal Parikh, DO

9:10 am – 9:17 am –

16. MAGNETIC RESONANCE ELASTOGRAPHY OF THE BRAIN IN CHILDREN WITH CEREBRAL PALSY: BRAIN STIFFNESS RELATIONSHIPS WITH FUNCTIONAL BALANCE REACTIONS

Curtis L. Johnson, PhD; Grace McIlvain, BS; James B. Tracy, MS; Charlotte A. Chaze, MS; Gabrielle M. Villermaux; Henry G. Wright, DPT; Freeman Miller, MD; Jeremy R. Crenshaw, PhD

9:18 am – 9:25 am –

17. PROFILE OF CHILDREN WITH CEREBRAL PALSY AND A NORMAL MAGNETIC RESONANCE IMAGING STUDY

Arielle Springer; Sasha Dyck Holzinger, RN; John Andersen, MD, FRCPC; David Buckley, M.B., Ch.B. Sheffield, F.R.A.C.P., FRCPC; Darcy L. Fehlings, MD; Adam Kirton, MD MSc FRCPC; Louise Koclas, MD; Nicole Pigeon, MD; Esias Van Rensburg, MD; Ellen Wood, MD; Maryam Oskoui, MDCM, FRCPC, MSc, FAAN; Michael Shevell, MDCM

9:26 am – 9:34 am –

18. UNDERSTANDING THE IMPACT OF BILATERAL BRAIN INJURY IN CHILDREN WITH CEREBRAL PALSY

Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech); Alex M. Pagnozzi, PhD; Jurgen Fripp, PhD; Stephen Rose, PhD

9:35 am – 9:42 am –

19. PREDICTING MOTOR AND COGNITIVE OUTCOMES FROM MRIS OF CHILDREN WITH ACQUIRED BRAIN INJURY

Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Alex M. Pagnozzi, PhD; Jurgen Fripp, PhD; Stephen Rose, PhD

9:43 am – 9:50 am –

110. CORTICAL OSCILLATIONS THAT UNDERLIE VISUAL SELECTIVE ATTENTION ARE UNCHARACTERISTIC IN ADOLESCENTS WITH CEREBRAL PALSY

Rashelle Hoffman, DPT; Tony Wilson, PhD; Max Kurz, PhD

J. Transitions/Adult Care –

8:15 am – 8:22 am

J1. ARE MOTOR DIFFICULTIES IN CHILDREN WITH CHD TRANSIENT?

Marie-Eve Bolduc, MSc, OT; Eliane Dionne, OT; Annette Majnemer, PhD, OT; Marie Brossard-Racine, OT, PhD

8:23 am – 8:30 am –

J2. CEREBELLAR DIFFERENCES WITH REHABILITATION IN CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER

Kamaldeep K. Gill, OT; Donna Lang, PhD; Dan Goldowitz, PhD; Jill G. Zwicker, PhD, OT

8:31 am – 8:38 am –

J3. INCREASING SYNCHRONY OF MATERNAL/INFANT CORTICAL RESPONSES AS MOTHERS INCREASE SENSORY SCAFFOLDING DURING INTERACTIONS

Mary Lauren M. Neel, MD; Krystal Hay, DPT; Melissa Moore-Clingenpeel, MA, MS; Ashley Miller, MM, MT-BC; Lelia Emery, MMT, MT-BC; Kaleigh Hague, MT-BC; Nathalie Maitre, MD

8:39 am – 8:46 am –

J4. A STATE-OF-SCIENCE ON ADULTS WITH CEREBRAL PALSY AS A BASE FOR DEVELOPING AN ICF CORE SET

Suzie Noten, MSc; Joyce Benner, MSc; Chonnanid Limsakul, MD; Wilma M. van der Slot, MD PhD; Henk J. Stam, MD PhD; Melissa Selb, MSc; Rita van den Berg-Emons, PhD; Marij E. Roebroek, PhD

8:47 am – 8:54 am –

J5. DEVELOPMENTAL TRAJECTORIES OF CAPABILITY IN MOBILITY AND IN SELF-CARE OF CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY; A COLLABORATIVE INTERNATIONAL STUDY

Jan Willem Gorter, MD PhD; Dirk-Wouter Smits, PhD; Corinne Riddell, PhD; Jeanine M. Voorman, MD PhD; Peter L. Rosenbaum, MD CM FRCPC; Robert Palisano, ScD; Stephen Walter, PhD; Steven Hanna, PhD; Leontien van Wely, PhD; Marjolijn Ketelaar, PhD

9:10 am – 9:17 am –

J6. OUTCOMES OF AMBULATORY FUNCTION IN ADULTS WITH CEREBRAL PALSY: EVALUATING CHANGE FROM ADOLESCENCE

Nancy Lennon, MS, PT; Chris Church, MPT; Wade Shrader, MD; William Robinson, BS; Jose J. Salazar Torres, PhD; Daveda Taylor, DPT; Tim Niiler, PhD; Freeman Miller, MD

9:18 am – 9:25 am –

J7. BONE MINERAL DENSITY IN AMBULANT ADULTS WITH CEREBRAL PALSY: IMPLICATIONS FOR HEALTHY AGING

Nelleke G. Langerak, PhD; Thulfieq Behardien, BSc; Maaïke M. Eken, PhD; Berendina E. Veerbeek, MSc; Anthony G. Fieggen, MD, FCS; Jacques du Toit, MBChB(Stell), FC Orth(SA), MScClinEpi; Robert P. Lamberts, PhD, FECSS

9:26 am – 9:33 am –

J8. CHANGES IN WALKING ABILITY BETWEEN CHILDHOOD AND ADULTHOOD IN CEREBRAL PALSY: A SYSTEMATIC REVIEW WITH META-ANALYSIS

Hsiu-Ching Chiu, PhD; Louise Ada, PhD; Chieh-feng Chen, PhD

9:34 am – 9:41 am –

J9. MUSCULOSKELETAL DISORDERS AMONG OLDER ADULTS WITH AND WITHOUT CEREBRAL PALSY: A COMPARISON OF REHABILITATION SERVICE USE AND COMORBIDITIES USING NATIONAL MEDICARE CLAIMS DATA

Deborah E. Thorpe, PT, PhD; Mary E. Gannotti, PhD; Chin-Hua Wang, PhD; Janet Freburger, PT, PhD

9:42 am – 9:49 am –

J10. LONG-TERM OUTCOMES OF 30-YEAR SURVIVORS OF PEDIATRIC ONSET SPINAL CORD INJURIES

Lawrence C. Vogel, MD; Kathleen M. Chlan, BA; Jessica Cwik, BA; Sue Mukherjee, MD; Kathy Zebracki, PhD

K. Early Development –

8:15 am – 8:22 am –

K1. A COMBINATION OF INFANT MOTOR ASSESSMENTS PREDICTS NEURODEVELOPMENTAL OUTCOMES IN PRETERM INFANTS

Colleen Peyton, DPT; Christa Einspieler, PhD; Toril Fjortoft, PT, Ph.D.; Lars Adde, P.T., Ph.D.; Michael Schreiber, MD; Michael E. Msall, MD

8:23 am – 8:30 am –

K2. DEVELOPMENT OF NORMAL AND ABERRANT FIDGETY MOVEMENTS IN PRETERM AND TERM BORN INFANTS: OPTIMISING TIMING OF PRECHTL'S GENERAL MOVEMENTS ASSESSMENT

Alicia Spittle, PhD; Amanda K. Kwong, BPhysio (Hons); Lex Doyle, MD; Katherine Lee, PhD; Christa Einspieler, PhD; Joy Olsen, PhD, BOT; Abbey Eeles, PhD, BOT; Jeanie Cheong, MD

8:31 am – 8:38 am –

K3. COMMUNITY-BASED EARLY DETECTION PROGRAM FOR INFANTS AT HIGH RISK OF CEREBRAL PALSY IN A LOW-MIDDLE INCOME COUNTRY

Asis Kumar Ghosh, MPT, BPT; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Iona Novak, PhD; Cathy Morgan, PhD, BAppSc; Robert Ware, PhD; Katherine Benfer, PhD, MPH, BSpPath

8:39 am – 8:46 am –

K4. MEASURING EARLY PROBLEM-SOLVING IN CHILDREN WITH MOTOR IMPAIRMENTS: EVALUATING RESPONSIVENESS OVER TIME USING A MODIFICATION OF THE EARLY PROBLEM SOLVING INDICATOR

Rebecca M. Molinini, DPT; Ketaki Inamdar, MPT; Emily C. Marcinowski, PhD; Stacey C. Dusing, PhD; Natalie A. Koziol, PhD; Michele A. Lobo, PT, PhD; Regina T. Harbourne, PhD, PT; Sarah W. McCoy, PhD; James A. Bovaird, PhD

8:47 am – 8:54 am –

K5. SUPPORTING PLAY, EXPLORATION AND EARLY DEVELOPMENT INTERVENTION (SPEEDI) FOR PRETERM INFANTS: A FEASIBILITY STUDY IN AN AUSTRALIAN CONTEXT

Erancyne Finlayson, BA; Stacey C. Dusing, PhD; Joy Olsen, PhD, BOT; Andrea Guzzetta, MD, PhD; Amanda K. Kwong, BPhysio (Hons); Alicia Spittle, PhD

9:10 am – 9:17 am –

K6. EARLY INTERVENTION SERVICE INTENSITY AND CHANGE IN CHILDREN'S SOCIAL-EMOTIONAL AND COGNITIVE FUNCTIONAL CAPABILITIES

Beth M. McManus, PhD; Mary A. Khetani, ScD; Zachary Richardson, MA, PhD(c); Beth Scully, BS; Jodi Litfin, PhD; Natalie Murphy, MPH; Brianna Rigau, OTR/L

9:18 am – 9:25 am –

K7. EARLY MOTOR BEHAVIOR, NEURODEVELOPMENTAL OUTCOME, AND FUNCTIONAL BRAIN CONNECTIVITY IN PRETERM INFANTS

Colleen Peyton, DPT; Christa Einspieler, PhD; Lars Adde, PT, Ph.D.; Toril Fjortoft, PT, PhD; Michael Schreiber, MD; Alexander Drobyshvsky, PhD; Jeremy Marks, MD, PhD

9:26 am – 9:33 am –

K8. EFFECT OF NEONATAL THERAPY INTERVENTION ON NEUROBEHAVIOR, NEUROMOTOR OR COGNITIVE DEVELOPMENT OF PRETERM INFANTS

Sonia Khurana, PhD; Stacey C. Dusing, PhD; Audrey E. Kane, PhD, OTR/L; Shaaron Brown, DPT; Talicia Tarver, MLIS

9:34 am – 9:41 am –

K9. EFFICACY OF THE START-PLAY PROGRAM FOR INFANTS WITH NEUROMOTOR DISORDERS: MOTOR OUTCOMES

Michele A. Lobo, PT, PhD; Regina T. Harbourne, PhD, PT; Stacey C. Dusing, PhD; Sarah W. McCoy, PhD; Andrea B. Cunha, PhD; Iryna Babik, PhD; Lin-Ya Hsu, PhD; Natalie A. Koziol, PhD; James A. Bovaird, PhD; Emily C. Marcinowski, PhD; Hui-Ju Chang, Ph.D.; Mihee An, PhD; Susan Sheridan, PhD; Sandra Willett, PT, PCS, MS

9:42 am – 9:49 am –

K10. PREDICTION OF PRESCHOOL COGNITIVE ABILITIES USING THE BAYLEY SCALES OF INFANT TODDLER DEVELOPMENT (3RD EDITION) IN MEDICALLY COMPLEX CHILDREN

Raye-Ann deRegnier, MD; Lynn Boswell, MS, PT; Annamarie Russow, MsEd; Mary Kay Santella, PT; Marie Weissbourd, PhD

L. Sensory and Pain –

8:15 am – 8:22 am –

L1. ASSOCIATIONS OF PAIN, SLEEP DISORDERS, FATIGUE, AND COMORBID NEURODEVELOPMENTAL CONDITIONS WITH DEPRESSIVE DISORDERS AMONG PRIVATELY-INSURED ADULTS WITH CEREBRAL PALSY

Daniel Whitney, PhD; Seth Warschausky, PhD; Daniel Whibley, PhD; Anna Kratz, PhD; Susan Murphy, PhD; Edward A. Hurvitz, MD; Mark Peterson, PhD

8:23 am – 8:30 am –

L2. COMPARING PAIN, FATIGUE, DEPRESSIVE SYMPTOMS AND SLEEP DISTURBANCE BETWEEN YOUNG ADULTS WITH CEREBRAL PALSY AND A REFERENCE POPULATION

Marloes van Gorp, MSc; Leontien van Wely, PhD; Annet J. Dallmeijer, PhD; Vincent de Groot, MD PhD; Caroline B. Terwee, PhD; Gerard Flens, MSc; Henk J. Stam, MD PhD; Wilma M. van der Slot, MD PhD; Marij E. Roebroek, PhD

8:31 am – 8:38 am –

L3. PAIN IN ADULTS WITH CEREBRAL PALSY: A WORLD WIDE STUDY WITH INDIVIDUAL PARTICIPANT DATA.

Wilma M. van der Slot, MD PhD; Joyce Benner, MSc; Laura K. Brunton, PT, PhD; Joyce Engel, Prof; Philippe Gallien, MD; Sander Hilberink, PhD; Grethe Månun, PhD MD; Prue E. Morgan, BAppSc (PT), MAppSc (PT), PhD; Arve Opheim, PhD; Inmaculada Riquelme, PhD; Elisabet Rodby-Bousquet, PT, PhD; Tülay Tarsuslu Şimşek, PT MD; Deborah E. Thorpe, PT, PhD; Rita van den Berg-Emons, PhD; Laura Voglte, PhD; Marij E. Roebroek, PhD

8:39 am – 8:46 am –

L4. RELATIONSHIP BETWEEN SELF-CARE AND MANUAL ABILITY IN CHILDREN WITH CEREBRAL PALSY (CP) AGED 1.5 TO 12 YEARS WITH CEREBRAL PALSY: A LONGITUDINAL STUDY.

Andrea N. Burgess, OT; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Mark Chatfield, BA, MS Statistics; Jenny Ziviani, OT; Robert Ware, PhD; Leanne Sakzewski, PhD, BOccThy

8:47 am – 8:54 am –

L5. DETERMINANTS OF SEVERE VISUAL IMPAIRMENT IN CHILDREN WITH CEREBRAL PALSY. A SCPE NETWORK POPULATION-BASED REGISTER STUDY

Javier de la Cruz, MD; Elodie Sellier, MD, PhD; Veronka Horber, MD; Inge Franki, PT, PhD; Carmen R. Pallás, MD, PhD; Kate Himmelmann, MD, PhD; Els Ortibus, MD, PhD

9:10 am – 9:17 am –

L6. EFFICACY OF THE START-PLAY PROGRAM FOR INFANTS WITH NEUROMOTOR DISORDERS: COGNITIVE OUTCOMES

Regina T. Harbourne, PhD, PT; Stacey C. Dusing, PhD; Michele Lobo, PhD, PT; Sarah W. McCoy, PhD; Natalie A. Koziol, PhD; Lin-Ya Hsu, PhD; Sandra Willett, PT, PCS, MS; Emily C. Marcinowski, PhD; Iryna Babik, PhD; Andrea B. Cunha, PhD; Mihee An, PhD; Hui-Ju Chang, Ph.D.; James A. Bovaird, PhD; Susan Sheridan, PhD

9:18 am – 9:25 am –

L7. ENABLING VISIONS AND GROWING EXPECTATIONS (ENVISAGE): COMPREHENSIBILITY AND USABILITY OF A SERIES OF WORKSHOPS FOR PARENTS OF CHILDREN WITH A NEURODISABILITY

Laura Miller, PhD; Grace Nickson, Bachelor Occ Therapy (Hons); Christine Imms, PhD; Peter L. Rosenbaum, MD CM FRCPC; Jenny Ziviani, OT; Rachel E. Martens; Vicki Cavalieros; Andrea Cross, PhD

9:26 am – 9:33 am –

L8. NEURODEVELOPMENT OF INFANTS BORN WITH COMPLEX CONGENITAL HEART DEFECT: MOTOR AND COGNITIVE DELAYS ARE COMMON UNDER 6 MONTHS OF AGE

Tanya Tripathi, PhD; Thais Cabral, PhD; Gardenia Barbosa, PhD; Tondi M. Harrison, PhD, RN, FAAN; Janet Simsic, MD; Jill C. Heathcock, MPT, PhD

9:34 am – 9:41 am –

L9. QUANTITATIVE MEASURES OF NUTRITIVE SUCKING CORRELATE WITH MICROSTRUCTURAL ABNORMALITIES IN THE SENSORIMOTOR TRACTS OF NEONATES

Christos Papadelis, PhD; Eleonora Tamilia, PhD; Marianna S. Parker, MBBS; Maria Rocchi, MSc; Fabrizio Taffoni, PhD; Anne Hansen, MD; P Ellen Grant, MD

9:42 am – 9:49 am –

L10. PAIN INTERFERENCE IN AMBULATORY YOUNG ADULTS WITH CEREBRAL PALSY

Wade Shrader, MD; Nancy Lennon, MS, PT; Chris Church, MPT; Allison Wickham, BS; Tim Niiler, PhD; Freeman Miller, MD

Saturday, September 21, 2019: 10:30am-12:00pm

GENERAL SESSION

Saturday, September 21 1:30pm-3:30pm

Instructional Courses

IC29 - A MULTIDISCIPLINARY APPROACH TO BEST OUTCOMES IN EPILEPSY SURGERY

Nathan S. Rosenberg, MD; Adam Ostendorf, MD; Jonathan Pindrik, MD

Learning Objectives:

- 1: List clinical characteristics of patients who may benefit from epilepsy surgery.
- 2: Describe common neuropsychological outcomes after epilepsy surgery.
- 3: List the most common neurosurgical procedures used in epilepsy surgery.
- 4: Describe the options that are available for rehabilitation after epilepsy surgery.

IC30 - ASSESSMENT AND TREATMENT OF ADULT PATIENTS WITH CEREBRAL PALSY AND COMORBID DEPRESSION

David Roye, MD; Hiroko Matsumoto, PhD; Daniel F. Linhares, MD; Jan L. Moskowitz, MSW

Learning Objectives:

- 1: How to properly assess patients for depression and utilize validated screening tools. Review the prevalence of depression in the adult population with CP and potential risk factors.
- 2: Understand different types of therapeutic approaches for mental health and the role of health care providers, other than psychiatrists, in the treatment for depression.
- 3: Review the prevalence of different psychotropic medications being used for adult patients with CP.
- 4: Understand the difference between multiple antidepressant medications and how to use their individual properties to more precisely target the depressive symptoms of each individual patient.

IC31 - GLOBAL IMPLEMENTATION OF THE INTERNATIONAL DYSPHAGIA DIET STANDARDISATION INITIATIVE FRAMEWORK: THE "HOW TO" FOR IMPROVING SAFETY AT MEALTIMES FOR CHILDREN AND ADULTS WITH DEVELOPMENTAL CONDITIONS

Janice Duivesteyn, BSR OT/PT, MRSc; Danielle Rae, BEd., MOT

Learning Objectives:

- 1: To articulate how IDDSI offers a common language to improve safety and can also facilitate research to benefit those with dysphagia
- 2: To describe the rationale and process behind the development of the IDDSI framework
- 3: To demonstrate skill in using the IDDSI testing methods
- 4: To discuss how implementation might be initiated and supported in different practice settings using the many freely available IDDSI resources.

IC32 - VISION PROBLEMS IN CHILDREN WITH CEREBRAL PALSY: PRACTICAL STRATEGIES FOR SCREENING/ IDENTIFICATION, REFERRAL, DIAGNOSIS AND TREATMENT

Sharon S. Lehman, MD; Linda Lawrence, MD

Learning Objectives:

- 1: Describe current recommendations for vision screening and special considerations for children with cerebral palsy.
- 2: Identify characteristics and risk factors for cortical/ cerebral visual impairment in children with cerebral palsy in order to refer those who warrant an evaluation by the ophthalmologist.
- 3: List current treatment of strabismus and amblyopia in children with cerebral palsy.
- 4: Describe the steps necessary for a child to obtain vision services.

IC33 - FIXING THE FEMURS, FIBRES AND FEET: IMPACT ON FITNESS, FUNCTION, FRIENDSHIPS AND THE FUTURE

Pam Thomason, B Phty, M Physio; Kate L. Willoughby, BPhysio, DPhysio; Erich Rutz, MD; Abhay Khot, MBBS, FRACS; Kerr Graham, MD, MD, FRCS (Ed), FRACS

Learning Objectives:

- 1: Understand musculoskeletal outcomes in children and adolescents within the ICF framework and how this may impact future management.
- 2: Understand the importance of the "f words" to inform our practice and influence our management decisions.
- 3: Understand the orthopaedic management of lower limb deformities in order to achieve stability of gait correction post surgery.
- 4: Recognise positive and negative predictors of musculoskeletal health at skeletal maturity and its impact on the "f-words".

IC34 - LEARNING HEALTH SYSTEMS FOR CEREBRAL PALSY: GENERATING USABLE DATA AND MEANINGFUL KNOWLEDGE

Nikolas J. Koscielniak, MS, MPH, OTR/L; Carole A. Tucker, PT, PhD

Learning Objectives:

- 1: To understand concepts and components of LHS and be able to effectively communicate LHS importance to clinical staff and administration.
- 2: To become familiar with the application of LHS in support of clinical decision-making in individuals with CP.
- 3: To understand the role of clinical documentation for LHS and key strategies to collect meaningful data in large-scale health systems.
- 4: To develop skills and knowledge of implementation science for LHS through applied activities.

IC35 - THE YEAR'S TOP 10 ARTICLES ON DEVELOPMENTAL DISABILITIES

Nancy A. Murphy, MD; Richard Adams, MD

Learning Objectives:

- 1: Summarize the major conclusions of each of the ten articles presented.
- 2: Identify areas in which additional research is needed.
- 3: Evaluate the utility of each of the articles for their own clinical practice.
- 4: Be inspired by the presentations to seek articles on their own.

IC36 - MULTI-FACETTED MEALTIME MANAGEMENT FOR CHILDREN WITH CEREBRAL PALSY: THE ART AND SCIENCE OF SUPPORTING ORAL FEEDING

Gina R. Rempel, MD, FRCPC; Cindy B. Dodds, PT, PhD; Diane Sellers, PhD; Maria C. Ibarra, MD

Learning Objectives:

- 1: Identify points of controversy in the literature regarding approaches for managing eating and drinking for children with cerebral palsy.
- 2: Appreciate a broad and global perspective of eating and drinking in children with cerebral palsy.
- 3: Recognize and value international strategies used to support eating and drinking in children with cerebral palsy.
- 4: Consider quality of life and supportive care models to mitigate risk and optimize mealtime participation for children with cerebral palsy.

IC37 - NEONATAL BRACHIAL PLEXUS PALSY: UPDATES ON TREATMENT, PROGNOSIS AND OUTCOMES.

Sue Mukherjee, MD; Robert Rinaldi, MD; Virginia S. Nelson, MD, MPH; Lynda Yang, MD; Mary Catherine Spires, MD

Learning Objective

- 1: Describe risk factors for NBPP and prognostic indicators
- 2: Describe tests used to support prognostic and surgical decision making in NBPP, and surgical options
- 3: Understand the role of rehab methods, splints and taping to support function and recovery in NBPP
- 4: List outcomes of interest and discuss outcomes measurement in NBPP

IC38 - NEUROCOGNITION IN SPINA BIFIDA

Marie Peny-Dahlstrand, PhD; Timothy J. Brei, MD; Andrew Zabel, Ph.D.; Barbro Lindquist, PhD

This instructional course aims to give the participants a possibility to increase their knowledge about the cognitive profile in persons with SB and to discuss methods to enable people with SB to reach more independence and participation in their daily lives.

Learning Objectives:

- 1: Describe the cognitive profile in persons with SB.
- 2: Understand how executive dysfunction can influence activity performance, self-management and participation in people with SB.
- 3: Understand self-management theory and describe self-management measures in SB.
- 4: Describe methods to enable people with SB to reach more independence and participation in their daily lives.

IC39 - PREPARING CHILDREN FOR SUCCESSFUL COMMUNITY PARTICIPATION

Lisa A. Chiarello, PT, PhD, FAPTA; Robert J. Palisano, PT, ScD, FAPTA

Learning Objectives:

- 1: Collaborate with families, children, and community leaders to identify participation goals and evaluate child and family outcomes.
- 2: Assess child, family, and community strengths and what needs to occur to achieve participation goals.
- 3: Identify intervention strategies that can be used in outpatient pediatric rehabilitation to support children's community participation goals.
- 4: Identify solutions to barriers to supporting community participation in outpatient pediatric rehabilitation.

IC40 - VISUAL FUNCTION CLASSIFICATION SYSTEM FOR CHILDREN WITH CEREBRAL PALSY

Andrea Guzzetta, PhD; Daniela Ricci, PhD; Francesca Tinelli, PhD

Learning Objectives:

- 1: Describe different visual behaviours of children with cerebral palsy.
- 2: Be able to use a new validate instrument for the classification of visual function in children with cerebral palsy.
- 3: Be able to spread and to teach to colleagues and parents this new visual classification system.
- 4: Be able to speak a "common Language" about visual disorders in children with cerebral palsy.

IC41 -

Scientific Presentation

Thursday, September 19, 2019: 6:30 PM - 8:00 PM

- A NEW RADIOGRAPHIC MEASUREMENT FOR QUANTITATIVE ASSESSMENT OF FOREFOOT SPLAY IN CHILDREN WITH PERSISTENT IDIOPATHIC TOE WALKING*Jon R. Davids, MD; Donald Kephart, MD; Janet Phan, MS; Arash Calafi, MD; Sean Brown, MA; S. Reed Laing, BA; Anita Bagley, PhD, MPH; Vedant A. Kulkarni, MD***- THE NATURAL HISTORY OF UPPER EXTREMITY FUNCTION IN HEMIPLEGIC CEREBRAL PALSY AS DETERMINED BY THE SHUEE***David E. Westberry, MD; Laura Peace, OTR/L; Heidi Simon, OTR/L; Linda Wack, RN; Lisa V. Wagner, DHSc OT; Ashley Carpenter, BS***- PREVALENCE OF ABNORMAL MOVEMENT AND POSTURAL PATTERNS IN HEALTHY LOW RISK INFANTS FROM BELGIUM, INDIA, NORWAY, AND THE UNITED STATES***Raye-Ann deRegnier, MD; Lynn Boswell, M.S., P.T.; Toril Fjortoft, P.T., Ph.D.; Lars Adde, P.T., Ph.D.; Aurelie Pascal, P.T.; Niranjan Thomas, M.D.; Annamarie Russow, Ms.Ed.; Christine Van den Broeck, P.T., Ph.D.; Mary Weck, P.T.; Ragnhild Stoen, M.D., Ph.D.;***- REPORT FROM THE CEREBRAL PALSY RESEARCH NETWORK- 2019***Garey Noritz, MD; Paul Gross, BA; Jacob Kean, PhD***- UNMET RESPITE CARE NEEDS FOR CHILDREN WITH MEDICAL TECHNOLOGY DEPENDENCE (MTD)***Sarah A. Sobotka, MD, MSCP; Emma Lynch, MPH; Michael T. Quinn, PhD; Michael E. Msall, MD***- MAXIMUM MUSCLE MITOCHONDRIAL RESPIRATION RATE IN FUNCTIONALLY AMBULATORY CHILDREN IS NOT HIGHER THAN IN MINIMALLY- AMBULATORY CHILDREN WITH CEREBRAL PALSY***Sudarshan Dayanidhi, PhD; Alexia Rudofski, BS; Craig Finlayson, MD; Jill Larson, MD; Vineeta T. Swaroop, MD; Richard L. Lieber, PhD***- EMG CHANGES RELATED TO MUSCULAR FATIGUE AFTER AN INTENSE MOTOR TASK IN CHILDREN WITH CEREBRAL PALSY***Jean L. Stout, PT, MS; Mathieu Biemann, MSc.; Tom Novacheck, MD; Désirée Maltais, PhD; Laurent Bouyer, PhD***- CONCERNS AND EXPECTATIONS OF ADOLESCENTS WITH PHYSICAL DISABILITIES REGARDING ADOLESCENCE AND TRANSITION TO ADULTHOOD***Marina B. Brandao, PhD; Kátia P. Bueno, PhD; Ana Paula M. Silverio, OT; Fernanda I. Antunes; Priscilla P. Figueiredo, MSc; Aline M. Feitosa, OT,PT; Marisa C. Mancini, PhD***- PREVALENCE OF PAIN, AND PAIN INTERFERENCE IN 5-10 YEAR OLD CHILDREN WITH CEREBRAL PALSY***Kristina Tedroff, MD, PhD; Mirja Gyllensvärd, MD; Kristina Löwing, PhD***- LONG-TERM IMPROVEMENT ON GMFCS LEVEL OF PATIENTS WITH CEREBRAL PALSY TREATED BY AN INTEGRATED APPROACH OF REPEATED BOTULINUM TOXIN-A INJECTIONS***Nigar Dursun, MD; Merve Akyuz, MD; Tugba Gokbel, MD; Melike Akarsu, MSc; Cagla Karacan, PhD; Erbil Dursun, MD***- VARIATION IN GAIT PHENOTYPES AT THE ANKLE IN YOUTH WITH CHARCOT-MARIE-TOOTH TYPE 1***Sylvia Ounpuu, MSc; Tishya Wren, PhD; Gyula Acsadi, MD, PhD; Kristan Pierz, MD***- SURGICAL OUTCOMES AFTER SINGLE EVENT MULTILEVEL SURGERY IN CEREBRAL PALSY PATIENTS WITH MID-STANCE KNEE HYPEREXTENSION***Ki Hyuk Sung, PhD; Chin Youb Chung, MD, PhD; Soon-Sun Kwon, PhD; Moon Seok Park, MD, Ph.D.***- SPINAL DEFORMITIES AND PAIN DURING AGING IN ADULTS WITH CEREBRAL PALSY AND SPASTIC DIPLEGIA; A LONG-TERM FOLLOW-UP STUDY***Robert P. Lamberts, PhD, FCCSS; Maaïke Eken, PhD; Jacques du Toit, MBChB(Stell), FC Orth(SA), MScClinEpi; Elsabe Botha, BSc (radiology); Richard de Villiers, MMed (Rad.D); Nelleke Langerak, PhD***- INVESTIGATING THE FEASIBILITY OF QUANTITATIVE SENSORY TESTING TO PROFILE SENSORY GAIN/LOSS IN RELATION TO PAIN OUTCOMES FOLLOWING INTRATHECAL BACLOFEN IMPLANT SURGERY IN CEREBRAL PALSY***Chantel Barney, PhD; Alyssa M. Merbler, MA; Donald Simone, PhD; David Walk, MD; Frank Symons, PhD***- ATTITUDES OF PARENTS OF ADOLESCENTS WITH CEREBRAL PALSY TOWARDS INTENSIVE MODELS OF PHYSICAL THERAPY***Theresa Sukal-Moulton, DPT, PhD; Paige Golden; Angela Guerino; Natalie Kahn; Alexandra Manning***- SPLIT ANTERIOR TIBIALIS TENDON TRANSFER TO THE PERONEUS BREVIS OR TERTIUS FOR TREATMENT OF VARUS FOOT DEFORMITIES IN CHILDREN WITH STATIC ENCEPHALOPATHY***Robert M. Kay, MD; Susan Rethlefsen, DPT; Alexander Nazareth, BS; Kenneth D. Illingworth, MD***- ALTERED GENE EXPRESSION AND DNA METHYLATION PROFILES IN SKELETAL MUSCLE FROM INDIVIDUALS WITH SPASTIC CP***Karyn Robinson, MS; Erin Crowgey, PhD; Adam Marsh, PhD; Stephanie Lee, MS; Robert Akins, PhD***- POST-OPERATIVE IMMOBILIZATION FOLLOWING HIP RECONSTRUCTION IN CHILDREN WITH CEREBRAL PALSY: PRACTICE PATTERNS AND ASSOCIATED COMPLICATIONS FROM A PROSPECTIVE MULTI-CENTER INTERNATIONAL COHORT STUDY***Vedant A. Kulkarni, MD; Jon R. Davids, MD; Unni G. Narayanan, MBBS, MSc, FRCS(C); Ashley Ferkul, BA; S. Reed Laing, BA; Anita Bagley, PhD, MPH***- EFFECTIVENESS OF VIDEO-BASED TRAINING ON MOBILE APP MEASUREMENT OF MIGRATION PERCENTAGE: IS COMMUNITY-BASED HIP SURVEILLANCE FEASIBLE?***Nina Cung, BA, BS; Vedant A. Kulkarni, MD; Anita Bagley, PhD, MPH; Jon R. Davids, MD*

- RELATIONSHIP BETWEEN NEONATAL MRI, CLINICAL ASSESSMENT SCORES AND NEURODEVELOPMENTAL OUTCOMES AT 2 YEARS CORRECTED AGE IN VERY PRETERM BORN INFANTS

Joanne M. George, PhD; Robert Ware, PhD; Mark Chatfield, BA, MS; Simona Fiori, PhD; Jurgen Fripp, PhD; Kerstin Pannek, PhD; Stephen Rose, PhD; Paul Colditz, PhD, MD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc (Anatomy), PGrad (Biomech)

- THE IMPACT OF PARTICIPATION-BASED INTERVENTIONS ON BODY FUNCTIONS AMONG YOUTH WITH PHYSICAL DISABILITIES

Dana Anaby, PhD; Jan Willem Gorter, MD PhD; Mindy F. Levin, PhD; Lisa Avery, MSc; Rachel Teplicky, MSc; Isabelle Cormier, BA; Laura Turner, MSc; Janice Coulter; Julia E. Hanes, BS

- EPIDEMIOLOGY OF EYE DISEASES AMONG CHILDREN WITH DISABILITY IN RURAL BANGLADESH: FINDINGS FROM THE SHAHJADPUR CHILDREN'S COHORT

Mohammad Muhit, PhD; Tasneem Karim, MBBS, MPH; Israt Jahan, MPH; Mahmudul Hassan Al Imam, MPH; Manik Chandra Das, MBBS; Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM

- COMPARING PARENT AND PROVIDER PRIORITIES IN DISCUSSIONS OF EARLY DETECTION AND INTERVENTION FOR INFANTS WITH AND AT RISK OF CEREBRAL PALSY.

Rachel Byrne, BA; Tracy Pickar, BA; Mary-Lauren Neel, MD; Andrea Duncan, MD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Nathalie Maitre, MD

- APPLICATION OF PRINCIPLES OF IMPLEMENTATION SCIENCE DECREASES AGE AT CEREBRAL PALSY DIAGNOSIS BELOW 12 MONTHS IN A MULTICENTER CLINICAL NETWORK.

Nathalie Maitre, MD; Rachel Byrne, BA; Andrea Duncan, MD; Joanna Burton, MD; Sai Iyer, MD; Betsy Ostrander, MD

- IMPACT OF HIP SURVEILLANCE ON SURGICAL PRACTICE: WHAT MAKES A DIFFERENCE?

Stacey D. Miller, PT; Maureen O'Donnell, MD MSC FRCPC; Kishore Mulpuri, MBBS, MS, MHS

- INVESTIGATING PEDIATRICIANS: KNOWLEDGE AND LEARNING NEEDS RELATED TO CEREBRAL PALSY

Stacey D. Miller, PT; Ip Angie, FRCPC; Kishore Mulpuri, MBBS, MS, MHS; Maureen O'Donnell, MD MSC FRCPC

- TRAINING OF FIRST RESPONDER HEALTH CARE PROFESSIONALS IN TRANS-DISCIPLINARY CARE FOR CEREBRAL PALSY- IMPACT ON KNOWLEDGE AND ATTITUDE

Meenakshi Girish, MD; Senthil Amudhan, MD; Asha Nayak, MPT; Shashikala Gopalswamy, MD; Maria Lewin, DCH, DNB; Gayathri Devi Chinnappa, MD Pediatrics

- EVALUATION OF DIAPHRAGM NEUROMUSCULAR TRANSMISSION AND FATIGUE IN A MOUSE MODEL OF CEREBRAL PALSY

Joline Brandenburg, MD; Matthew Fogarty, DVM, PhD; Gary C. Sieck, PhD

- PAIN IN YOUNG CHILDREN WITH SPINA BIFIDA

Ann L. Alriksson-Schmidt, PhD; Katherine Ong, MA, PhD; Matthew R. Reeder, MPH; Judy Thibadeau, RN, MN; Kimberly Newsome, RN; Marcia Feldkamp, PA, MSPH, PhD

- ASSESSMENT OF AUDIO-VISUAL AND SOCIO-EMOTIONAL PROCESSING AND THE USE OF ADAPTIVE COMMUNICATIVE EQUIPMENT IN CHILDREN WITH SEVERELY INVOLVED CEREBRAL PALSY AND SCOLIOSIS.

Amanda T. Whitaker, MD; Stephanie Burkhardt, MPH; Satbir Singh, BS; Katelyn D. Levensgood, DPT; Lindsay Pietruszewski, DPT; Ashley Miller, MM, MT-BC; Kaleigh Hague, MT-BC; Lelia Emery, MMT, MT-BC; Nathalie Maitre, MD

- INTRATHECAL BACLOFEN THERAPY IN CHILDREN: IMPACT ON QUALITY OF LIFE AND CAREGIVER BURDEN

Kirsty Stewart, PhD; Jenny Lewis, PT; Gavin Hutana, BA, MBBS

- EVALUATING AN OBSERVATIONAL CODING SYSTEM DERIVED FROM THE PAIN AND DISCOMFORT SCALE TO ASSESS SPASTICITY-RELATED PAIN IN CEREBRAL PALSY

Alyssa M. Merbler, MA; Chantel Barney, PhD; Kristin Frenn, MPH; Frank Symons, PhD

- A RANDOMIZED CONTROLLED STUDY OF VIRTUAL REALITY FOR PAIN MANAGEMENT DURING BOTULINUM TOXIN INJECTIONS FOR SPASTICITY MANAGEMENT

Kristin Frenn, MPH; Lisa Lykken, BS; Elana Abelson, BA; Andrina MacDonald; Dalberg Todd, Do; Shannon Wier, BA; Elizabeth Jensen, BA; Frank Symons, PhD; Chantel Barney, PhD

- EVALUATING PAIN IN PEDIATRIC AND ADULT PATIENTS WITH CEREBRAL PALSY USING PATIENT REPORTED OUTCOMES MEASUREMENT INFORMATION SYSTEM (PROMIS)

Hiroko Matsumoto, PhD; Matthew Simhon, BS; David Roye, MD; Heakyung Kim, MD; Joshua Hyman, MD

- SHORT TERM EFFECTIVENESS OF HOME-BASED TELE-MONITORED UPPER LIMB CHILDREN ACTION OBSERVATION TRAINING (TELE-UPCAT) RCT IN UNILATERAL CEREBRAL PALSY

Giuseppina Sgandurra, MD, PhD; Elena Beani, PT, PhD; Valentina Menici, PT; Silvia Perazza, MD, PhD; Elisa Sicola, PT; Adriano Ferrari, MD; Giovanni Cioni, MD

- UPPER EXTREMITY ASYMMETRY DETECTION IN INFANTS: A COMPARISON OF THE HAND ASSESSMENT FOR INFANTS AND HAMMERSMITH INFANT NEUROLOGICAL EXAMINATION

Mary Ann Nelin, MD; Lindsay Pietruszewski, DPT; Stephanie Burkhardt, MPH; Nancy Batterson, OT/L, SCFES; Katelyn D. Levensgood, DPT; Julia Less, MPH; Dennis Lewandowski, PhD; Brianna Sowers; Nathalie Maitre, MD

- BIMANUAL PERFORMANCE OF 8 TO 12 YEAR OLD CHILDREN WITH BILATERAL CEREBRAL PALSY.

Andrea N. Burgess, OT; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Jenny Ziviani, OT; Mark Chatfield, BA, MS; Robert Ware, PhD; Leanne Sakzewski, PhD, BOccThy

- VISUOMOTOR INTEGRATION NETWORK CONNECTIVITY IN INDIVIDUALS WITH PERIVENTRICULAR LEUKOMALACIA

Corinna M. Bauer, PhD; Christos Papadelis, PhD

- A PARENTAL PERSPECTIVE ON TRANSITION FROM NICU TO EARLY INTERVENTION

Thubi H. Kolobe, PhD; Elizabeth A. Koldoff, PhD; Barbara J. Holtzclaw, PhD

- EEG AS A MEASURE OF MOTOR PERFORMANCE IN INFANTS WITH CEREBRAL PALSY

Thubi H. Kolobe, PhD; Andrew H. Fagg, PhD; David P. Miller, PhD; Lei Ding, PhD

- THE DISEASE AND ECONOMIC BURDEN ATTRIBUTABLE TO ADULTS WITH CEREBRAL PALSY: A COHORT STUDY OF PRIVATELY-INSURED BENEFICIARIES

Daniel Whitney, PhD; Edward A. Hurvitz, MD; Mark Peterson, PhD

- ASSISTIVE AND REHABILITATIVE EFFECTS OF THE PLAYSKIN LIFT™ EXOSKELETAL GARMENT IN CHILDREN WITH ARTHROGRYPOSIS

Andrea B. Cunha, PhD; Iryna Babik, PhD; Michele A. Lobo, PT, PhD

- GROSS MOTOR FUNCTION LEVELS IN BILATERAL SPASTIC CEREBRAL PALSY FROM 4 TO 25 YEARS OF AGE WITH AND WITHOUT EARLY SELECTIVE DORSAL RHIZOTOMY - A POPULATION BASED STUDY

Annika Lundkvist Josenby, PhD; Ann I. Atriksson-Schmidt, PhD; Lena Westbom, PhD

- CAN KINEMATIC AND KINETIC GAIT INDICATORS PREDICT OUTCOMES FOLLOWING SURGICAL HAMSTRING LENGTHENING?

Micah Garcia, MS; James McCarthy, MD; Jason Long, PhD

- TRANSCRANIAL MAGNETIC STIMULATION: ASSESSMENTS OF CORTICAL EXCITABILITY IN INFANTS WITH PERINATAL STROKE

Jesse Kowalski, DPT; Samuel Nemanich, PhD, MSCI; Tanjila Nawshin, MBBS; Mo Chen, PhD; Colleen Peyton, DPT; Marie Hickey, MD; Raghavendra Rao, MD; Michael Georgieff, MD; Bernadette Gillick, PhD, MSPT, PT

- "I WOULD LIKE FOR MY CHILD TO BE HAPPY WITH HIS LIFE": PARENTAL EXPERIENCES FOR THEIR CHILDREN WITH CONGENITAL ZIKA SYNDROME

Klayton Galante Sousa, PhD; Pedro Farias, MS; Egmar Longo, PhD; Mercês Silva, PhD; Ana Severo, PhD; Silvana Pereira, PhD

- RELATIONSHIP OF ADHD-SYMPTOMS AND MOTOR SKILLS IN CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER

Kamaldeep K. Gill, OT; Anisha Jethnani, MOT; Jasmine Yu, MOT; Jill G. Zwicker, PhD, OT

- NUTRITIONAL STATUS OF CHILDREN WITH CEREBRAL PALSY IN REMOTE SUMBA ISLAND OF INDONESIA: A COMMUNITY-BASED KEY INFORMANTS STUDY

Israt Jahan, MPH; Mohammad Muhit, PhD; Denny Hardianto, MS; Tasneem Karim, MBBS, MPH; Mahmudul Hassan Al Imam, MPH; Manik Chandra Das, MBBS; Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM

- CADAVERIC STUDY ON THE VARIATIONS IN THE NORMAL COURSE OF MOTOR BRANCHES OF SCIATIC AND TIBIAL NERVES (SUPPLYING HIP, KNEE AND ANKLE JOINT MUSCLES)

Jujjuvarapu Dheeraj, MCh; Aniruddh K. Purohit, Mch; Ananth Egoor, Mch

- COACHES FIDELITY IN DELIVERING A NOVEL COACHING INTERVENTION FOR PARENTS OF CHILDREN WITH SUSPECTED DEVELOPMENTAL DELAY

Tatiana Ovgourtsova, PhD; Annette Majnemer, PhD, OT; Brown Amelie, LCSW; Maureen O'Donnell, MD MSc FRCPC

- FAMILY-CENTERED CARE IN EARLY INTERVENTION (EI): ASSOCIATIONS WITH CHILD CHARACTERISTICS AND EI SERVICE USE INTENSITY

Beth M. McManus, PhD; Zachary Richardson, MA, PhD(c); Margaret Schenkman, PhD; Natalie Murphy, MPH; Elaine Morrato, DrPH

- "IT SHOULD HAVE BEEN GIVEN SOONER, AND WE SHOULDN'T HAVE TO FIGHT FOR IT": UNDERSTANDING THE FAMILY EXPERIENCE OF THE DIAGNOSIS OF CEREBRAL PALSY

Sian A. Williams, PhD; N. Susan Stott, PhD; Nichola Wilson, PhD; Alexandra Sorhage, PGDIPHI; Malcolm Battin, FRACP; Amy R. Hogan, BAPsych; Anna Mackey, PhD

- LONG TERM RESULTS OF MULTI-LEVEL SURGERY FOR FLEXED KNEE GAIT IN SPASTIC DIPLEGIA: THE CRITICAL IMPORTANCE OF PRIOR SURGERY.

Pam Thomason, B.Phty, M.Physio; Julie Tavernier, BS; Morgan Sangeux, PhD; Kerr Graham, MD, MD, FRCS (Ed), FRACS

- EXTRACELLULAR MATRIX IN MUSCLE FROM CHILDREN WITH CEREBRAL PALSY SHOWS DYSREGULATION OF MATRIX COMPONENTS

Richard L. Lieber, PhD; Raji Pichika, PhD; Lucas Smith, PhD; Hank Chambers, MD

- THE BEST COMBINATION OF DIAGNOSTIC TESTS FOR CEREBRAL PALSY IN HIGH RISK INFANTS: A CASE CONTROL STUDY

Cathy Morgan, PhD, BAppSc; Andrea Guzzetta, MD; Domenico Romeo, PhD; Olena Chorna, MM, CCRP; Claire Galea, MEpi; B.Ed; Sabrina Del Secco; Iona Novak, PhD

- STEERING TOWARDS COLLABORATIVE ASSESSMENT: A QUALITATIVE STUDY OF PARENTS EXPERIENCES OF EVIDENCE-BASED ASSESSMENT FOR THEIR CHILD WITH CEREBRAL PALSY.

Bridget E. O'Connor, BAppSci (Physio); Claire Kerr, BSc (Hons) Physio, PhD; Nora Shields, PhD; Brooke Adair, B.Physio, PhD; Christine Imms, PhD

- NATIONAL COLLABORATION FOR SELECTIVE DORSAL RHIZOTOMY (SDR) OUTCOMES IN AUSTRALIA

Jenny Lewis, PT; Simon P. Paget, MA (Cantab), MBBS MRCPCH(UK), FAFRM, FRACP; Natasha Bear, MSc; Felicity Baker, PT; Olivia Lee, MBBS, FRACP; Kim McLennan, MBBS, FRACP, FAFRM; Emma Richardson, MBBS; Adam Scheinberg, MBBS, FRACP, FAFRM, MMED; Nadine Smith, PT; Pam Thomason, B.Phty, M.Physio; Andrew Tidemann, MBBS, FRACP; Meredith Wynter, PT; Adam Fowler, MBBS, FRACP

- ESTABLISHED INDICATIONS, BENEFITS AND SHORTCOMINGS OF LOWER LIMB ORTHOSES IN THE MANAGEMENT OF CHILDREN WITH CEREBRAL PALSY: CLINICAL PRACTICE GUIDELINES

Phillip M. Stevens, MEd, CPO; Sally A. DiBello, MPO, CPO

- IDENTIFICATION OF COMMON BIMANUAL PERFORMANCE GOALS OF CHILDREN PARTICIPATING IN CONSTRAINT INDUCED MOVEMENT THERAPY IN A GROUP SETTING

Angela Shierk, QTR, PhD; Heather Roberts, PhD, OT; Nancy J. Clegg, PhD; Deborah A. Baldwin, BS; Linsley Smith, RN; Mauricio Delgado, MD

- EVALUATING PARTICIPATION IN CHILDREN WITH CEREBRAL PALSY: USING A WINDOW OF THE INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY AND HEALTH

Mintaze Kerem Günel, PhD; Ayşe Numanoğlu Akbaş, PhD; Özge Çankaya, MSc; Kübra Seyhan, MSc; Cemil Özal, PhD; Sefa Üneş, MSc; Merve Tunçdemir, MSc; Hilal Özcebe, PhD; Umut Ece Arslan, PhD

- RESPONSIVENESS AND MINIMAL CLINICALLY IMPORTANT DIFFERENCE OF THE CHALLENGE FOR CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY

Ricardo Rodrigues de Sousa, Jr., MSc Student; Ana Paula Bensemann Gontijo, PhD; Amanda Riani Martins Silva, PT Student; Marisa C. Mancini, PhD

- EFFECT OF STRUCTURED NEONATAL PHYSICAL THERAPY (SNP) INTERVENTION ON NEUROBEHAVIOR AND QUALITY OF GENERAL MOVEMENTS IN MODERATE TO LATE PRETERM (MLP) INFANTS

Sonia Khurana, PhD; Bhamini K. Rao, PhD; Senthil K. D, PhD; Leslie E. Lewis, MBBS,DCH,DNB; Asha Kamath, PhD; Stacey C. Dusing, PhD

- BIOFEEDBACK ASSISTED RELAXATION TRAINING FOR THE MANAGEMENT OF CHRONIC PAIN IN CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY.

Katarina Ostojic, Bsci MPH; Angela M. Morrow, MRCPI FRACP FAFRM PhD; Simon P. Paget, MA (Cantab), MBBS MRCPCH(UK), FAFRM, FRACP

- EFFECTIVENESS OF THE PONSETI METHOD IN TREATING FOOT DEFORMITIES IN CHILDREN WITH ARTHROGRYPOSIS

Jose J. Salazar Torres, PhD; Chris Church, MPT; Nancy Lennon, MS, PT; John Henley, PhD; Daveda Taylor, DPT; Maureen Donohoe, PT, DPT, PCS; Louise Reid Nichols, MD

- FEASIBILITY, VALIDITY, AND RELIABILITY OF A NOVEL MEANS-END PROBLEM SOLVING ASSESSMENT TOOL (MEPSAT)

Andrea B. Cunha, PhD; Iryna Babik, PhD; Natalie A. Koziol, PhD; Jayden Nord, PhD; Lin-Ya Hsu, PhD; Regina T. Harbourne, PhD, PT; James A. Bovaird, PhD; Stacey C. Dusing, PhD; Sarah W. McCoy, PhD; Michele A. Lobo, PT, PhD

- RELATIONSHIPS BETWEEN MUSCLE STRENGTH AND FUNCTIONAL MOBILITY IN ADULTS WITH CP; IMPLICATIONS FOR STRENGTH TRAINING PROGRAMS

Maaïke M. Eken, PhD; Nelleke Langerak, PhD; Susanne Koschnick, MSc; Jacques du Toit, MBChB(Stell),FC Orth(SA), MScClinEpi; Robert Lamberts, Prof.

- INTRAOPERATIVE HIP ARTHROGRAM CHANGES SURGICAL DECISION-MAKING DURING HIP RECONSTRUCTION PROCEDURES IN CHILDREN WITH CEREBRAL PALSY

Colyn Watkins, MD; Laura A. Lins, MPH, ATC; Kemble Wang, MD; Travis Matheney, MD; Kerr Graham, MD, MD, FRCS (Ed), FRACS; Brian Snyder, MD, PhD; Benjamin J. Shore, MD, MPH, FRCSC

- TESTING NEW UK STANDARDS FOR PUBLIC INVOLVEMENT IN RESEARCH: THE EXPERIENCE OF THE NORTHERN IRELAND CEREBRAL PALSY REGISTER

Claire Kerr, BSc (Hons) Physio, PhD; Karen McConnell, BSc (Hons), PhD; Helen Savage; Oliver Perra, BSc (Hons), PhD

- DEVELOPING AN ICF CORE SET FOR ADULTS WITH CEREBRAL PALSY: WHICH AREAS OF FUNCTIONING DO THESE ADULTS CONSIDER IMPORTANT?

Suzie Noten, MSc; Lorenzo Troenosemito, BSc; Melissa Selb, MSc; Vincent de Groot, MD PhD; Manin Konijnenbelt, Drs; Daniëlle M. Driessen, MD; Agnies M. van Eeghen, MD, PhD; Henk J. Stam, MD PhD; Rita van den Berg-Emons, PhD; Sander R. Hilberink, PhD; Marij E. Roebroek, PhD

- DEVELOPING AN ICF CORE SET FOR ADULTS WITH CEREBRAL PALSY: AN INTERNATIONAL EXPERT SURVEY.

Chonnanid Limsakul, MD; Suzie Noten, MSc; Wilma M. van der Slot, MD PhD; Henk J. Stam, MD PhD; Melissa Selb, MSc; Marij E. Roebroek, PhD

- AN EXPLORATION OF THE SHARED EXPERIENCES AND PERSONAL IMPACT OF A PROGRESSIVE RESISTANCE TRAINING PROGRAMME, FOR YOUNG PEOPLE WITH CEREBRAL PALSY: A QUALITATIVE ANALYSIS

Grace Lavelle, PhD; Cherry Kilbride, PhD; Marika Noorkoiv, PhD; Nicola Theis, PhD; Tom Korff, PhD; Adam Shortland, PhD; Wendy Levin, PT; Jennifer Ryan, PhD

- POSTURAL STEADINESS, BALANCE REACTIONS, AND PHYSICAL ACTIVITY IN SCHOOL-AGE CHILDREN WITH AND WITHOUT CEREBRAL PALSY

Jeremy R. Crenshaw, PhD; James B. Tracy, MS; Drew Petersen, MS; Jamie Pigman, PhD; Benjamin Conner, MS; Henry G. Wright, DPT; Freeman Miller, MD; Christopher M. Modlesky, PhD; Curtis L. Johnson, PhD

- PAIN REPORTED BY PEOPLE WITH CEREBRAL PALSY AND FAMILIES: ESPACE, A NATIONAL SURVEY ON MOTOR REHABILITATION IN FRANCE.

Javier de la Cruz, MD; Gwenaël Cornec, MS; Gaëlle Drewnowski; Julia Boivin; Audrey Fontaine; Isabelle Desguerre, MD, PhD; Vincent Gautheron; Yann Le Lay, PT; Philippe Toullet, PT; Anne-Catherine Guenier; Eric Berard, MD; Maria Bodoria; Sylvain Brochard, MD

- ADAPTED SPORT AND RECREATION SUMMER CAMP; PERSPECTIVES OF PARENTS REGARDING IMPACT ON PSYCHOSOCIAL OUTCOMES AND PHYSICAL ACTIVITY PARTICIPATION

Elysa F. Sandron, BS; Carolyn A. Emery; Meghan H. McDonough, PhD; Elizabeth G. Condliffe, PhD, MD; Laura K. Brunton, PT, PhD; David Legg, PhD

- LACK OF SPONTANEOUS REACH AND GRASP IN INFANTS 8 - 24 MONTHS WITH HEMIPARETIC CEREBRAL PALSY RESULTS IN CLEAR ASYMMETRY.

Thais Cabral, PhD; Tanya Tripathi, PhD; Gardenia Barbosa, PhD; Meredith Schram, BA; Amy Darragh, PhD; Sharon Ramey, PhD; Stephanie C. Deluca, PhD; Jill C. Heathcock, MPT, PhD

- BONE DENSITY AND HARDWARE FAILURE IN PEDIATRICS

Amanda T. Whitaker, MD; Mallory Rowan, BS; Garey Noritz, MD; Althea Perez, BA

- TITLE: A DESCRIPTIVE STUDY OF SURGICAL INTERVENTIONS FOR CEREBRAL PALSY PATIENTS IN THE CEREBRAL PALSY RESEARCH NETWORK REGISTRY

Jeffrey R. Leonard, MD; Garey Noritz, MD; Robert J. Bollo, MD; Brandon G. Rocque, MD; Samuel R. Browd, MD, Ph.D; Jeffrey S. Raskin, MD; Paul Gross, BA

- DIFFERENCES BETWEEN ADULTS AND CHILDREN IN CEREBRAL PALSY PREVALENCE, SUBTYPES AND ASSOCIATED IMPAIRMENTS. A POPULATION-BASED STUDY.

Ulrica Jonsson, MD; Kate Himmelmann, MD, PhD; Meta Nyström-Eek, PhD

- THE EFFECT OF FLEXIBLE THORACOLUMBAR BRACE ON SPINAL ALIGNMENT IN SUBJECTS WITH SCOLIOSIS IN CEREBRAL PALSY

Joon Young Jang, MD; Yulhyun Park, MD; Seungeun Lee, PT, BSc; Ju Seok Ryu, MD

- VALIDATION OF AN INSTRUMENT FOR DEVELOPMENTAL PROBLEMS SCREENING IN CHILDREN UNDER FIVE YEARS IN URUGUAY

Maria Mercedes Perez-Roca, PhD; Anabella Santoro Ferrero, PhD; Gustavo Giachetto Larraz, PhD; Franklin Fernando Massa Mandagaran, Stat

- SOCIOEMOTIONAL SUPPORT AND ADJUSTMENT DURING TRANSITION FOR YOUTH WITH SPINAL CORD INJURY

Kyle Deane, PhD; Lara Anderson, B.S.; Eric Peist, M.A.; Kathy Zebracki, PhD

- INCREASING EARLY INTERVENTION REFERRALS THROUGH PEDIATRIC RESIDENT EDUCATION

Carl W. Dowden, MD; Laura J. Hobart-Porter, DO, FAAPMR

- THE OBSERVATIONAL GAIT SCALE IS HIGHLY ASSOCIATED WITH THE GROSS MOTOR FUNCTION CLASSIFICATION SYSTEM IN CHILDREN WITH CEREBRAL PALSY

Karina A. Zapata, PT, DPT, PhD; Mauricio Delgado, MD; Chan-Hee Jo, PhD; Charter Rushing, DScPT

- ACTIVE AND PASSIVE GOAL ACHIEVEMENT AFTER SINGLE-EVENT MULTILEVEL CHEMONEUROLYSIS IN ADULTS WITH CEREBRAL PALSY

Sangjee Lee, MS; Amber Newell, CPNP, OTR/L; Heakyung Kim, MD

- RANGE OF MOTION OF CHILDREN WITH CONGENITAL ZIKA, IPESQ COHORT

Renan A. Silva, Jr., MD; Gabriela Gama, PhD; Agda Santos, MD; Patricia Juliana da Silva, PT; Jousilene Tavares, PhD; Thalles Amorim, PT; Adriana Melo, PhD; Melania Maria Ramos Amorim, PhD

- DEVELOPMENT OF A NEW MEASURE OF BALANCE CONFIDENCE FOR YOUTH WITH CEREBRAL PALSY: THE FEELINGS ABOUT BALANCE CEREBRAL PALSY QUESTIONNAIRE

Megan M. Towns, MSc; Kelly Arbour-Nicitopoulos, PhD; Sally Lindsay, PhD; Virginia Wright, BSc (PT), MSc, PhD

- A MANAGEMENT PROTOCOL FOR HIP MIGRATION AND CONTRALATERAL CONTAINED HIP IN NON-AMBULATORY CHILDREN WITH SPASTIC CEREBRAL PALSY. A PROSPECTIVE CASE SERIES STUDY.

Ahmad S. Aly, Sr., MD; Kariem Tarek, MSc

- THE AUTHENTICITY OF USING VISUAL DATA TO REPRESENT THE EMOTIONAL WELL-BEING OF CHILDREN AND YOUNG PEOPLE WITH CEREBRAL PALSY.

Dawn M. Pickering, MSc, MCSP, PGCME

- COMPARISON OF PATIENT-REPORTED OUTCOMES MEASUREMENT INFORMATION SYSTEM (PROMIS) SCORES FOR CHILDREN WITH CEREBRAL PALSY TO A TYPICALLY DEVELOPING COHORT: EFFECT OF AGE AND GMFCS

Madeleine Ball, BS; Vedant A. Kulkarni, MD; Nancy Abarca, MPH; Donald Kephart, MD; Laura Lewallen, MD; Anita Bagley, PhD, MPH; Jon R. Davids, MD

- NEURAXIAL ANESTHESIA FOR HIP SURGERY IN CHILDREN WITH CEREBRAL PALSY WITH PRE-EXISTING INTRA-THECAL BACLOFEN PUMPS: INDWELLING EPIDURAL CATHETER AND A NOVEL PUMP-DELIVERED SPINAL ANESTHETIC METHOD ARE EFFECTIVE

Donald Kephart, MD; Vedant A. Kulkarni, MD; Madeleine Ball, BS; Alisha Othieno, BA; Sundeep Tumber, DO; Jon R. Davids, MD

- SKELETAL AGE ASSESSMENT USING THE CALCANEAL APOPHYSIS IN CHILDREN WITH CEREBRAL PALSY

Donald Kephart, MD; Vedant A. Kulkarni, MD; S. Reed Laing, BA; Vincent Tang, BS; Anita Bagley, PhD, MPH; Jon R. Davids, MD

- EVALUATION OF A MAGIC CAMP FOR CHILDREN WITH SPASTIC HEMIPLEGIC CEREBRAL PALSY

Hon Yuen, PhD; Gavin Jenkins, PhD

- MUSCLE TONE OF CHILDREN WITH CONGENITAL ZIKA- IPESQ COHORT

Gabriela Gama, PhD; Janiele Tavares, PT; Thalles Amorim, PT; Emanuela Barros, PT; Agda Santos, MD; Layane Carvalho, PhD; Jousilene Tavares, PhD; Adriana Melo, PhD

- PERCEPTION OF ADOLESCENTS WITH CEREBRAL PALSY OF THE EFFECTS OF VIDEO GAME THERAPY IN THEIR FUNCTIONALITY

Paula S. Chagas, PhD; Elisa J. Valenzuela; Claudia C. Mármora, PhD; Amanda Paula.; Lais T. Carvalho; Maria Paula S. Ribeiro; Renata M. Rosa; Carolyne Drummond; Jaqueline S. Frônio, PhD

- QUANTITATIVE STRUCTURAL AND DIFFUSION MRI MEASURES FOR AUTOMATED CLINICAL REPORTING IN EARLY PRETERM AND TERM-EQUIVALENT MRI.

Miles L. Seidel, BSE; Kerstin Pannek, PhD; Joanne M. George, PhD; Stephen Rose, PhD; Paul Colditz, PhD, MD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Jurgen Fripp, PhD

- VALIDATING AUTOMATIC SEGMENTATION OF SELECTED DEEP GRAY MATTER AND WHITE MATTER STRUCTURES IN MRI OF PRETERM INFANTS AT EARLY AND TERM-EQUIVALENT AGE.

Miles L. Seidel, BSE; Kerstin Pannek, PhD; Joanne M. George, PhD; Stephen Rose, PhD; Paul Colditz, PhD, MD; Jurgen Fripp, PhD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad

- SEDENTARY BEHAVIOUR PEAKS AT 4-5 YEARS OF AGE IN A LONGITUDINAL, POPULATION-BASED STUDY OF CHILDREN WITH CEREBRAL PALSY FOLLOWED BETWEEN 1.5 AND 12 YEARS

Sarah E. Reedman, PhD, BPhy (Hons); Emily Johnson, BPhy (Hons); Leanne Sakzewski, PhD, BOccThy; Sjaan Gomersall, PhD, BPhysio (Hons); Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Stewart G. Trost, PhD

- DEFINING END STAGE GASTROINTESTINAL FAILURE IN PATIENTS WITH NEUROLOGIC IMPAIRMENT

Garey Noritz, MD; Taylor Jersak, MD; Dmitry Tumin, PhD; David Fosselman, MD; Marissa Testa, MS, RDN, CSP, LD; Lisa Humphrey, MD

- CONTENT VALIDITY AND FEASIBILITY OF ACTIVEYOU 1 - A NEW WEB-BASED INSTRUMENT FOR MAPPING ACTIVITY PREFERENCES IN CHILDREN AND ADOLESCENTS WITH DISABILITIES

Lars Kristian Dalen, MS; Tor Erik H. Nyquist, MSc; Astrid Nyquist, PhD

- INVESTIGATING THE IMPACT OF ADAPTED BIKES OR TRIKES ON THE QUALITY OF LIFE OF CHILDREN AND YOUTH WITH NEUROMOTOR DISABILITIES.

Tracy Ferguson, BS; Natasha Hanson, PhD

- HIGH PREVALENCE OF ABNORMAL GENERAL MOVEMENTS IN HOSPITALIZED VERY LOW BIRTHWEIGHT INFANTS

Lisa Letzkus, PhD; Santina Zanelli, MD; Corrie J. Alonzo, M.D.; Elizabeth Connaughton, DPT; Nancy Kelly, DPT; Joseph Michel, BS

- PRELIMINARY RESULTS OF PATIENT-REPORTED OUTCOME MEASURES AMONG ADULTS WITH CEREBRAL PALSY FOLLOWING LATERAL COLUMN LENGTHENING AND MEDIAL COLUMN SLIDING OSTEOTOMY FOR PES PLANOVALGUS DONE IN CHILDHOOD

Christopher Constantino, MD; Karen Kruger, PhD; Joseph Krzak, PhD; Adam Graf, MS; Ann Flanagan, PT, PCS; Haluk Altioik, MD; Peter Smith, MD; Gerald Harris, PhD

- ELECTRONIC PARTICIPATION-FOCUSED CARE PLANNING SUPPORT FOR FAMILIES OF YOUNG CHILDREN RECEIVING REHABILITATION THERAPIES: A PILOT STUDY

Mary A. Khetani, ScD, PhD; Vera C. Kaelin, MSc; Jessica M. Jarvis, PhD; Dana Anaby; Rachel Teplicky, MSc;

- PARENT-REPORTED MOTOR FUNCTION USING PEDI-CAT IS RELATED TO GMFM AND GMFCS FOR CHILDREN WITH CEREBRAL PALSY

Kimberley S. Scott, DPT; Jessica Lewis, PT, DPT; Jill C. Heathcock, MPT, PhD

- LOSING A DIAGNOSIS OF CEREBRAL PALSY: COMPARISON OF CHARACTERISTICS AT AGE 2 BETWEEN EVENTUAL CONFIRMED AND NON-CONFIRMED CEREBRAL PALSY AT AGE 5

Anjellica Chen, MD; Sasha Dyck Holzinger, RN; John Andersen, MD; David Buckley, M.B., Ch.B. Sheffield, F.R.A.C.P. Australia, FRCPC; Darcy L. Fehlings, MD; Adam Kirton, MD MSc FRCPC; Louise Koclas, MD; Nicole Pigeon, MD; Esias Van Rensburg, MD; Ellen Wood, MD; Maryam Oskoui, MDCM, FRCPC, MSc, FAAN; Michael Shevell, MDCM, FRCPC, FCAHS

- INNOVATIVE MULTIDISCIPLINARY INTENSIVE THERAPY PROGRAM RESULTS IN A STRONG IMPACT IN THE LIVES OF CHILDREN WITH NEUROMOTOR DISORDERS

Aimee Wilson, PT, C/NDT, HPSCS; Kirsten Woyte, OTR/L, NTMCTC; James B. Hedgecock, PT, DPT, PCS

- BOTULINUM TOXIN AND CASTING MAY DELAY OR PREVENT SURGERY IN SPASTIC HEMIPLEGIC CEREBRAL PALSY

Stephen T. Gates, MD; Robert Wimberly, MD; Anthony Riccio, MD; Mauricio Delgado, MD; Chan-Hee Jo, PhD

- DEVELOPMENTAL CHARACTERISTICS OF NONMICROCEPHALIC INFANTS BORN TO MOTHERS WITH CONFIRMED OR SUSPECTED ZIKA DIAGNOSIS: A RETROSPECTIVE ANALYSIS IN ST. LUCIA, WEST INDIES.

Keisha T. Lindsay, PhD, CCC-SLP, TSSLD; Kim F. Gardner, MD, MsPH

- IMPACT OF INTRATHECAL BACLOFEN ON GROWTH IN CHILDREN WITH SPASTICITY.

Amy L. Kaye, PhD

- TREADMILL EXERCISE AMELIORATES FOCAL CEREBRAL ISCHEMIA/REPERFUSION-INDUCED NEUROLOGICAL DEFICIT BY PROMOTING DENDRITIC MODIFICATION AND SYNAPTIC PLASTICITY VIA UPREGULATING CAVEOLIN-1/VEGF SIGNALING PATHWAYS

Qingfeng Xie, MS

- THE EFFECT OF FLEXIBLE THORACOLUMBAR BRACE ON SPINAL ALIGNMENT IN PATIENTS WITH NEUROMUSCULAR SCOLIOSIS

Ju Seok Ryu, MD, PhD; Areum Shin, Gyeonggi-do; Yulhyun Park, MD; Joon Young Jang, MD;

- ASSESSING CORRELATION BETWEEN OPENING PRESSURE VALUES DURING INTRATHECAL BACLOFEN TEST DOSE WITH POST-PROCEDURE COMPLICATIONS

Sara Cartwright, MD; Douglas G. Kinnett, MD; Marina Ma, MD; Julie Estenfelder, BSN

- KINEMATIC ANALYSIS OF TRUNK MOVEMENTS DURING REACHING IN PRETERM, VERY-LOW- BIRTH WEIGHT AND FULL-TERM INFANTS

Yuko Nomura, PT; Haruhiko Sato, PhD; Mari Ooka, PhD; Manabu Kemmochi, PhD

- IMPACT OF OCCUPATIONAL THERAPY ON SELF-CARE FOLLOWING SELECTIVE DORSAL RHIZOTOMY

Heather Forst, OTR/L; Kathleen M. Vonderhaar, MD; Tonye Sylvanus, MD; Nanette Aldahondo, MD; Angela Sinner, DO

- STRATEGIES FOR ENGAGING PARENTS AS PARTNERS IN CEREBRAL PALSY RESEARCH: A QUALITATIVE STUDY

Margaret Wallen, PhD; Katie Headrick, BA; Belinda J. Deramore Denver, OT; Marelle Thornton, AO; Amy R. Hogan, BAPsych; Gabrielle Drake, PhD M Soc Pol BSW

- COMPARING QUALITY OF LIFE IN CHILDREN WITH CEREBRAL PALSY VERSUS CHILDREN WITH CEREBRAL PALSY AND AUTISM SPECTRUM DISORDER

Courtney Gilbert, MD; JenFu Cheng, MD; Claire Marchetta, MPH

- FOOT PRESSURE ANALYSIS TO ASSESS SEVERE EQUINOPLANOVALGUS FOOT DEFORMITY CORRECTION USING THE CALCANEAL-CUBOID-CUNEIFORM OSTEOTOMY

Tasos Karakostas, MPT, PhD; Vineeta T. Swaroop, MD; Luciano Dias, MD

- VALIDATION OF THE JAPANESE VERSION OF THE CAREGIVER PRIORITIES AND CHILD HEALTH INDEX OF LIFE WITH DISABILITIES (CPCHILD)

Yoko Matsumoto, PhD; Mariko Yagi, PhD; Kazuhiro Haginoya, MD, PhD; Mika Hirotsune, MD; Mio Nishimura, MD; Yukihiko Kitai, MD; Ryo Tanabe, MD; Koichi Maruyama, MD; Hiroshi Arai, MD; Yoko Kawasaki, MD

- MOTOR DEVELOPMENT OUTCOMES IN PEDIATRIC PATIENTS WITH SOLID TUMORS AFTER CHEMOTHERAPY

Xuan Zhou, MS

- INVESTIGATION ON THE COMPREHENSIVE REHABILITATION OF CHILDREN WITH CEREBRAL PALSY AGED 3-6 IN CHINA BASED ON ICF-CY

Yongli Wang, PhD; Jing Song; Qin Wan, PhD; Zhaoming Huang, PhD

- MEASURING PHYSICAL ACTIVITY DURING FUNCTIONAL TASKS IN AMBULATORY YOUTH WITH CEREBRAL PALSY

Margaret F. O'Neil, PT, PhD, MPH; Maayn Daagan, BS, DPT; Janell Mensinger, PhD; Steven G. Chopski, PhD; Christine Wojciechowicz, BS; Katie Feehan, MPH; Renee Turchi, MD, MPH

- A RANDOMIZED CONTROLLED TRIAL OF HOME-BASED EXERCISE ON MOTOR DEVELOPMENT IN CHILDREN TREATED FOR CONGENITAL HEART DISEASE WITH CATHETERIZATION

Qing Du, PhD; Xuan Zhou, MS

- A PILOT STUDY OF A MINDFULNESS BASED STRESS REDUCTION PROGRAM (MBSR) DELIVERED TO A GROUP OF ADULTS WITH CEREBRAL PALSY (CP) VIA VIDEO CONFERENCING

Helene Høy; Marianne Løvstad, PhD; Jeanette F. Hartveit; Reidun B. Jahnsen, PhD; Sørli Hilde; Tornås Sveinung, PhD; Grethe Månnum, PhD MD

- THE QUALITY OF SLEEP IN CHILDREN WITH CEREBRAL PALSY

Boyoung Hong, MD; Hyecheon Choi, MD; Joon Sung Kim, MD; Seong Hoon Lim, MD

- IDENTIFYING KEY BARRIERS AND FACILITATORS TO USE THE SEGMENTAL ASSESSMENT OF TRUNK CONTROL IN OUTPATIENT PEDIATRIC REHABILITATION

Rachel L. Bican, PT, DPT; Danielle M. Bellows, PT, DHSc, PCS; Catie Christensen, PT, DPT, PCS; Abigail Kremer, PT, DPT; Jill C. Heathcock, MPT, PhD

- FLEXIBLE INTRAMEDULLARY NAILS ARE AN EFFECTIVE TREATMENT FOR FEMORAL SHAFT FRACTURES IN CHILDREN WITH NON-AMBULATORY NEUROMUSCULAR DISORDERS BUT CARRY INCREASED RISK OF EARLY REVISION SURGERY AND ANGULAR DEFORMITIES

Robert M. Kay, MD; Ali Siddiqui, BS; Kenneth D. Illingworth, MD; Oussama Abousamra, MD; Erin Meisel, MD;

- PRE-OPERATIVE NUTRITION ASSESSMENTS DO NOT IMPROVE OUTCOMES IN CEREBRAL PALSY PATIENTS UNDERGOING VARUS DEROTATIONAL OSTEOTOMY

Robert M. Kay, MD; Kyle K. Obana, BA; Bensen B. Fan, MD; Rachel Y. Goldstein, MD; Lindsay M. Andras, MD

- ACCURACY AND REPEATABILITY OF USING SMARTPHONE-BASED SENSORS FOR ORTHOTIC TUNING

Katherine M. Steele, PhD; Brandon Nguyen, BS; Darrin Howell, BS; Nick A. Baicoianu, MS;

- A PRELIMINARY COMPARISON OF SUBJECTIVE HEAT PAIN PERCEPTION IN FEMALES WITH CEREBRAL PALSY WITH AND WITHOUT HISTORY OF SELECTIVE DORSAL RHIZOTOMY AND TYPICALLY DEVELOPING CONTROLS

Lisa Lykken, BS; Kristin Frenn, MPH; Frank Symons, PhD; Chantel Barney, PhD

- LIMITATIONS OF THE BENEFIT OF CORTICOSTEROID IN DUCHENNE MUSCULAR DYSTROPHY: AN EFFECTIVENESS TRIAL

Michael D. Sussman, MD; Cole R. Hilton, BS; Susan Sienko, PhD; Camila B. De Mattos, MD; Charles D'Amato

- IDIOPATHIC TOE WALKING, WHAT IS THE STATE OF THE KNOWLEDGE: A SCOPING REVIEW

Amanda Bunn, MBChB, BHScPT; Nichola Wilson, PhD; N. Susan Stott, MBChB PhD FRACS; Sian A. Williams, PhD

- DESCRIBING CHANGES IN SUBJECTIVE BODILY PAIN INTENSITY IN PEOPLE WITH CEREBRAL PALSY: A SYSTEMATIC REVIEW

Heather M. Shearer, MSc; Pierre Côté, PhD; Sheilah Hogg-Johnson, PhD; Patricia McKeever, PhD; Darcy L. Fehlings, MD

- CAREGIVER'S AWARENESS OF FUNCTIONAL DIFFICULTIES FACED BY CHILDREN WITH CEREBRAL PALSY IN SRI LANKA

Shanika N. Nanayakkara, BS; Sumudu P. Walpola, BS; Nishamini Elapatha, BS; Dinesh Gunathilake, BS; Rasanga Dewara Handige, BS

- DAILY LIVING TRANSACTIONS. HOW CHILDREN WITH CEREBRAL PALSY WHO ARE NON-AMBULANT AND THEIR CARERS WORK TOGETHER TO COMPLETE DAILY ROUTINES.

Robyn Heesh; Susan Greaves, PhD; Loretta Sheppard, DClSci; Christine Imms, PhD

- A MATHEMATICAL MODEL TO ENHANCE SPEED OF COMMUNICATION AND OPTIMIZE THE DESIGN OF AUGMENTATIVE AND ALTERNATIVE COMMUNICATION DEVICES IN CHILDREN WITH DYSKINETIC CEREBRAL PALSY

Matteo Bertuccio, Ph.; Terence D. Sanger, MD, PhD

- PREVALENCE OF MUSCULOSKELETAL DISORDERS AND UTILIZATION OF REHABILITATION SERVICES IN ADULTS WITH CEREBRAL PALSY: ANALYSIS OF NATIONAL MEDICARE CLAIMS DATA

Deborah E. Thorpe, PT, PhD; Mary E. Gannotti, PhD; Chin-Hua Wang, PhD; Janet Freburger, PT, PhD

- TESTING NOVEL MEASURES OF COMMUNITY INTEGRATION IN ADULTS WITH CEREBRAL PALSY IN THE UNITED STATES AND AUSTRALIA.

Deborah E. Thorpe, PT, PhD; Nancy Bagatell, PhD, OTR/L; Richard A. Faldowski, PhD; Ilana Levin, PT, DPT; Amanda Carroll, MS OTR/L; Stewart G. Trost, PhD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad; Lee Barber, PhD, BAppSc (PT); Denise S. Brookes, B.App.Sc., M.App.Sc, PhD; Dara V. Chan, ScD, CRC

- NON-AMBULATORY CHILDREN AND YOUNG PEOPLE WITH CEREBRAL PALSY; DIFFERENT EXERCISE EFFECTS FROM STATIC VERSUS DYNAMIC STANDING

Åsa Tornberg, PhD; Katarina Lauruschkus, PhD

- NON-AMBULATORY CHILDREN WITH CEREBRAL PALSY; EFFECTS ON PASSIVE RANGE OF MOTION AND SPASTICITY IN THE HIP AFTER FOUR MONTH OF STATIC COMPARED TO DYNAMIC STANDING EXERCISE

Katarina Lauruschkus, PhD; Åsa Tornberg, PhD

- FAMILY CENTERED, EARLY INTERVENTION APPROACH: SRI LANKAN PROFESSIONALS PERSPECTIVE.

Yvonne Weerasinghe, BS; Samanmali P. Sumanasena, MD

- PHYSICAL AND ENVIRONMENTAL BARRIERS TO MOBILITY AND PARTICIPATION IN CHILDREN WITH MEDICAL COMPLEXITY

Laura F. Black, MD; Carolyn C. Foster, MD; Sara Shaunfield, PhD; Patricia H. Zavos, MPH; Deborah Gaebler-Spira, MD, FRCP

- TRANSITIONING CHILDREN FROM NICU VENTILATORS TO HOME VENTILATORS VIA A PEDIATRIC LONG TERM ACUTE CARE UNIT: A NEW PATHWAY FROM NICU TO HOME

Kilby Mann, MD; Christine Hartling, MS; Ric Dean, BA; Jennifer Brinton, MD; Nancy A. Murphy, MD

- DESIGNING AND IMPLEMENTING SHARED PLANS OF CARE FOR CHILDREN WITH MEDICAL COMPLEXITY IN ONE COMPLEX CARE PROGRAM

Natalie J. Tedford, MD; Mary L. Ehlenbach, MD

- COMPARISON OF FREQUENCY OF SURGERIES AND BOTULINUM TOXIN INJECTIONS IN CHILDREN WITH CEREBRAL PALSY BETWEEN TWO COUNTRIES

Ira F. Jeglinsky, PhD; Reidun Jahnsen, PhD; Ann I. Alriksson-Schmidt, PhD; Gunvor L. Klevberg, PhD; Sonja Elkjær, MS; Matti Ahonen, MD, PhD

- INFLUENCE OF VIRTUAL ENVIRONMENT COMPLEXITY ON MOTOR LEARNING IN TYPICALLY DEVELOPING CHILDREN AND CHILDREN WITH CEREBRAL PALSY

Danielle E. Levac, PhD; Morgan Taylor; Brennan Payne, PhD; Nathan Ward, PhD

- EFFECTS OF A COGNITIVE DUAL TASK ON POSTURAL CONTROL DURING SIT-TO-STAND MOVEMENT IN CHILDREN WITH CEREBRAL PALSY

Camila R. Gâmbaro Lima, MPT; Silvia Leticia Pavão, DPT; Ana Carolina de Campos, PhD; Nelci Adriana Cicuto Ferreira Rocha, PhD

- EFFECT OF ROBOT-ASSISTED GAIT TRAINING IN CHILDREN WITH CEREBRAL PALSY

Shin-Seung Yang, MD; Sehi Kweon, MS; Lihua Jln, MS; Min Kyun Sohn, MS

- CONTRALATERAL DIFFERENCES IN DISTAL FEMUR BONE DENSITY: COMPARING CHILDREN WITH AND WITHOUT CP.

Heidi H. Kecskemethy, MS Ed, RDN, CSP, CBDT; Luke Lawrence, BS; H. Theodore Harcke, Jr., MD; Steven Bachrach, MD;

- BILATERAL CONNECTIVITY IN CHILDREN WITH UNILATERAL BRAIN INJURY: IMPLICATIONS FOR UPPER-EXTREMITY FUNCTION

Claudio L. Ferre, PhD; Chin Karen, MA; Andrew Gordon, PhD; Kathleen Friel, PhD

- A PILOT STUDY OF GABAPENTIN FOR MANAGING PAIN IN CHILDREN WITH DYSTONIC CEREBRAL PALSY

Adrienne Harvey, PhD; Kirsty Stewart, PhD; Giuliana C. Antolovich, BSc, PhD, MBBS, FRACP; Mary-Clare Waugh, MBBS, FRACP, FAFRM; Lisa Copeland, MBBS, FAFRM, FRACP; Megan Thorley, OT; James Rice, MBBS; Felicity Baker, PT

- CHARACTERISTICS AND TREATMENT OF CHILDREN WITH CEREBRAL PALSY IN A STATE IN NORTHERN OF MEXICO: A 8 YEARS EXPERIENCE

Dayna Gama, MS; Elsa M. Perez, MD; Juan C. Peña, MD;

- CONSTRUCTION OF COMPREHENSIVE REHABILITATION MODEL FOR CHILDREN WITH CEREBRAL PALSY AGED 3-6 IN CHINA BASED ON ICF-CY

Lu Hongyun, PhD; Yongli Wang, PhD; Jing Song; Huang Zhaoming, PhD; Liu Qiaoyun, MA

- ADOLESCENTS WITH CEREBRAL PALSY THAT HAVE BDNF VAL66MET POLYMORPHISM DISPLAY SUPPRESSED SOMATOSENSORY CORTICAL OSCILLATIONS

Hannah R. Bergwell, BS, BA; Mike Trevarrow, BS; Shelley D Smith, PhD; Jennifer N. Sanmann, PhD; Tony W. Wilson, PhD; Max Kurz, PhD

- INFLUENCING FACTORS ASSOCIATED WITH SPOKEN LANGUAGE COMPREHENSION IN CHILDREN WITH CP - A SYSTEMATIC REVIEW

Emma Vaillant, MA; Johanna J. Geytenbeek, PhD; Elise P. Jansma, MSc; Kim J. Oostrom, PhD; R. Jeroen Vermeulen, MD PhD; Annemieke I. Buizer, MD PhD

- ABOBOTULINUMTOXINA, ONABOTULINUMTOXINA AND INCOBOTULINUMTOXINA NEUROTOXIN CONTENT AND ACTIVITY: POTENTIAL IMPLICATIONS FOR DURATION OF EFFICACY IN PEDIATRIC PATIENTS

Keith Foster, PhD; Malgorzata Field, MSc; Andrew Splevins, PhD; Marcel van der Schans, PhD; Jan Langenberg, PhD; Daan Noort, PhD; Philippe Picaut, PharmD

- COMPLICATIONS FOLLOWING SPINAL FUSION FOR SCOLIOSIS IN CHILDREN WITH CEREBRAL PALSY

Annabel Dekker, MBChB; Haemish Crawford, MBChB, FRACS; John Ferguson, MBChB, FRACS; Antony Field, MBChB, FRACS; Michael Barnes, MBChB FRACS; N. Susan Stott, MBChB PhD FRACS

- INTER AND INTRA OBSERVER RELIABILITY OF EDINBURGH VISUAL GAIT SCORE IN AMBULANT CHILDREN WITH CEREBRAL PALSY

Nabila Khan, MD; Soubhik Kumar Saha, MBBS; Abhay Gahukamble, MD; Thomas Palocaren, MD

- MODELING PERSPECTIVE AND MEDIA FOR SEQUENCE ACTION IMITATION OF CHILDREN WITH AUTISM SPECTRUM DISORDER

Sixia Mo, MS

- INCREASED INSIGHT INTO CHILDREN WITH DYSKINETIC CEREBRAL PALSY BY SYSTEMATIC MOVEMENT DISORDER EVALUATION INCLUDING EMG ASSESSMENT

Jakob Lorentzen, PhD; Alfred Peter Born, Dr. MD, PhD; Christian Svane, MSc; Christian Forman, MSc; Bjarne Laursen, PhD; Annika Reynberg Langkilde, Dr. MD, PhD; Peter Uldall, Dr. MD. PhD; Christina Engel Hoei-Hansen, Dr. MD. PhD

- BACKYARD SWING TO IMPROVE TRUNK CONTROL AND GAIT SPEED IN CHILDREN WITH CEREBRAL PALSY: A PILOT STUDY

John P. Phillips, MD; Buddhika Senevirathne, PT; Priyanwada Wijesinghe, PT; Apsara Premathilake, PT; Thilini Kaushalya, PT; Mohomad Farshan, PT; Jagath Munasinghe, MBBS; Gemunu Hewawitharana, MBBS

- ADAPTATION OF SCALES IN FUNCTIONAL EVALUATION OF CHILDREN WITH BRACHIAL PLEXUS PALSY

Müberra Tanriverdi, PhD; Zeynep Hosbay, PhD; Safiye Ozkan, PhD; Atakan Aydın, MD

- FEASIBILITY OF A HOME-BASED ACTION OBSERVATION TRAINING FOR CHILDREN WITH UNILATERAL CEREBRAL PALSY: AN EXPLORATIVE STUDY

Elena Beani, PT, PhD; Valentina Menici, PT; Adriano Ferrari, MD; Francesca Cecchi, Eng, PhD; Irene Mannari, Eng; Giovanni Cioni, MD; Giuseppina Sgandurra, MD, PhD

- A PORTABLE INSTRUMENTED SHOE USING A RECURRENT NEURAL NETWORK CLASSIFIER TO MEASURE GAIT SEGMENTATION IN CHILDREN WITH UNILATERAL SPASTIC CEREBRAL PALSY, A VALIDATION STUDY.

Maxime Robert, PhD; Antonio Prado, MSc; Xiya Cao, MSc; Joseph Dutkowsky, MD; Andrew Gordon, PhD; Sunil Agrawal, PhD

- CLINICAL CHARACTERISTICS OF CHILDREN WITH CORTICAL VISUAL IMPAIRMENT: A DESCRIPTIVE STUDY FROM SRI LANKA.

Dilini V. Vipulaguna, MD; Thilini Madushika, BSc; Antony Jacintha, MBBS; Samanmali P. Sumanasena, MD

- SELECTIVE MOTOR FASICULOTOMY AS AN ADJUNCT IN THE MANAGEMENT OF CEREBRAL PALSY CHILDREN WITH LOWER LIMB SPASTICITY

Aniruddh k. Purohit, Sr., MD; Pavan Kumar Rathna Sri Y, MD

- COMPARISON OF CLINICAL PARAMETERS AND 3D GAIT KINEMATICS OF PELVIS, HIP AND KNEE IN CROUCH GAIT IN CEREBRAL PALSY

Chasana Rathod, MD; Manasi Raut, MPT; Prasanna Naik, PT; Taral Nagda, MD

- IS THERE A RELATION BETWEEN SENSORY PROCESSING AND GAIT VARIABLES IN CHILDREN WITH CEREBRAL PALSY?

Carolina Corsi, PT; Mariana Santos, PhD; Ana Carolina de Campos, PhD; Nelci Adriana Cicuto Ferreira Rocha, PhD

- EXPLORATORY LEARNING TO ENCOURAGE SELECTIVE LEG MOVEMENT IN INFANTS BORN FULL-TERM AND VERY PRETERM

Jeong-Ah Kim, MS; Barbara Sargent, PT, PhD; Linda Fetters, PT, PhD

- BEYOND THE EYE: CORTICAL DIFFERENCES IN PRIMARY VISUAL PROCESSING IN CHILDREN WITH CEREBRAL PALSY

Jacy R. VerMaas, MA; James E. Gehringer, B.S.; Rashelle Hoffman, DPT; Michael P. Trevarrow, BS; Tony Wilson, PhD; Max Kurz, PhD

- REACHING, GROSS MOTOR, FINE MOTOR, AND COGNITIVE FUNCTIONING IN INFANTS WITH CEREBRAL PALSY GMFCS III-V LEVELS

Gardenia O. Barbosa, PhD; Thais Cabral, PhD; Tanya Tripathi, PhD; Jill C. Heathcock, MPT, PhD

- BASELINE CHARACTERISTICS OF INDIVIDUALS WITH CORTICAL VISUAL IMPAIRMENT OF PEDIATRIC ONSET: AN INITIAL ANALYSIS OF RESULTS OF A LONGITUDINAL STUDY

Andres Jimenez Gomez, FAAP; Kristen Fisher, DO; Veeral Shah, MD PhD

- THE IMPLEMENTATION OF A HEALTH SURVEILLANCE CLINIC FOR CHILDREN WITH DOWN SYNDROME

Niamh C. Lagan, MD; Fiona Mc Grane, MSC; Dean Huggard, MD; Joanne Balfe, MD; Eleanor Molloy, PhD

- CAN RECTUS FEMORIS MODELLING BE USEFUL IN PREDICTING OUTCOMES OF DISTAL RECTUS FEMORIS TRANSFER IN CHILDREN WITH CEREBRAL PALSY? A CASE SERIES

Tishya Wren, PhD; Kyle Chadwick, MS; Susan Rethlefsen, DPT; Nicole Mueske, MS; Robert M. Kay, MD;

- THE EFFECT OF LOW BACK PAIN ON QUALITY OF LIFE IN DISABLED CHILDREN MOTHERS

İrem KURT, MSc; Müberra Tanriverdi, PhD; Ömer Ötegen, MSc

- REACHING FREQUENCY INCREASES WITH AGE YET PRELIMINARY EVIDENCE SUGGESTS SHORTER, LESS EFFICIENT MOVEMENTS FOR INFANTS WITH NEONATAL STROKE AND CP IN THE FIRST 6 MONTHS OF LIFE.

Julia Mazzarella, DPT; Thais Cabral, PhD; Jill C. Heathcock, MPT, PhD; Mike McNally, PhD; Ajit Chaudhari, PhD

- ELEVATED CENTRAL ADIPOSITY IN CHILDREN WITH CEREBRAL PALSY IS NOT RELATED TO GROSS MOTOR FUNCTION

Joel Licea, MS; Chuan Zhang, MA; Freeman Miller, MD; Christopher M. Modlesky, PhD

- PROXIMAL FEMORAL VARUS OSTEOTOMY IN CHILDREN WITH CEREBRAL PALSY: FEMORAL REMODELING OVER TIME

Pooya Hosseinzadeh, MD; Arya Minaie, BA; Jaclyn A. Schipper, BA; Elizabeth Forsen

- CAN ISOLATED FEMORAL VARUS OSTEOTOMY IMPROVE ACETABULAR DYSPLASIA IN CHILDREN WITH CEREBRAL PALSY?

Pooya Hosseinzadeh, MD; Arya Minaie, BA; Jaclyn A. Schipper, BA; Elizabeth Forsen

- RECONSTRUCTIVE HIP SURGERY IN CHILDREN WITH CEREBRAL PALSY: FACTORS INFLUENCING RISK OF FEMORAL HEAD AVASCULAR NECROSIS

Pooya Hosseinzadeh, MD; Arya Minaie, BA; Jaclyn A. Schipper, BA; Elizabeth Forsen

- PREDICTORS OF FAILURE AFTER HIP RECONSTRUCTION IN CHILDREN WITH CEREBRAL PALSY

Pooya Hosseinzadeh, MD; Arya Minaie, BA; Jaclyn A. Schipper, BA; Elizabeth Forsen

- INTERNATIONAL DELPHI RECOMMENDATIONS FOR A PEDIATRIC LOWER LIMB NEUROLOGICAL TEST PROTOCOL

Ramona L. Clark, PT; Emmah Baque, PhD; Andrea Bialocerkowski, PhD

- RELATIONSHIP BETWEEN PHYSICAL ACTIVITY AND PHYSICAL FITNESS OF CHILDREN WITH CEREBRAL PALSY

MinHwa Suk, PhD; InKyeong Park, MA; JeongYi Kwon, MD

- ATYPICAL POPULATIONS OF MUSCLE SATELLITE CELLS ARE ASSOCIATED WITH SPASTIC CEREBRAL PALSY.

Stephanie K. Lee, MS; Kirk Dabney, MD; Julie Sees, DO; Freeman Miller, MD; Wade Shrader, MD; Robert Akins, PhD

- PARENTS PERCEPTIONS OF ENVIRONMENTAL SUPPORTS AND RESOURCES FOR PARTICIPATION OF CHILDREN WITH CEREBRAL PALSY.

Cheryl L. Kerfeld, PhD; Erin Wentz, PT, PhD, PCS; Nancy Cicirello, PhD; Alyssa Fiss, PT, PhD; Kristie F. Bjornson, PhD, PT, PCS

- ARE YOU BEING SERVED? PHYSICAL THERAPY INTERVENTION OUTSIDE THE HEALTH SYSTEM FOR CHILDREN WITH MOTOR DISABILITIES

Nilly Waiserberg, MSc; Paula Feder-Bubis, PhD

- EFFICACY OF INTENSIVE THERAPY PROGRAM USING THERASUIT METHOD FOR PEDIATRIC REHABILITATION PATIENTS COMPARED TO CONVENTIONAL IN-PATIENT NDT THERAPY.

Jiyeon Hong, MD; Seong Min Chun, MD; Yeaeun Kim, MPT; Hana Kim, MPT; Sujin Doo, MPT; Ji Soo Choi, MD; Jung-Hee Doo, MPT

Clinical Observations or Single Case Study Posters

Friday, September 20, 2019: 3:30 PM - 4:30 PM

- ALEXANDER DISEASE MIMICKING CEREBRAL PALSY : A CASE REPORT

Joohyun KEE, BA; Joohyun Kee, BA

- WHEN PICKY EATING LEADS TO MUSCLE WEAKNESS: SCURVY INDUCED MYOPATHY IN AN AUTISTIC CHILD WITH HISTORY OF ACUTE FLACCID MYELITIS

Afua Asante, MD; Louis Dizon, MD; Renat Sukhov, MD

- MOTOR EVOLUTION AND RESPONSE TO A PROTOCOL OF INTENSIVE PHYSIOTHERAPEUTIC CARE OF THE FIRST CASE OF CONGENITAL ZIKA PUBLISHED IN THE WORLD, IPESQ COHORT

Renan A. Silva, Jr., MD; Thamyris de Sales Regis, PT; Gabriela Gama, PhD; Maria Conceição Matias, PT; Emanuela Barros, PT; Adriana Melo, PhD; Jousilene Tavares, PhD; Melania Maria Ramos Amorim, PhD

- DOING THROUGH SEEING: USING VIDEO SELF-MODELLING TO IMPROVE OCCUPATIONAL PERFORMANCE.

Nicole J. McGrath, BA; Dawn Forbes, MCSP

- USE OF PEDBOTHOME IN A PATIENT WITH HEMIPARETIC CEREBRAL PALSY

Staci Kovelman, DPT; Justine L. Belschner, DPT; Catherine Coley, DPT. PCS.

- BARRIERS TO INTRATHECAL BACLOFEN THERAPY IN PATIENTS WITH GOVERNMENT INSURANCE IN A TRI-STATE AREA

Karen R. Romer, RN; Leslie Rhodes, DNP,PPCNP-BC; William Warner, Jr., MD; David Spence, MD

- REPORT ON SEVERE SUBDURAL EFFUSION AFTER ARACHNOID CYSTECTOMY IN INFANTS

Yang Xingkui, BA

- A SIGNIFICANT REPORT ON THE RAPID DIAGNOSIS AND REHABILITATION OF 18-TRISOMY SYNDROME

Liu Liwei, MD; Xia Kaide, PhD Candidate

- CASE REPORT OF RESTRICTIVE INDUCTION THERAPY FOR BRACHIAL PLEXUS INJURY

De Wu, PhD; Jiulai Tang, MD; Zhenzhen Cui, BA; Le Liu, BA; Pengcheng Cui, BA

- STUDY ON THE TEMPERAMENT CHARACTERISTICS OF CHILDREN OVER 1-YEAR-OLD WITH GENERALIZED DEVELOPMENTAL DELAY

Wang C. Xin, MD; Zhao Weiyan, DO; Jia Feiyong, M.D.,Ph.D.

- USE OF AN AQUATIC INTERVENTION TO PROMOTE CARDIOVASCULAR EXERCISE AND EXAMINE RELATED OUTCOMES IN A YOUNG ADULT WITH AMYOPLASIA ARTHROGRYPOSIS MULTIPLEX CONGENITAL: A CASE STUDY

Caitlin Keller, DPT; Anna Fogner, DPT; Amy Hunter, DPT; Cindy B. Dodds, PT, PhD

- NEUROLEPTIC MALIGNANT SYNDROME IN SYMPTOMATIC DUCHENNE MUSCULAR DYSTROPHY CARRIER

Sangjee Lee, MS; Soyeon Jang, MD

- LOWER EXTREMITY PAIN IN A CHILD WITH CEREBRAL PALSY SEVEN YEARS AFTER SELECTIVE DORSAL RHIZOTOMY

Matthew Severson, MD; Sherilyn Driscoll, MD

- NEUROMUSCULAR ELECTRICAL STIMULATION FOLLOWING ORTHOPEDIC SURGERY IN AN INDIVIDUAL WITH CEREBRAL PALSY

Kelly R. Greve, PT, DPT, PhD, ABPTS Board Certified Clinical Specialist in Pediatrics; Caroline T. Colvin, DPT; ABPTS Board Certified Clinical Specialist in Pediatrics

- NEUROMUSCULAR ELECTRICAL STIMULATION DURING SERIAL CASTING IN AN INDIVIDUAL WITH CEREBRAL PALSY

Kelly R. Greve, PT, DPT, PhD, ABPTS Board Certified Clinical Specialist in Pediatrics; Caroline T. Colvin, DPT; ABPTS Board Certified Clinical Specialist in Pediatrics

- ITB AND GAIN OF FUNCTION-BUT THE CHALLENGE IN PATIENT SELECTION CONTINUES

Colleen M. Lenz, MSN, RN, CPNP; Janice M. Laux, PT, PCS, DOMP, MS; Heather McLean, MPT, CBIS; Kara Towles, DPT

- THE CASE OF JOHN: SUICIDAL IDEATION IN AN ADOLESCENT WITH CEREBRAL PALSY

Eric Peist, MA; Kyle Deane, PhD; Kathy Zebracki, PhD

- INNOVATIVE PHYSICAL THERAPY INTERVENTIONS FOR A CHILD WITH SPINAL MUSCULAR ATROPHY

Jessica M. Trenkle, DPT

- EARLY INTERVENTION FOR CHILDREN IN HIGH RISK OF CEREBRAL PALSY - KNOWLEDGE-BASED GOOD PRACTICE

Britta Andersen, BA; Line Zacho Greve, BA

- A CASE OF CONGENITAL GLYCOSYLATION DISORDER CAUSED BY SLC35A1 GENE MUTATION AND LITERATURE REVIEW

Xiangshu Wen, MD

- AN EXPLORATION OF THE COMBINATION OF MEDICINE WITH SPORTS IN THE REHABILITATION OF CHILDREN WITH CEREBRAL PALSY

Bing Liang, BA; Yong Liu, NA; Hao Ma, BA

- THE IMPORTANCE OF CONTINUOUS TRAINING IN THE TREATMENT OF CEREBRAL PALSY :ONE REPORT OF REHABILITATION AFTER 29 YEARS OF TRAINING FOR A CHILD WITH ATHETOSIS CEREBRAL PALSY.

Hao Ma, BA; Bing Liang, BA

- METACHROMATIC LEUKODYSTROPHY: CHARACTERIZATION OF TWO (P.LEU433VAL, P.GLY449ARG) ARYLSULFATASE A MUTATIONS

Yangyang Wang, MD

- A DE NOVO MUTATION IN TTN GENE IN A PATIENT WITH CONGENITAL MYOPATHY: A CASE REPORT

Joon Young Jang, MD; Yulhyun Park, MD; Dae-Hyun Jang, MD; Ja-Hyun Jang, MD; Ju Seok Ryu, MD

- CLINICAL RESEARCH ON THE ACUPUNCTURE OF THE BACK-SHU AND FRONT-MU POINTS FOR TREATMENT OF CEREBRAL PALSY

Zhen Huan Liu, PhD; Bingxiang Ma, PhD

- THE COMPARISON BETWEEN ABNORMAL BRAIN MRI AND NORMAL BRAIN MRI WITH ANTI-N-METHYL-D-ASPARTATE RECEPTOR ENCEPHALITIS IN CHILDREN

Jian Yang, MD; Xiaodai CUI, PhD

- CP-SCHOOL: A PROGRAM FOR STRENGTHENING PARTICIPATION AND EMPOWERMENT AMONG SCHOOL AGED CHILDREN WITH CEREBRAL PALSY - REHABILITATION INSPIRED BY THE F-WORDS IN CHILDHOOD DISABILITY

Kristian Sørensen, MS; Siri Johnsen, MS; Mette Modahl, BA; Marie Læssøe Martin, BA; Bjørn Lerdal, MS; Ida E. Vestheim, MS

- INTRODUCING THE INTERNATIONAL CLASSIFICATION OF FUNCTION (ICF) TO PARENTS AND LOCAL PROFESSIONALS AS A FRAMEWORK FOR MULTIMODAL INTERVENTION IN INTENSIVE CHILD REHABILITATION

Siri Johnsen, MS; Kristian Sørensen, MS; Mette Modahl, BA; Marie Læssøe Martin, BA; Bjørn Lerdal, MS; Ida E. Vestheim, MS

- DYSKINETIC CEREBRAL PALSY AND ALLAN-HERNDON-DUDLEY SYNDROME-A DIFFERENTIAL DIAGNOSIS SHOULD BE THINK ABOUT.

Mei Hou, MD; Guangjin Luo, MD; Dianrong Sun, MD; Aiyun Yuan, PhD

- CONTRALATERAL FINDINGS IN GAIT ANALYSIS OF PATIENTS WITH HEMIPLEGIC CEREBRAL PALSY

Rachel Randall, MD; Amanda T. Whitaker, MD; Jessica Lewis, PT, DPT; Mallory Rowan, BS; Carl D. Gelfius, MD; Jeffrey R. Leonard, MD; Hemang Trivedi, MS

- NEUROMUSCULAR ELECTRICAL STIMULATION FOR MOVEMENT DISORDER: A CASE STUDY

Megan Metzler, MSc; Adam Kirton, MD

- CASE STUDY ON THE USE OF INTENSIVE PEDIATRIC NEUROREHABILITATION IN THE TREATMENT OF KERNICTERUS

Jessie E. Mann, MS; Dory Wallace, MS, OTR/L; Stephanie C. Deluca, PhD

- SCHOOL-BASED TELE-PHYSIATRY ASSISTANCE FOR REHABILITATIVE AND THERAPEUTIC SERVICES (STARS) FOR CHILDREN WITH SPECIAL HEALTH CARE NEEDS LIVING IN RURAL AND UNDERSERVED COMMUNITIES

Loren Davidson, MD; Armando Valerio, PT, DPT; James Marcin, MD, MPH

- NEUROMUSCULAR SHOULDER INSTABILITY AND PAINFUL DISLOCATION: IS IT TIME FOR A SHOULDER SURVEILLANCE PROGRAM

Francisco Valencia, MD

- BILATERAL VISUAL FIELD MAPS IN A PATIENT WITH LEFT EYE MICROPHthalmIA AND CONGENITAL BRAIN STROKE INVOLVING THE LEFT GENICULOSTRIATE PATHWAY: A CASE STUDY

Francesca Tinelli, PhD; Akshatha Bhat, PhD; Laura Biagi, DHSc; Giovanni Cioni, MD; Maria Concetta Morrone, MSc; Jan Kurzawski, PhD; Giovanni Anobile, PhD

- SYMMETRICAL CENTRAL TEGMENTUM TRACT HYPERINTENSITY AND CEREBRAL PALSY: THE CASE OF TWO PRETERM TWINS

Francesca Tinelli, PhD; Giovanni Cioni, MD; Raffaello Canapicchi, MD; Rosa Pasquariello, MD

- IMPLICATIONS OF TIME AND GROWTH ON GAIT FUNCTION IN A CHILD WITH CP GMFCS LEVEL I

Sylvia Ounpuu, MSc; Kristan Pierz, MD

- DIFFERENCES IN JOINT LEVEL IMPAIRMENTS AND ASSOCIATED GAIT FUNCTION BETWEEN A MOTHER AND DAUGHTER WITH CHARCOT-MARIE-TOOTH DISEASE

Sylvia Ounpuu, MSc; Gyula Acsadi, MD, PhD; Kristan Pierz, MD

- EFFECT OF YOGA ON METABOLIC PARAMETERS OF A YOUNG ADOLESCENT WITH CEREBRAL PALSY: A SINGLE-SUBJECT DESIGN

Elizabeth M. Williamson, PhD; Kristine Drane, BS; Michaela B. Lupo, BS

- OVERGROUND GAIT TRAINING FOR AN INFANT WITH DOWN SYNDROME

Ginny Paleg, DScPT

Demonstration Posters

Friday, September 20, 2019: 3:30 PM - 4:30 PM

- "WE DON'T KNOW!"; EMBRACING THE NEW NORM WHEN WORKING WITH CHILDREN WITH SPINAL MUSCULAR ATROPHY AND THEIR FAMILIES IN REHABILITATION.

Kara L. Reid, OTRegNB; A. Monique Taillon, BSc, MD, FRCPC

- USE OF VIRTUAL REALITY GOGGLES IN TREATMENT OF AMPLIFIED MUSCULOSKELETAL PAIN SYNDROME

Jill Meilahn, DQ; Nicole Mack, BS, CCLS, CTRS

- PAIN EXPERIENCES AMONG AGING ADULTS WITH CEREBRAL PALSY: LEVERAGING THE CEREBRAL PALSY RESEARCH NETWORK COMMUNITY REGISTRY FOR PATIENT REPORTED OUTCOMES

Mary E. Gannotti, PhD; Paul Gross, BA; Susan Horn, PhD; Deborah E. Thorpe, PT, PhD; Edward A. Hurvitz, MD; Garey Noritz, MD

- SPEEDI2 - EFFICACY OF A MOTOR AND COGNITIVE INTERVENTION FOR INFANTS BORN PRETERM: A PROTOCOL

Stacey C. Dusing, PhD; Jennifer Burnsed, MD; Richard D. Stevenson, MD; Karen D. Hendricks-Muñoz, MD, MPH; Amy Harper, MD; Leroy Thacker, PhD

- UTILIZING CHANGE MANAGEMENT STRATEGIES TO DESIGN AND IMPLEMENT AN INNOVATIVE SERVICE DELIVERY MODEL FOR OCCUPATIONAL THERAPY AND PHYSIOTHERAPY SERVICES

Kim Hesketh, BKIH, MScPT; Mary Riggin Springstead, M.Cl.Sc., CCC-SLP, Reg. CASLPO

- REQUIRED HEALTH AND EDUCATIONAL SUPPORT FOR CHILDREN WITH CEREBRAL PALSY

Joohee Cho, PhD; Yujin Seo; Chin Youb Chung, MD, PhD; Moon Seok Park, MD, PhD

- VIDEO GAIT ANALYSIS - A PRACTICAL OPTION IN PEDIATRIC REHABILITATION

Marilyn Wright, MSc; Donna Twose, BS; Jan Willem Gorter, MD PhD

- DOES FUNCTION IMPROVE AFTER HIP SURGERY IN CHILDREN WITH CEREBRAL PALSY?

Holly Roach, OTR, ATP; Elissa Curtis, OTR, ATP; Charter Rushing, DScPT; Robert Wimberly, MD; Karina A. Zapata, PT, DPT, PhD

- PILOT TRIAL COMPARING THE EFFECT OF MODIFIED CONSTRAINT-INDUCED MOVEMENT THERAPY (MCIMT) AND HAND-ARM BIMANUAL INTENSIVE THERAPY (HABIT) IN CHILDREN WITH HEMIPLEGIC CEREBRAL PALSY.

Xiaojie Li, MD; Yuqiong Liang, MD; Lin Zhu, OT, Bachelor

- THE INFLUENCE OF ICF AND ICF CORE SETS IN SELECTING THE NINDS CEREBRAL PALSY COMMON DATA ELEMENTS OUTCOME MEASURES.

Robin Feldman, BS MBA; Joline Brandenburg, MD; Verónica Schiariti, PhD; Carolina Mendoza-Puccini, MD; Kristen Joseph, MA; Joy Esterlitz, MS

- IMPORTANCE OF STAKEHOLDER INVOLVEMENT IN THE CREATION OF DIGITAL PLATFORMS FOR PEOPLE WITH CP AND THEIR FAMILIES

Tracy Pickar, BA; Rachel Byrne, BA; Peter L. Rosenbaum, MD CM FRCPC

- LET'S PLAY: CREATING A UNIVERSAL PLAY-BASED FUNCTIONAL INDICATOR FOR PEDIATRIC POPULATIONS

Verónica Schiariti, PhD

- HISTORY OF THE AACPDM - REMARKABLE LADIES IN LEADERSHIP ROLES IN THE EARLY YEARS OF THE ACADEMY

Verónica Schiariti, PhD

- DEVELOPING AN EVIDENCE-INFORMED CARE PATHWAY FOR PROMOTING PHYSICAL ACTIVITY AND REDUCING SEDENTARY BEHAVIOUR IN INDIVIDUALS WITH CEREBRAL PALSY

Julia (Shi-Peng) Xiong, BHSc; Patrick McPhee, PhD; Jan Willem Gorter, MD PhD

- CULTURAL ANTHROPOLOGY: INSIGHT INTO SOCIETY'S VIEWS OF CHILDHOOD ONSET DISABILITIES

Wade Shrader, MD; Mason Shrader, BA

- DEVELOPING A SERVICE PROTOCOL FOR LEARNING TO USE THE EYE-GAZE ASSISTIVE TECHNOLOGY IN CHILDREN AND YOUTH WITH SEVERE DISABILITIES AND COMPLEX COMMUNICATION NEEDS

Ai-Wen Hwang, PhD; Yu-Hsin Hsieh; Lin-Ju Kang, PhD; Hsin-Yi Kwok; Fu-Shiuan Lee, MD; Mats Granlund, PhD; Helena Hemmingsson, PhD; Yu-Wei Hsu, MS

- CHRONIC PAIN IN INDIVIDUALS WITH CEREBRAL PALSY: A MULTIMODAL APPROACH TO UNDERSTANDING A COMPLEX PROBLEM

Eric M. Chin, MD; Alexander Hoon, MD, MPH; Shenandoah Robinson, MD; Colleen Lenz, MSN, RN, CPNP

- SITTING POSTURAL CONTROL INTERVENTIONS FOR CHILDREN WITH OR AT RISK FOR CEREBRAL PALSY (CP): PROTOCOL FOR A SYSTEMATIC REVIEW

Ketaki Inamdar, MPT; Stacey C. Dusing, PhD; Rebecca M. Molinini, DPT; Siva Tejaa Panibatla, MPT

- THE EFFECT OF VITAMIN D3 COMBINED WITH THE EARLY START DENVER MODEL ON AUTISM SPECTRUM DISORDER IN TODDLERS

Jia Feiyong, MD, PhD; Jun-Yan Feng, MD; Honghua Li, MD; Shan Ling, MS

- MAKING THE CONNECTION: USE OF TELEPHONE INTAKE TO TAILOR INTRODUCTORY CARE TO MULTIDISCIPLINARY CEREBRAL PALSY CLINIC

Margaret Salzbrenner Hoopes, MSN; Abigail Helms, MMS; Keri DiAlessandro, PA-C; Lennon Olszewsky, MSN; Nancy Lennon, MS, PT

- DEVELOPMENT OF A SOCIAL DETERMINATES OF HEALTH STANDARDIZED SCREENING TOOL IN A PEDIATRIC HEALTHCARE SYSTEM: OPPORTUNITIES AND LESSONS LEARNED WITHIN A CEREBRAL PALSY CLINIC

Margaret Salzbrenner Hoopes, MSN; Tirzah Spencer, PhD; Kirk Dabney, MD

- INTERDISCIPLINARY MODEL OF CARE FOR REFUGEES AND NEW IMMIGRANTS

Carolyn Chowne, RN, BScN, MScN; Kim Magnus, BSc.MOT

- TECHNOLOGY ENABLING CHILDREN (TEC) CENTRE - A CANADIAN INITIATIVE

Hana Alazem, BSc.PT, MD, FRCPC (C); Anna M. McCormick, MD, FRCPC (Pediatrics/Rehabilitation); Darcy L. Fehlings, MD; Corrie Dixon, BS; Patricia Longmuir, PhD; Leanne Ward, MD; Carolyn Hunt, MD; Sarah Zaidi, BS

- THE STATUS QUO AND PERSPECTIVES OF CHILD CEREBRAL PALSY TREATED BY TRADITIONAL CHINESE MEDICINE IN MAINLAND CHINA

Huijie Song, MS

- TRANSFORMING THE LIVES OF CHILDREN WITH CEREBRAL PALSY USING 3-DIMENSIONAL PRINTING AND OCCUPATIONAL THERAPY

Dennis Chen, MS OT/L; Lien Hoang, MA, OTR/L; Kelly Culhane, MOTR/L

- DEVELOPMENT OF A MOBILE APPLICATION OF THE "PICTURE MY PARTICIPATION-CHINESE VERSION" (PMP-C APP) FOR CHILDREN WITH DISABILITIES IN TAIWAN

Lin-Ju Kang, PhD; Pei-Yi Lin; Ai-Wen Hwang, PhD; Ya-Lan Chiu, PhD student; Wen-Hsu Sung, PhD; Christine Imms, PhD; Mats Granlund, PhD

- A NEW QUALITY REGISTRY AND FOLLOW-UP PROGRAMME FOR ADULTS WITH MYELOMENINGOCELE IN SWEDEN

Ulrica Jonsson, MD; Lena Westbom, PhD

- REHABILITATION WITH A COMBINATION OF SCALP ACUPUNCTURE AND EXERCISE THERAPY IN SPASTIC CEREBRAL PALSY

Jing Gao, PhD; Luna He, MD

- MOVEMENT & MINDFULNESS: HOW A RESTORATIVE YOGA PROGRAM IS ENGAGING YOUTH WITH CEREBRAL PALSY

Corrie Dixon, BS

- CEREBRAL PALSY CAMP: PSYCHOSOCIAL AND QUALITY OF LIFE OUTCOMES

Shelby P. Cerza, MA; Robert Wimberly, MD; Jennifer Rodgers, MA; Claire Shivers, BS; Jonathan VanPelt, MHA, BS; Mauricio Delgado, MD

- AN ONLINE ADVOCACY TOOLKIT TO PROMOTE EVIDENCE BASED TEACHING FOR CHILDREN STRUGGLING TO READ IN ONTARIO

Nicola J. Jones-Stokreef, FRCPC

- A TRANSFORMATIVE PRACTICE PROJECT OF AN ITALIAN NETWORK: A SHARED CLINICAL MODEL FOR THE EARLY DETECTION OF INFANTS AT RISK FOR CP

Olena Chorna, MM, CCRP; Andrea Guzzetta, MD, PhD

- DEVELOPMENT OF ICF-BASED CARE PATHWAYS FOR CHILDREN WITH CHILDHOOD-ONSET DISABILITIES IN URUGUAY

Verónica Schiariti, PhD; Maria Mercedes Perez-Roca, PhD; Claudia Romero, PhD

- ENHANCING THE LIVES OF CHILDREN LIVING WITH CP IN VIETNAM THROUGH EVIDENCE BASED PRACTICE GUIDELINES - A MULTI-NATIONAL COLLABORATION

Prue Golland, MPH, B.App.Sc.(Physiotherapy); Patty Coker-Bolt, PhD, OTR/L, FAOTA; Johan Baudewijns, BSc PT, BScPE

- JAPAN HAS STRUGGLED FOR MEDICALLY COMPLEX CHILDREN AT HOME FOR YEARS WITH POOR WORK FORCE. BUT RECENTLY, JAPAN PEDIATRIC SOCIETY HAS STARTED ITS TRAINING COURSES FOR PEDIATRICIANS AS OPTIONAL REQUIREMENT TO RENEW THEIR BOARD LICENSE.

Hakuyo Ebara, MD; Kiyokuni Miura, M.D

- WHEELCHAIR SERVICE DELIVERY IN LOW-RESOURCE SETTINGS: A UGANDAN PERSPECTIVE

Susan Murr, DPT

- MAKING SENSE OF THE EVIDENCE: A IRISH FRAMEWORK TO SUPPORT UPPER LIMB MOTOR MANAGEMENT AND THE PARTICIPATION OF CHILDREN WITH CEREBRAL PALSY USING A COLLABORATIVE APPROACH

Denise McDonald, MD; Margaret McGrath, BSc (Hons) OT; Adrienne Carolan Gillan, BSc (Hons) OT; Evelyn Bergin, BSc (Hons) OT

- HIP WATCH IN ORANGE COUNTY; SURVEYING THE HIPS OF CHILDREN WITH CEREBRAL PALSY

Melinda Winterswyk, PT, DPT, PCS; Julia c. Jarrin, MPT, PCS, ATP, SMS; Brian Apin, PT, DPT; Kristen Higbee, BS, PT; Dawn Wolfe, PT, PCS; Vedant A. Kulkarni, MD

- REST ASSURED: AN INNOVATIVE COLLABORATION TO PROVIDE SLEEP SAFETY FOR CHILDREN WITH NEURODEVELOPMENTAL DISABILITIES

Emily Kivlehan, MD; Deborah Gaebler-Spira, MD, FRCP; Sheila Krahl, DPT; Beverley Tann, RN, BSN; Bruce Ankenman, PhD

- RECOGNITION OF CHRONIC PAIN IN PEOPLE WITH CEREBRAL PALSY: IT'S HOW YOU ASK!

Colleen M. Lenz, MSN, RN, CPNP; Eric M. Chin, MD; Alexander Hoon, MD, MPH; Shenandoah Robinson, MD

- DEVELOPMENT OF A SRI LANKAN CEREBRAL PALSY REGISTER: A STUDY PROTOCOL

Thilini Madushika, BSc, Physiotherapy; Samanmali P. Sumanasena, MD; Gopi Kitnasamy, BSc; Saraji Wijesekara, MBBS, MD (PAEDIATRICS), DCH, MRCPCH (UK); Jayatri Jagoda, MBBS (Colombo, Sri Lanka), MD (Colombo); Neil Thalagala, MBBS, MD, MSc. Public Health; Nimisha Muttiah, PhD; Hayley J. Smithers-Sheedy, BAppSc(SpPath), MPH, PhD

- 3D AT: USING THREE DIMENSIONAL PRINTED ASSISTIVE TECHNOLOGY TO IMPROVE OCCUPATIONAL PERFORMANCE OF STUDENTS IN SPECIAL EDUCATION

Sandra Masayko, MEd, OTR/L, ATP; Laura Slotkoff, MS, OTR/L; Marcia Leinweber, MA, ATP

- THE CPPAIN-PROJECT: EXPLORING THE PAIN BURDEN IN YOUNG PEOPLE WITH CEREBRAL PALSY

Randi Dovland Andersen, PhD; Chantel Barney, PhD; Jordan Sheriko, BSc (Hons), MD; Sindre K. Brufnot, BA; Guro L. Andersen, PhD; Kjersti Ramstad, PhD; Christine Chambers, PhD; Reidun B. Jahnsen, PhD

- DISCOVERING METHODS TO INCREASED EARLY INTERVENTION REFERRALS

Carl W. Dowden, MD; Laura J. Hobart-Porter, DO, FAAPMR

- EMPOWERING PRIMARY CARE PROVIDERS THROUGH DEVELOPMENT OF A CEREBRAL PALSY HEALTHPATHWAY

Heather Burnett, MD

- A NOVEL SURGICAL TECHNIQUE IN RHIZOTOMY AND THE ROLE OF INTRAOPERATIVE NEUROPHYSIOLOGY

Bo Xiao, MD

- A SYSTEMATIC APPROACH FOR CLINICAL ANALYSIS OF STANDING AND PRE-GAIT POSTURES IN CHILDREN WITH CEREBRAL PALSY: A PILOT TOOL

Julie H. Perfect, PT, DPT, PCS; Mary Weck, PT

- EFFECT OF EARLY INTERVENTION OF CURCUMIN ON HIPPOCAMPAL NEURONS AND ASTROCYTES IN AUTISTIC MODEL RATS

Zhimei Jiang, PhD; Dandan Huang, MS

- NEDERLANDS CP REGISTER FOR CHILDREN WITH CEREBRAL PALSY: AN INNOVATIVE MODEL FOR PERSONALIZED CARE WITH PATIENT PARTICIPATION

Janneke Hazelhoff, MS; Annet J. Dallmeijer, PhD; Joop Beelen, MA; Annemieke I. Buizer, MD PhD

- IMPLEMENTING AN ABDUCTED STANDING PROGRAM IN A PEDIATRIC RESIDENTIAL PROGRAM.

Jolynn Pickens, DPT; Derenda Gibbs, BS

- REDUCING THE TIME REQUIRED TO OBTAIN PEDIATRIC CUSTOM WHEELCHAIRS FOR CHILDREN ENROLLED IN THE CALIFORNIA CHILDREN'S SERVICES (CCS) MEDICAL THERAPY PROGRAM (MTP) IN SAN DIEGO COUNTY

Judith P. Garces, PT; Neil Goyal, MSPT; Kristen Dimou, MSPT; Maria Celeste Graham, PT

- FOUNDATION OF EDUCATION AND CULTURE OF SPORT CLUB INTERNATIONAL AND THEIR SOCIAL PROJECTS: A MATCH OF COMMITMENT WITH SOCIAL RESPONSIBILITY, ACCESSIBILITY AND SOCIAL INCLUSION, A COMMITMENT WITH AN EQUALITY SOCIETY.

Elida dos Santos, BS

- RECLAIM-DCP: A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY OF DEUTETRABENAZINE FOR THE TREATMENT OF DYSKINESIA IN CEREBRAL PALSY IN CHILDREN AND ADOLESCENTS

Daniel Claassen, MD; Jonathan Mink, MD, PhD; Mered Parnes, MD; Heather Riordan, MD; Mark Gordon, MD; Hadas Barkay, PhD; Maria Wieman, MPH; Juha Savola, MD, PhD; Roberta Battini, MD, PhD; Joseph Jankovic, MD; Leon Dure, MD

- THE GMFM APP+: IMPROVEMENTS TO SCORING OF THE GROSS MOTOR FUNCTION MEASURE

Dayle McCauley, MS; Jan Willem Gorter, MD PhD; Peter L. Rosenbaum, MD CM FRCP; Dianne Russell, PhD; Marilyn Wright, MSc; Lisa Avery, MSc; Sonya Strohm, MS

- THE EFFECT OF INJURY TIMING ON LOWER EXTREMITY WEAKNESS AND ABNORMAL JOINT TORQUE COUPLING PATTERNS IN CHILDREN WITH HEMIPARESIS

Yatsala Goyal, MS; Theresa Sukal-Moulton, DPT, PhD; Julius Dewald, PT, PhD

- COMMUNITY ENGAGEMENT WITH SCREENING AND EVALUATION OF CHILDREN WITH SPECIAL NEEDS IN A PROVINCE IN CHINA: A TRANSDISCIPLINARY APPROACH

Eunice Y. Shen, DPT, PhD

- "GO BABY GO ISRAEL"- MODIFIED TOY CARS FOR EARLY MOBILITY AND PARTICIPATION

Stephanie Libzon, MscPT; Mikael Nudelman; Nilly Waiserberg, MscPT

- PHYSICAL THERAPIST AND ENGINEERING STUDENT WORKING TOGETHER TO IMPROVE THE QUALITY OF LIFE OF PEOPLE WITH DISABILITIES 4TH YEAR UNDERGRADUATE COURSE

Stephanie Libzon, MscPT; Jason Friedman; Yoram Reich; Jacob Fainguelernt; Nilly Waiserberg, MscPT

- SOME CLINICIANS, ROBOTIC ENGINEERS, GAMES DEVELOPERS AND ENTREPRENEURS WALKED IN A BAR AND INVENTED A 2ND WAVE THERAPY GAMING THERAPY ECOSYSTEM THAT ENABLES REMOTE MONITORING AND MOTIVATION OF PATIENTS.

Chris F. McGowan

- ADOPTING THE ICF MODEL AS A GUIDING FRAMEWORK FOR SERVICE DELIVERY ACROSS THE TELETON CENTERS IN MEXICO

Juan Carlos J. Fosado, MSc; Abi Natzelli R. Segovia, MD; Verónica Schiariti, PhD

- BRAIN-COMPUTER OR EYE-GAZE INTERFACES: TECHNICAL CHALLENGES AND PROMISE

Seth Warschausky, PhD; Marco Garcia, BS; Petra Karlsson, PhD; Jane E. Huggins, PhD

- PICTURES CAN TALK: EMPOWERING YOUTH WITH ARTHROGRYPOSIS USING PARTICIPATORY ACTION RESEARCH

Noemi Dahan-Oliel, PhD; Jessica Collins, MSc OT; Emily Lecker, MSc, OT; Dominique Angers-Trottier, MSS SW; Qi Yue He

- EFFICIENT COLLABORATIVE CARE MODEL FOR TONE MANAGEMENT IN RURAL EASTERN CANADA

Nicole Desaulniers, BS; Rankyn Campbell, MA

Scientific Posters

Friday, September 20, 2019: 3:30 PM - 4:30 PM

- EFFECTS OF A PHYSIOTHERAPY INTENSIVE PROTOCOL IN CHILDREN WITH CONGENITAL ZIKA- A PILOT STUDY, IPESQ COHORT

Gabriela Gama, PhD; Renan A. Silva, Jr., MD; Maria Conceição Matias, PT; Kamila Costa, PT; Thamyris Regis, PT; Janiele Tavares, PT; Paula Assunção, PhD; Jousilene Tavares, PhD; Adriana Melo, PhD

- FAT MASS MEASUREMENT BY DEXA: HOW DOES IT COMPARE TO ANTHROPOMETRIC MEASURES IN ADULTS WITH CEREBRAL PALSY?

Emily Kivlehan, MD; Deborah Gaebler-Spira, MD, FRCP; Nicole Wysocki, MD; Christina Marciniak, MD

- EFFICACY OF BIOMECHANICAL ORTHOPEDIC INSOLES FOR LOWER EXTREMITY FUNCTION OF SPASTIC CEREBRAL PALSY CHILDREN WITH TIBIAL MEDIAL TORSION

Pang Wei, MD; Lu Shuqing, Master of Medicine; Li Xin, Bachelor; Fan Yanping, Master

- CLINICAL AND GENETIC ANALYSIS OF 91 PATIENTS WITH CHILDHOOD ONSET SPASTIC PARAPLEGIA

Kazuhiro Haginoya, MD, PhD; Yusuke Takezawa, MD, PhD; Atsuo Kikuchi, PhD, MD; Takehiko Inui, MD; Yukimune Okubo, MD; Ryo Sato, PhD; Noriko Togashi, MD; Takuya Miyabayashi, MD; Morie Shibuya, MD; Kazuhiro Iwama, MD, PhD; Hiroto Saito, MD, PhD; Naomichi Matsumoto, PhD, MD; Shigeo Kure, MD, PhD

- MOTOR IMAGERY AND ITS LINK WITH GROSS MOTOR SKILL PERFORMANCE IN CHILDREN WITH CEREBRAL PALSY

Alicia J. Hilderley, PhD; Margot J. Taylor, PhD; Darcy L. Fehlings, MD; Joyce L. Chen, PhD; Virginia Wright, BSc (PT), MSc, PhD

- THERAPEUTIC EFFECT OF CHILDREN'S CRAWLING-TRAINING-ROBOT ON REHABILITATION OF CHILDREN WITH SPASTIC CEREBRAL PALSY

Yue Zhang, BS

- EFFECTS OF VIDEO GAME THERAPY ON THE FUNCTIONALITY OF ADOLESCENTS WITH CEREBRAL PALSY - SINGLE SUBJECT DESIGN

Paula S. Chagas, PhD; Elisa J. Valenzuela; Yannca F. Silva; Matheus H. Bogo; Renata M. Rosa; Carolyne Drummond; Samara Silva; Rânia P. Castro; Kennea Ayupe, PhD; Jaqueline S. Frônio, PhD

- VALIDITY AND USEFULNESS OF THE ECOLOGICAL ASSESSMENT OF PARTICIPATION

Lisa Chiarello, PT, PhD, FAPTA; Robert Palisano, ScD; Nea Vänskä, MSc, PT; Salla Sipari, PhD

- A REPORT ON CHARACTERISTICS OF CEREBRAL PALSY FROM HENAN CEREBRAL PALSY REGISTER AND REHABILITATION MANAGEMENT SYSTEM

Dengna Zhu, MD; Changlian Zhu, MD; Junying Yuan, MD; Yiwen Wang, MD

- ATAXIC-HYPOTONIC CEREBRAL PALSY IN A CEREBRAL PALSY REGISTRY: INSIGHTS INTO A DISTINCT SUBTYPE

Michael Shevell, MDCM; Jake P. Levy, MDCM; Maryam Oskoui, MDCM, FRCPC, MSc, FAAN; John Andersen, MD, FRCPC; Pamela Ng, MSc; David Buckley, M.B., Ch.B. Sheffield, FRACP Australia, FRCPC; Darcy L. Fehlings, MD; Adam Kirton, MD MSc FRCPC; Louise Koclas, MD; Nicole Pigeon, MD; Esias Van Rensburg, MD; Ellen Wood, MD

- THE PREVALENCE AND RISK FACTORS FOR FOOT PRESSURE ULCERS IN AMBULATORY PATIENTS WITH SPINA BIFIDA

Melissa Bent, MD; Susan Rethlefsen, DPT; Nicole Mueske, MS; Tishya Wren, PhD; Rajan Murgai, BS

- TRAINING PROVIDERS IN NIGHTTIME POSTURAL CARE INTERVENTION: A RANDOMIZED CONTROL TRIAL

Jennifer Hutson, MS, OTR/L

- THE RELEVANCE OF ENVIRONMENTAL FACTORS FOR WALKING ONSET AND SENSORY PROCESSING OF TODDLERS BORN PRETERM

Mariana Santos, PhD; Carolina Corsi, PT; Ana Carolina de Campos, PhD; Nelci Adriana Cicuto Ferreira Rocha, PhD

- FEASIBILITY OF A MATERNAL-DRIVEN MULTIMODAL NEONATAL REHABILITATION PROGRAM IN HOSPITALIZED VERY PRETERM INFANTS.

Lisa Letzkus, PhD; Santina Zanelli, MD; Corrie J. Alonzo, M.D.; Elizabeth Connaughton, DPT; Nancy Kelly, DPT; Joseph Michel, BS

- CORE VALUES OF ADAPTED PHYSICAL ACTIVITY FOR PERSONS WITH DISABILITIES EXPRESSED BY SPORT PEDAGOGUES AT SIX REHABILITATION CENTERS IN NORWAY

Tor Erik H. Nyquist, MSc; Lars Kristian Dalen, MS; Astrid Nyquist, PhD

- CHARACTERISTICS OF PAIN IN CHILDREN DYSKINETIC CEREBRAL PALSY: A CROSS-SECTIONAL STUDY

Clare T. McKinnon, BAppSc (PT, Hons); Giuliana C. Antolovich, BSc, PhD, MBBS, FRACP; Prue E. Morgan, BAppSc (PT), MAppSc (PT), PhD; Adrienne Harvey, PhD

- EFFECT OF VOLUME OF PHYSICAL THERAPY (PT) SERVICE ON GROSS MOTOR FUNCTION CLASSIFICATION SYSTEM (GMFCS) EXPANDED AND REVISED LEVEL IN CLIENTS WITH CEREBRAL PALSY (CP)

Rachel A. Shaw, MPT; Maria Celeste Graham, PT; Neil Goyal, MSPT; Judith P. Garces, PT; Kristen Dimou, MSPT; Garrett D. McGaugh, MPH

- COMPARATIVE STUDY OF PRONATOR TERES REROUTING WITH FLEXOR CARPI ULNARIS TO EXTENSOR CARPI RADIALIS BREVIS TENDON TRANSFERRING VS CONVENTIONAL REHABILITATION PROGRAM IN CEREBRAL PALSY

Sivaporn Yongpipatana, MD; Tulyapruet Tawonsawatruk, PhD.; Monratta Panuwannakorn, MD; Suwimol Prusmetikul, MD; Amprai Surit, OT

- QUALITY OF LIFE IN CHILDREN WITH CEREBRAL PALSY

Boyoung Hong, MD; Hyehoon Choi, MD; Joon Sung Kim, MD; Seong Hoon Lim, MD

- CHILDREN WITH UNILATERAL CEREBRAL PALSY AFTER PERINATAL STROKE COMMONLY SHOW PRESENCE OF FIDGETY MOVEMENTS IN SOME BODY PARTS.

Aurelie Pascal, PT; Lars Adde, PT, PhD; Ragnhild Stoen, MD, PhD; Toril Fjortoft, PT, PhD; Gunnar Naulaers, MD, PhD; Paul Govaert, MD, PhD; Els Ortibus, MD, PhD; Christine Van den Broeck, PT, PhD

- PHYSICAL ACTIVITY LEVEL AND AEROBIC DEMAND DURING ACTIVE VIDEO GAME PLAY IN AMBULATORY YOUTH WITH CEREBRAL PALSY

Margaret E. O'Neil, PT, PhD, MPH; Nancy Lennon, MS, PT; Maria Fragala-Pinkham, MS, PT, DPT; Corey Landis, MS; Andrew Finnegan, MA; Yichuan Liu, PhD; Arun Ramakrishnan, PhD; Hasan Ayaz, PhD; Paul Diefenbach, PhD; Patricia Shewokis, PhD

- PROXIMITY OF TMS AND FMRI MARKERS OF CONTRALESIONAL MOTOR CORTEX MAY RELATE TO CLINICAL FUNCTION IN HEMIPARETIC CHILDREN WITH PERINATAL STROKE.

Hsing-Ching Kuo, PhD, MSc; Alicia Hilderley, PhD PKin; Helen Carlson, PhD; Adam Kirton, MD MSc FRCPC

- ASSESSMENT OF INFANTS USING THE ALBERTA INFANT MOTOR SCALE IN CHINA

Qing Du, PhD; Xuan Zhou, MS

- HETEROTOPIC BONE FORMATION PREVENTING INTRATHECAL BACLOFEN PUMP REFILLS: A CASE REPORT

Stephen Nichols, MD; Shenandoah Robinson, MD; Jennifer M. Roth, MS, BSN, CPNP

- TREATING ADDUCTOR HYPERTONIA WITH BOTULINUM TOXIN A IN CHILDREN WITH CEREBRAL PALSY: IMPROVEMENT IN OBSERVATIONAL GAIT SCALE

Tugba Gokbel, MD; Melike Akarsu, MSc; Merve Akyuz, MD; Nigar Dursun, MD; Erbil Dursun, MD

- PERCEPTIONS OF CHILDREN AND YOUNG PEOPLE WITH CEREBRAL PALSY ABOUT INVOLVEMENT IN RESEARCH AS RESEARCH PARTNERS: QUALITATIVE RESEARCH

Margaret Wallen, PhD; Cayleigh Street, BA; Christine Imms, PhD; Natasha M. Garrity; Gabrielle Drake, PhD M Soc Pol BSW

- NOSSA CASA, LET'S TALK ABOUT CEREBRAL PALSY: USING SOCIAL MEDIA AS A TOOL FOR KNOWLEDGE TRANSLATION

Beatriz Vieira, MS; Marina Airoldi, MS

- MOTOR OUTCOME AFTER EARLY SURGERY FOR INFANTS LESS THAN 12 MONTHS OF AGE WITH CONGENITAL HEART DEFECTS: A SYSTEMATIC REVIEW

Turki Aljuhani, MA; Sinai Zyblewski, MD; Dorothea Jenkins, MD; Heather Shaw Bonilha, Ph.D., CCC-SLP; Patty Coker-Bolt, PhD, OTR/L, FAOTA

- FUNCTIONAL ELECTRICAL STIMULATION-ASSISTED HAND THERAPY VIDEO GAMES FOR CHILDREN WITH HEMIPLEGIA: AN EXPLORATORY TRIAL

Michael J. Fu, PhD; Ryan Suder, PhD, OTR/L, BCP; Anna Curby, MS, OTR/L; Jayme Knutson, PhD

- PREVALENCE OF AUTISM SPECTRUM DISORDERS: SCHOOL-AGED STUDY IN WENZHOU, CHINA

Bingwu Xiang, MSc; Xiang Chen, PhD

- COMPETENCY-BASED TRAINING PROGRAM FOR PEDIATRIC RESIDENTS AT ALEXANDRIA UNIVERSITY CHILDREN'S HOSPITAL (AUCH) ON CEREBRAL PALSY

Tarek E. Omar, MD; Mahmoud T. Ahmed, MS

- FUNCTIONAL CONNECTIVITY IN CHILDREN WITH DEVELOPMENTAL COORDINATION DISORDER, WITH AND WITHOUT CO-OCCURRING ATTENTION DEFICIT HYPERACTIVITY DISORDER: AN EXPLORATORY STUDY

Shie Rinat, OT; Jill G. Zwicker, PhD, OT

- COMBINING THE TEST OF MOTOR PERFORMANCE WITH THE HAMMERSMITH INFANT NEUROLOGICAL EXAMINATION AS A SUCCESSFUL SECONDARY APPROACH TO EARLY DETECTION OF CEREBRAL PALSY

Lindsay Pietruszewski, DPT; Nancy Batterson, OT/L, SCFES; Mary Ann Nelin, MD; Dennis Lewandowski, PhD; Stephanie Burkhardt, MPH; Nathalie Maitre, MD

- HIP DISPLACEMENT IN CHILDREN WITH CEREBRAL PALSY ASSOCIATED WITH CONGENITAL ZIKA VIRUS INFECTION

Alessandra L. Carvalho, MD; Adriana Fernandes, BS; Paloma Ventura, BS; Carlos Brites, PhD; Rita Lucena, PhD

- STABILITY OF FUNCTIONAL MOBILITY MORE THAN 25 YEARS AFTER SELECTIVE DORSAL RHIZOTOMY

Berendina E. Veerbeek, MSc; Robert P. Lamberts, PhD, FECSS; A. Graham Fieggen, MD, FCS Neurosurgery; Nelleke G. Langerak, PhD

- CEREBRAL PALSY-RELATED MORTALITY TRENDS AND DISPARITIES IN THE UNITED STATES, 1968-2016

Laura A. Lins, MPH, ATC; Patrick L. Remington, MD, MPH; Maureen S. Durkin, PhD, DrPH

- POTENTIAL PREDICTORS FOR HEALTH-RELATED QUALITY OF LIFE IN PRESCHOOL CHILDREN WITH CEREBRAL PALSY: A FOLLOW-UP STUDY

Chia-Ling Chen, MD, PhD; Chia-Hui Chen, MS; Hsieh-Ching Chen, PhD

- INTENSIVE THERAPIES FOR CHILDREN WITH QUADRIparetic CEREBRAL PALSY

Dory Wallace, MS, OTR/L; Mary Rebekah Trucks, MS, OTR/L; Sharon L. Ramey, PhD; Stephanie C. Deluca, PhD

- USING INTENSIVE PEDIATRIC NEUROREHABILITATION IN THE TREATMENT FOR CHILDREN WITH MICROCEPHALY SECONDARY TO CASK MUTATION

Jessie E. Mann, MS; Dory Wallace, MS, OTR/L; Stephanie C. Deluca, PhD; Konark Mukherjee, MBBS, PhD

- FAMILY CENTERED CARE IN A CHILD DEVELOPMENT CENTER IN INDIA: IMPLICATIONS FOR LOW AND MIDDLE INCOME COUNTRIES

Roopa Srinivasan, DNB (Pediatrics); Vibha Krishnamurthy, MD

- EFFECTIVENESS OF THREE MEDICATIONS TO REDUCE DROOLING IN YOUNG PEOPLE WITH DEVELOPMENTAL DISABILITY

Sue Reid, PhD MCLinEpi BAppSc; Angela Guzys, BSc(Nursing); Dinah S. Reddihough, MD BSc FRACP FAFRM

- INVOLVING CHILDREN IN THE CULTURAL AND LINGUISTIC ADAPTATION PROCESS OF A LANGUAGE COMPREHENSION ASSESSMENT INSTRUMENT

JaeL N. Bootsma, MSc SLP; Jan Willem Gorter, MD PhD; Olaf Kraus de Camargo, PhD; Johanna J. Geytenbeek, PhD; Kim J. Oostrom, PhD; Dayle McCauley, MS; Sarah N. Hopmans, MS; Fiona Campbell, MSc; Tom Chau, PhD; Danijela Grahovac, MSc; Michelle Phoenix, PhD; BJ Cunningham, PhD; Marilyn K. Kertoy, PhD

- A NEW MODEL OF DIAGNOSIS OF CEREBRAL PALSY: A CASE SERIES

Anna te Velde, BAppSc (Hons); Cathy Morgan, PhD, BAppSc; Prue Golland, MPH, B.App.Sc.; Jane Berry, BAppSc (OT); Johanna Korkalainen, BAppSc (SpPath); Robyn McMurdo, BSW; Ronda Shehata, BAppSc (SpPath); Claire Galea, MEpi; B.Ed Mathematics; Esther M. Tantsis, FRACP, MBBS, BMedSci, PhD; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Iona Novak, PhD

- NEPAL CEREBRAL PALSY REGISTER (NCPR): TOWARDS DEVELOPING A PLATFORM FOR NATIONAL CEREBRAL PALSY (CP) REGISTER AND POPULATION- BASED SURVEILLANCE OF CHILDREN WITH CP IN NEPAL

Mohammad Muhi, PhD; Israt Jahan, MPH; Mahmudul Hassan Al Imam, MPH; Tasneem Karim, MBBS, MPH; Ratul Ghose, MBBS; Manik Chandra Das, MBBS; Amir Banjara Chhetri, MS; Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM

- THE IMPACT OF CEREBRAL PALSY ON GRADES AND EDUCATION

Johan Jarl, PhD

- RISK FACTORS FOR POSTOPERATIVE URINARY RETENTION AFTER ELECTIVE PEDIATRIC ORTHOPEDIC SURGERY: INCREASED RISK IN CHILDREN WITH CEREBRAL PALSY

Mohan V. Belthur, MD; Thomas Sitzman, MD, MPH; M'Hamed Temkit, PhD; Jessica D. Burns, MD

- IMPACT OF BLOOD RECOVERY ON TRANSFUSION RATES IN CHILDREN UNDERGOING LOWER EXTREMITY ORTHOPEDIC PROCEDURES

Francisco Valencia, MD; Mariam Astarabadi, MS; Esteban J. Lopez, BA; Peter Lichtenthal, MD

- FAT-FREE SOFT TISSUE DEFICIT IN CHILDREN WITH CP IS MORE PRONOUNCED IN THE APPENDICULAR THAN IN THE NON-APPENDICULAR REGIONS

Chuan Zhang, MA; Freeman Miller, MD; Gavin Colquitt, EdD; Christopher M. Modlesky, PhD

- THE AWARENESS AND USE OF DIAGNOSTIC TOOLS FOR EARLY DIAGNOSIS OF CEREBRAL PALSY IN NEW ZEALAND

Sian A. Williams, PhD; Anna Mackey, PhD; Malcolm Battin, FRACP; Nichola Wilson, PhD; Alexandra Sorhage, PGDIPHI; Alicia Spittle, PhD; N. Susan Stott, PhD

- INFLUENCE OF REGIONAL LEAN MASS ON LOWER-EXTREMITY STRENGTH IN YOUTH WITH SPASTIC CEREBRAL PALSY

Leticia Janzen, MSc; Elizabeth G. Condliffe, PhD, MD; Clodagh M. Toomey, PT, PhD; Gregor Kuntze, PhD; Shane Esau, M.Kin.; Laura K. Brunton, PT, PhD; Carolyn A. Emery

- PATIENT ENGAGEMENT IN THE DEVELOPMENT OF A COACHING INTERVENTION: STRATEGIES AND PERCEIVED BENEFITS

Tatiana Ogourtsova, PhD; Maureen O'Donnell, MD MSC FRCPC; Bahar Kasaai, PhD; Annette Majnemer, PhD, OT

- CHOP: CENTER VARIABILITY IN BASELINE PRESENTATION AND MANAGEMENT

Maria Juricic, PT; Emily Schaeffer, PhD; Stacey D. Miller, PT; Benjamin J. Shore, MD, MPH, FRCSC; Unni G. Narayanan, MBBS, MSc, FRCS(C); Kishore Mulpuri, MBBS, MS, MHSc

- UNILATERAL HIP RECONSTRUCTION SURGERY FOR CHILDREN WITH CP

Maria Juricic, PT; Stacey D. Miller, PT; Mariana Gutierrez Salazar, MS; Nandy E. Fajardo, PT; Lise Leveille, MD, MHSc; Kishore Mulpuri, MBBS, MS, MHSc

- ARE THE DOMAINS OF THE CPQOL ADEQUATE FOR EXPLORING QUALITY OF LIFE IN CHILDREN WITH CEREBRAL PALSY ASSOCIATED WITH INTELLECTUAL DISABILITIES IN SPAIN?

Marta Badia, PhD; Begoña Orgaz, PhD; Inmaculada Riquelme, PhD; María Gómez-Vela, PhD

- A PROSPECTIVE, MULTI-CENTER INITIATIVE TO REDUCE INTRATHECAL BACLOFEN PUMP SURGICAL SITE INFECTION: A CEREBRAL PALSY RESEARCH NETWORK QUALITY IMPROVEMENT PROJECT.

Robert J. Bollo, MD; Amy F. Bailes, PT, Ph.D; Brandon G. Rocque, MD; Jeffrey S. Raskin, MD; Paul Gross, BA

- IMPROVING EPILEPSY CONTROL AMONG CHILDREN WITH CEREBRAL PALSY IN RURAL BANGLADESH

Tasneem Karim, MBBS, MPH; Manik Chandra Das, MBBS; Mohammad Muhit, PhD; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM; Shekeeb S. Mohammad, MBBS, FRACP, PhD

- NUTRITIONAL STATUS OF CHILDREN WITH CEREBRAL PALSY: FINDINGS FROM HOSPITAL-BASED SURVEILLANCE IN VIETNAM

Tasneem Karim, MBBS, MPH; Israt Jahan, MPH; Rachael Dossetor, BSc, BA; Nguyen Giang; Nguyen Van Anh; Trinh Dung; Cao Chau; Nguyen Van Thuong; Nadia Badawi, PhD, FRACP, FRCPI, MSc; Nguyen Van Bang; Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM; Elizabeth Elliott

- COMMUNICATION AND EATING DATA COLLECTED BY CEREBRAL PALSY REGISTRIES

Mary Jo C. Hidecker, PhD; Jenny Nybonn, BA; Kate Himmelmann, MD, PhD; Peter L. Rosenbaum, MD CM FRCPC

- A SYSTEMATIC REVIEW OF INSTRUMENTED DEVICES REPORTED TO MEASURE MUSCLE MECHANICAL PROPERTIES IN CHILDREN WITH DEVELOPMENTAL DISORDERS.

Leanne M. Johnston, PhD; Miran Goo, PT; Francois Hug, PhD; Kylie Tucker, PhD

- LOW- VERSUS HIGH-TECH EVALUATIONS OF VISUAL ABILITIES IN CHILDREN WITH CEREBRAL VISUAL IMPAIRMENT

Corinna M. Bauer, PhD; Linda Lawrence, MD; Emma S. Bailin, BS; Christopher Bennett, PhD; Peter Bex, PhD; Lotfi B. Merabet, Ph.D.

- COMPARISON OF THE RESULTS OF TWO DIFFERENT APPROACHES AT RECTUS FEMORIS REGARDING THE EFFECTS AT PELVIS AND KNEE RANGE OF MOTION IN PATIENTS WITH CEREBRAL PALSY

Mauro C. de Moraes Filho, MD, MSc, PhD; Marcelo H. Fujino, MD; Cátia Kawamura, PT; André Lima, MD; Francesco Blumetti, MD, MSc, PhD; José Augusto Lopes, MSc; Daniella Neves, MD

- DEVELOPMENT OF ADAPTIVE BEHAVIOR IN INFANTS AND TODDLERS WITH NEUROMOTOR DELAY

Lin-Ya Hsu, PhD; Sarah W. McCoy, PhD; Michelle Paulson, BS; Stacey C. Dusing, PhD; Michele A. Lobo, PT, PhD; Regina T. Harbourne, PhD, PT

- DIFFERENCES IN RESPONSES TO ENGLISH AND KOREAN VERSIONS OF THE CAREGIVER PRIORITIES & CHILD HEALTH INDEX OF LIFE WITH DISABILITIES (CPCHILD)

Moon Seok Park, MD, PhD; Ki Hyuk Sung, PhD; Soon-Sun Kwon, PhD; Gyeong Hee Cho, PhD; Chin Youb Chung, MD, PhD; Clarissa Encisa, MPH; Huroy Menal, Bsc; Unni G. Narayanan, MBBS, MSc, FRCS(C);

- THE DISTRIBUTION OF NEUROIMAGING PATTERNS IN CHILDREN WITH CEREBRAL PALSY - SUBTYPES AND ASSOCIATED IMPAIRMENTS

Kate Himmelmann, MD, PhD; Veronka Horber, MD; Elodie Sellier, MD, PhD; Javier de la Cruz, MD; Ingeborg Krägeloh-Mann, Prof. Dr. Med.

- THE RELATIONSHIP BETWEEN VERY EARLY BRAIN MICROSTRUCTURE AT 32 AND 40 WEEKS POSTMENSTRUAL AGE AND 12-MONTH MOTOR OUTCOME IN VERY PRETERM BORN INFANTS: A DIFFUSION MRI STUDY

Joanne M. George, PhD; Kerstin Pannek, PhD; Jurgen Fripp, PhD; Mark Chatfield, BA, MS; Robert Ware, PhD; Stephen Rose, PhD; Paul Colditz, PhD, MD; Roslyn N. Boyd, PhD, BAppSc (PT), BSc, PGrad

- HOW DIFFERENT ARE AMBULATORY PATIENTS WITH EARLY-ONSET HEREDITARY SPASTIC PARAPARESIS AND SPASTIC, DIPLEGIC CEREBRAL PALSY?

Robert Wimberly, MD; Sebastian Maenza, MD; Mauricio Delgado, MD; Anthony Anderson, MSc; Linsley Smith, RN; Anthony Riccio, MD; Kirsten Tulchin-Francis, PhD

- UNCERTAINTY ABOUT UNCERTAINTY: ±5° MIGHT NOT MEAN WHAT YOU THINK

Elizabeth Boyer, PhD; Andrew Georgiadis, MD; Tom Novacheck, MD; Michael H. Schwartz, BS, MS, PhD

- A RANDOMIZED CONTROLLED TRIAL IN PATIENTS WITH CEREBRAL PALSY TREATED BY BOTULINUM TOXIN-A FOR SPASTIC PRONATION DEFORMITY: HOME EXERCISE PROGRAM VERSUS COMBINED TREATMENT WITH TWISTER AND HOME EXERCISE PROGRAM

Merve Akyuz, MD; Melike Akarsu, MSc; Cagla Karacan, PhD; Erbil Dursun, MD; Tugba Gokbel, MD; Nigar Dursun, MD

- CONSISTENCY OF PROBLEM IDENTIFICATION AMONG PHYSICAL THERAPISTS WITHIN A CLINICAL MOTION LABORATORY

Jean L. Stout, PT, MS; Andrew Georgiadis, MD; Tom Novacheck, MD

- PRACTICE VARIATION IN TREATMENT OF SPASTICITY IN CHILDREN WITH SPASTIC DIPLEGIC CP IN NORTH AMERICA

Paul Gross, BA; Kristie F. Bjornson, PhD, PT, PCS; Darcy L. Fehlings, MD; Jacob Kean, PhD; Shenandoah Robinson, MD; Joline Brandenburg, MD

- STEPWATCH ACTIVITY MONITOR AND ACTIGRAPH USE IN WHEELCHAIR ATHLETES

Kirsten Tulchin-Francis, PhD; Wilshaw Stevens, Jr, BS; Robert Wimberly, MD; Fernanda Harlett, MBA

- EFFECTS AND FEASIBILITY OF AN INDIVIDUALIZED INTENSIVE GOAL TRAINING PROGRAM FOR ADOLESCENTS WITH CEREBRAL PALSY

Marina B. Brandao, PhD; Aline M. Feitosa, OT,PT; Ana Paula M. Silverio, OT; Andrew Gordon, PhD; Marisa C. Mancini, PhD

- A SYSTEMATIC REVIEW OF RESPIRATORY INTERVENTIONS FOR CHILDREN AND YOUNG PEOPLE WITH CEREBRAL PALSY

Katherine M. Langdon, FRACP; Amanda M. Blackmore, PhD; Noura Gibson, PhD; Monica S. Cooper, FRACP; Lisa Moshovis, BA,Sc; Andrew Wilson, PhD

- TRABECULAR BONE SCORE IS LOWER IN THE LUMBAR SPINE OF CHILDREN WITH CEREBRAL PALSY THAN IN TYPICALLY DEVELOPING CHILDREN

Suzanne Vogler, MS; Chuan Zhang, MA; Freeman Miller, MD; Christopher M. Modlesky, PhD

- TRANSCULTURAL ADAPTATION AND VALIDATION FOR USE IN BRAZIL OF THE PARTICIPATION AND ENVIRONMENT MEASURE CHILDREN AND YOUTH (PEM-CY)

Egmar Longo, PhD; Elida Rayane V. Galvão, MSc; Ana Carolina de Campos, PhD; Priscila B. Lopes, N/A, MS; Thais Massetti, PhD; Alyne Oliveira, PhD; Ana Paula M. Cazeiro, PhD

- TRANEXAMIC ACID USE IN HIP RECONSTRUCTION SURGERY IN CHILDREN WITH CEREBRAL PALSY DOES NOT DECREASE BLOOD LOSS AND TRANSFUSION RATES

Pooya Hosseinzadeh, MD; Arya Minaie, BA; Maksim Shlykov, MD; Jaclyn A. Schipper, BA; Elizabeth Forsen

- INTEGRATIVE EMR AND THERAPY SESSION-BASED PATTERN ANALYSIS TO IDENTIFY SUBGROUPS OF CHILDREN WITH CEREBRAL PALSY FOR HIGH RESOLUTION COMPARATIVE EFFECTIVENESS RESEARCH

Alexis Mitelpunkt, MD, BSc; Kelly R. Greve, PT, DPT, PhD, ABPTS Board Certified Clinical Specialist in Pediatrics; Jason Long, PhD; Jessica L. Hobart; Jilda Vargus-Adams, MD MSc; Bruce J. Aronow, PhD; Amy F. Bailes, PT PhD.

- POSITIONING AFTER HIP CONTAINMENT SURGERY: ARE HIP ABDUCTION SPLINTS EFFECTIVE IN MAINTAINING HIP POSITION?

Daphne O'Young, BSc.(OT); Sonja Magnuson, BMR-OT, MSc-Rehab Sc; Kishore Mulpuri, MBBS, MS, MHSc; Jill G. Zwicker, PhD, OT

- DEEP BRAIN STIMULATION IN DYT6 DYSTONIA: CLINICAL OUTCOME AND PREDICTIVE FACTORS

Annika Danielsson, MD; Kristina Tedroff, MD, PhD

- PARTICIPATORY PROFILES OF CHILDREN AND ADOLESCENTS WITH CEREBRAL PALSY: WITH AND WITHOUT MENTAL HEALTH ISSUES

Dido Green, PhD; Karina Trejo, BSc; Lilly Augustine, PhD; Mats Granlund, PhD; Eva Bjork

- WHAT IS THE EVIDENCE FOR NON-OPERATIVE MANAGEMENT OF SCOLIOSIS IN PATIENTS WITH CEREBRAL PALSY?

Annabel Dekker, MBChB; N. Susan Stott, MBChB PhD FRACS; Jimmy Chong, MbChB

- EFFECT OF POSITIONING ERROR ON THE HILGENREINER EPIPHYSEAL ANGLE COMPARED TO THE FEMORAL NECK-SHAFT ANGLE IN CHILDREN WITH CEREBRAL PALSY

Kishore Mulpuri, MBBS, MS, MHSc; Emily Sullivan; Carly Jones, BA,Sc; Stacey D. Miller, PT; Kyoung Min Lee, MD, PhD; Moon Seok Park, MD, Ph.D.; David R. Wilson, PhD; Agnes d'Entremont, PhD, PEng

- CHALLENGES PRIMARY CARE PROVIDERS FACE WHEN CARING FOR CHILDREN WITH MEDICAL COMPLEXITY.

Todd Savolt, BS; Timothy R. Smith, MD; Emily Goodwin, MD; Michael Kennedy, MD

- ASSESSING THE RELATIONSHIP BETWEEN ENGAGEMENT AND CLINICAL OUTCOMES AT AN INTENSIVE UPPER EXTREMITY REHABILITATION DAY CAMP FOR CHILDREN WITH UNILATERAL SPASTIC CEREBRAL PALSY

Karen Chin, MA; Kathleen Friel, PhD; Christine Imms, PhD; Andrew Gordon, PhD

- INFLUENCE OF A DUAL-TASK ON PREFRONTAL CORTICAL ACTIVATION IN CHILDREN WITH HEMIPLEGIC CEREBRAL PALSY

Swati M. Surkar, PhD; Rashelle Hoffman, DPT; Regina T. Harbourne, PhD, PT; Max Kurz, PhD



AACPDM

AACPDM Office
555 East Wells, Suite 1100
Milwaukee, WI 53202

Phone: 414.918.3014

Fax: 414.276.2146

Email: info@aacpdm.org