

Dear Institutional and Industry Professionals,

Bonjour! We are thrilled to welcome you to the American Academy for Cerebral Palsy and Developmental Medicine's (AACPDM) 78th Annual Meeting in the stunning city of Québec. The breadth and richness of the meeting content is impressive and inspiring and has been generated by so many of you – thank you! This year was a banner year for abstract submissions. The final program includes: 39 Morning Seminars, 39 Mini-Symposia, 136 Free Paper Presentations, 170 Scientific Posters, 48 Demonstration Posters, 18 Clinical Observation or Single Case Study Posters and 8 Preconference Sessions.

Our meeting theme is "Translating Discovery", a concept that threads its way through many of the planned presentations and reveals discovery in its many phases from bench research to implementation science. We have a broad preconference agenda. Topics range from specific skill building, such as interpreting gait lab kinematics and developing behavioral management strategies, to much broader approaches, such as initiating a research program. Our keynote speakers have been carefully selected and are leaders in their fields. As always, we value community partnership, and the Community Forum, hosted by the AACPDM Community Council, offers opportunities for individuals and families with lived experience to learn and participate during our annual conference.

We invite you to the Welcome Reception from 6-8pm on Wednesday, October 23 where we can all say hello and take a sneak peek at the poster presentations. Please join us as well for dinner as part of the Networking Gala at the Québec Armoury on Friday, October 25. The beautiful stone architecture and soaring ceilings in a venue classified as a National Historic Site will surely set the stage for an enjoyable evening. Most of all, it will provide a fantastic backdrop for spending time together and, of course, dancing.

"Translating Discovery" is elemental to our Academy, the fire in all of us. Our Academy celebrates the power of transdisciplinary collaboration and we come together across our various specialties, backgrounds and nationalities to drive the medical fields working on childhood on-set disability forward. We all learn from one another. We hope that you discover something at the meeting that will inspire some of your next steps.



Laurie Glader, MD 1st Vice Presient



Vedant Kulkarni, MD, FAAOS, FAOA Scientific Program Committee Co-Chair



Scientific Program Committee Co-Chair



#### PRESIDENT

M. Wade Shrader, MD Nemours A.I. duPont Hospital for Children Wilmington, DE

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Columbus, OH

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Nancy Murphy, MD University of Utah Health Sciences Center Salt Lake City, UT

Colleen Peyton, PT, DPT Northwestern University Chicago, IL

Verónica Schiariti, MD MHSc PhD
Division of Medical Sciences, University of Victoria
Victoria, BC

Benjamin J. Shore, MD MPH FRCSC Harvard Medical School Boston Children's Hospital

Sruthi P. Thomas, MD, PhD Baylor College of Medicine Texas Children's Hospital Houston, TX

Boston, MA

Robert Lane Wimberly, MD Scottish Rite for Children University of Texas Southwestern Medical Center Dallas. TX

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American Academy for Cerebral Palsy and Developmental Medicine

# **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

# **Office Staff**

Tamara Wagester – Executive Director Sarah Shier – Senior Meetings Manager Mckenzie Morgan – Meetings Manager Amanda Prendergast – Communications Manager Claire Lofald – Membership & Administrative Coordinator

# 2024 Local Host

Emilie Croteau MD, PM&R

# **Future Annual Meetings**

# 79th Annual Meeting

October 15-18, 2025 New Orleans Marriott New Orleans, Louisiana

# 80th Annual Meeting

September 27-30, 2026 Marriott Philadelphia Downtown Philadelphia, Pennsylvania

# **Meeting at a Glance**

Wednesday, October 23, 2024	
8:00 AM – 9:00 AM Committee Chair Trai	ning
9:00 AM - 10:00 AM AACPDM All Committee	tees
Meeting	
10:00 AM – 12:00 PM   Committee Meetings	
8:00 AM – 12:00 PM Preconference Sessi	ons
PC1: An International	
Perspective on Techn	ology
Integration in Rehabi	litation:
Overcoming Barriers	and
Innovating Care TICKET	
8:00 AM – 12:00 PM PC2: Foot Deformities	5
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Comprehensive Appr	
8:00 AM – 12:00 PM PC3: HABIT-ILE Maste	
Unveiling the Key Ing	
and Practical Implem	
Needs for Children wi	th
Cerebral Palsy TICKET	
8:00 AM – 12:00 PM PC4: Transforming Yo	
Stage Research Progr	
an Established One 🗉	
1:00 PM – 5:00 PM PC5: Learning to Read	I
Interpret Gait Lab Kin	
and Kinetics: Testing	Your Skills
[TICKET]	
1:00 PM – 5:00 PM PC6: Operationalizing	
Box of Coaching: The Coaching Tool	Applied
1:00 PM – 5:00 PM PC7: Initiating a Research	
Palsy or Other Child-0	
Developmental Disab	
(TICKET)	
1:00 PM – 5:00 PM PC8: Unlocking Soluti	ons:
Strategies for Managi	
Self-Injurious and Age	-
Behaviors in Pediatric	
and Adult Population	s
with Developmental	
Intellectual Disabilitie	S (TICKET)
12:00 PM – 1:00 PM Committee Chair/Boa	rd Lunch
1:00 PM – 5:00 PM Board of Directors Me	eeting
5:30 PM – 6:00 PM New Member and Ear	rly Career
3.30 FIVI - 0.00 FIVI   INEW INTERTIDET ATTO LAT	
Welcome Reception	

Thursday, October 24, 2024	
7:00 AM – 8:00 AM	Breakfast in the Exhibit Hall
8:00 AM - 9:30 AM	Opening General Session
9:45 AM – 10: 45 AM	Morning Seminar (#1-13)
10:45 AM – 11:45 AM	Coffee Break and Exhibit/
	Poster Review
11:45 AM – 12:45 PM	Lunch
12:45 PM – 2:15 PM	Free Paper Sessions A-D
	A: Care Delivery & Epidemiology
	A: Care Delivery & Epidemiology B: Neuroscience
	,
	B: Neuroscience
2:30 PM – 4:00 PM	B: Neuroscience C: Orthopaedics 1
2:30 PM – 4:00 PM 4:15 PM – 6:15 PM	B: Neuroscience C: Orthopaedics 1 D: Rehabilitation & Tone
	B: Neuroscience C: Orthopaedics 1 D: Rehabilitation & Tone General Session
4:15 PM – 6:15 PM	B: Neuroscience C: Orthopaedics 1 D: Rehabilitation & Tone General Session Mini Symposia (#1-13)

Friday, Octobe	r 25, 2024
7:00 AM – 8:00 AM	Breakfast in the Exhibit Hall
8:00 AM – 9:00 AM	Morning Seminars (#14-26)
9:15 AM – 10:15 AM	General Session
10:15 AM – 10:45 AM	Coffee Break in the Exhibit Hall
10:45 AM – 12:30 PM	Free Paper Sessions E-H E: Early Development 1 F: Lifespan & Equity G: Orthopaedics 2 H: Therapeutic Interventions
12:30 PM – 1:30 PM	Lunch
1:30 PM – 2:30 PM	Coffee Break and Exhibit/ Poster Review
1:45 PM - 2:15 PM	International Scholar Highlight
2:30 PM - 4:30 PM	Mini Symposia (#14-26)
4:30 PM – 7:00 PM	Leisure Time
7:00 PM – 11:59 PM	Networking Gala TICKET

Saturday, Octo	ber 26, 2024
7:00 AM – 8:00 AM	Breakfast in the Exhibit Hall
8:00 AM – 9:00 AM	Morning Seminars (#27-39)
8:15 AM – 3:00 PM	Community Forum
9:00 AM – 9:30 AM	Coffee Break in the Exhibit Hall
9:30 AM – 11:15 AM	Free Paper Sessions I-L
	l: Basic Science & Genetics J: Early Development 2 K: Mental Health, Pain, & Nutrition L: Participation & Gait Analysis
11:30 AM – 1:00 PM	Closing General Session
1:00 PM - 2:00 PM	Lunch
2:00 PM - 4:00 PM	Mini Symposia (#27-39)
2:00 PM - 6:00 PM	Board of Directors Meeting

# 2023-2024 AACPDM Board of Directors

M. Wade Shrader, MD - President Laurie Glader, MD - First Vice President Theresa Sukal-Moulton, PT, DPT, PhD - Second Vice President Joline Brandenburg, MD – Treasurer Golda Milo-Manson, MHSc, MD, FRCPC -Secretary Lesley Pritchard, PT, PhD – Past President Tom F. Novacheck, MD – Past President Jeremy Bauer, MD - Director Colleen Peyton, PT, DPT – Director Robert Lane Wimberly, MD – Director Anna McCormick, MD, FRCP(C) – Director Nancy Murphy, MD – Director Verónica Schiariti, MD, MHSc, PhD – Director Benjamin J. Shore, MD, MPH, FRCSC – Director

# **Ex-Officio Board Members**

Angela Harris – Community Council Chair Jilda N. Vargus-Adams, MD, MSc – Care Pathways Chair Julieanne Sees, DO, MBA, FAOAO, FAOA – Webmaster William L. Oppenheim, MD – Historian Tamara Wagester – Executive Director

Sruthi P. Thomas, MD, PhD – Director

# 2024 Scientific Program Committee

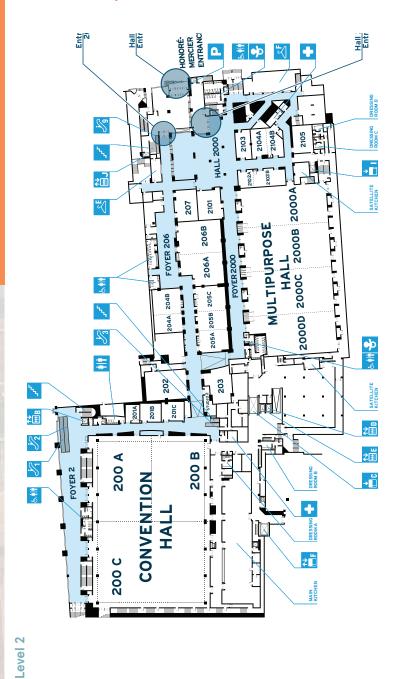
Laurie Glader, MD

Sruthi Thomas, MD, PhD Vedant Kulkarni, MD Theresa Sukal-Moulton, PT, DPT, PhD David Frumberg, MD Paige Church, MD Mercedes Ruiz Brunner, PhD Michelle R. Christie, MD Maurice G. Sholas, MD PhD Unoma Akamagwuna, MD Jill Heathcock, MPT PhD Edward Dabrowski, MD Desiree Maltais, PT, PhD Kelli Chaviano, DO Christos Papdelis, PhD Heidi Haapala, MD Pooya Hosseinzadeh, MD Nancy Lennon, DPT, MS, PT Eric Chin, MD Siddharth Srivastava David M. Scher, MD Jill E. Larson, MD Rachel L. DiFazio, PhD, RN, PNP Lisa Letzkus, NP Kristie E. Malik, MD Amanda Sarafian, EdD, OTR/L Joslyn Gober, DO Cristina Sarmiento, MD Sonia Khurana, PT, PhD Saihari Dukkipati, PhD Corinna Bauer, PhD Laura Gilbert, DO, MBA Ahlam Zidan, MSc. PT, PhD (c) Meghan Munger, PhD, MPH

# **AACPDM Past and Future Presidents**

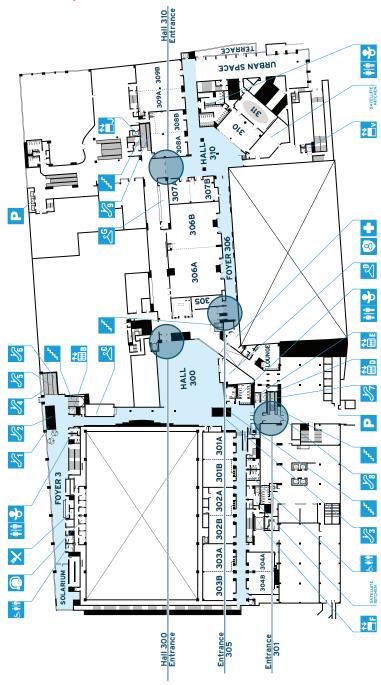
AACI DIN I ast and I utule I le	soluents
Winthrop Phelps, MD1948	Robert P. Christopher, MD1987
George G. Deaver, MD1949	Leon Root, MD1988
Earl R. Carlson, MD1950	Alfred Healy, MD1989
Bronson Crothers, MD1951	Gayle G. Arnold, MD1990
Leslie B. Hohman, MD1952	James R. Gage, MD1991
Arnold Gesell, MD1953	John F. McLaughlin, MD1992
Meyer A. Perlstein, MD1954	Michael A. Alexander, MD1993
Lenox D. Baker, MD 1955	Helen M. Horstmann, MD1994
Margaret H. Jones Kanaar, MD1956	Charlene Butler, EdD1995
Nicholson J. Eastman, MD1957	Robert K. Rosenthal, MD1996
William T. Green, MD1958	Peter L. Rosenbaum, MD1997/1998
Alvin J. Ingram, MD1959	Dennis C. Harper, PhD1999
Raymond R. Rembolt, MD1960	John F. Mantovani, MD2000
G.W.R. Eggers, MD1962	Michael D. Sussman, MD2001/2002
Russell Meyers, MD1963	James A. Blackman, MD2003
Eric Denhoff, MD1964	Robert W. Armstrong, MD004
Chester A. Swinyard, MD1965	Luciano S. Dias, MD2005
Samuel B. Thompson, MD1966	Barry S. Russman, MD2006
Sedgwick Mead, MD1967	William L. Oppenheim, MD2007
William Berenberg, MD1968	Diane L. Damiano, PhD PT2008
William J. Hillman, MD1969	Hank G. Chambers, MD2009
Harriet E. Gillette, MD1970	Deborah J. Gaebler-Spira, MD2010
Henry H. Banks, MD1971	Scott A. Hoffinger, MD2011
Lawrence T. Taft, MD1972	Joseph P. Dutkowsky, MD2012
Robert L. Samilson, MD1973	Maureen E. O'Donnell, MD MSc FRCP (C) 2013
Elliott D. O'Reilly, MD1974	Richard D. Stevenson, MD2014
Hans U. Zellweger, MD1975	Darcy Fehlings, MD MSc FRCP (C)2015
Eugene E. Bleck, MD1976	Eileen Fowler, PhD PT2016
Leon Greenspan, MD1977	Unni Narayanan, MBBS MSc FRCP (C) 2017
Gerald Solomons, MD1978	Sarah Winter, MD2018
Hyman H. Soboloff, MD1979	Jilda Vargus-Adams, MD, MPH2019
Leonard F. Bender, MD1980	Mauricio Delgado, MD2020
Fred P. Sage, MD 1981	Susan Sienko, PhD2021
Paul H. Pearson, MD1982	Tom F. Novacheck, MD2022
Harold B. Levy, MD1983	Lesley E. Pritchard, PhD, PT2023
David H. Sutherland, MD1984	M. Wade Shrader, MD2024
Robert V. Groover, MD1985	Laurie Glader, MD2025
Alfred L. Scherzer, MD1986	Theresa Sukal-Moulton, PT, DPT, PhD 2026

# **Quebec City Convention Center Floor Plans**





# **Quebec City Convention Center Floor Plans**



Level 3

# **Purpose**

The educational program of the American Academy for Cerebral Palsy and Developmental Medicine (AACPDM) 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, dieticians, rehabilitation engineers, kinesiologists, nurses, psychologists, special education teachers and educators. Note: All levels of skill will be addressed.

# **AACPDM Vision**

To advance the health and well-being of all individuals with cerebral palsy and other childhood-onset disabilities.

# **AACPDM Mission**

Empowering and supporting a collaborative multidisciplinary community that

- provides accessible and robust scientific education for health professionals and researchers
- fosters innovative research as well as its dissemination and implementation
- advocates for equitable access to evidence based and patient centered care



# **AACPDM Member Benefits**

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.

# **Advisor Support Program**

The AACPDM Membership Committee launched an Advisor Support Program to match current AACPDM members with new members to ensure they get the most out of their membership.

# **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 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 childhood-onset 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 electronic subscription.

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

# Research

A key mission of the Academy is to promote excellence in research for the benefit of persons with cerebral palsy and childhoodonset disabilities. One way in which the Academy promotes research is through annual Research Grants. Historically, the AACPDM has partnered with the Pedal with Pete Foundation, and the Center for Progress to fund multiple grants, up to \$25,000 USD each! Areas of research should focus on topics related to cerebral palsy. AACPDM is excited to announce in 2024 that the grant awards will be up to \$30,000 USD.



Join or Renew Today!



# Website

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

# **Committees**

The heart of the Academy is our committees. 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
- Communications
- Complex Care
- Education
- International Affairs
- Lifespan Care
- Membership
- Nominating
- Publications
- Research
- · Scientific Program

Learn more about the Committees and join one today!

# Councils

The AACPDM offers an opportunity to participate in a Committee or a Council. Councils are similar to Committees, but the terms of service, objectives, and reporting structures can differ based on the unique nature of the Council charge.

- · Community Council
- Care Pathways Council



# Thank you to our Committees and Councils

Committee/Council	CHAIR
Adapted Sports & Recreation	Susan V. Duff, EdD, MPT, OT/L, CHT
Advocacy	Lauren Fetsko, DO
Awards	Michelle R. Christie, MD
Communications	Mercedes Ruiz Brunner, PhD
Complex Care	Kristie E. Malik, MD
Education	Maurice G. Sholas, MD, PhD
International Affairs	Marcin J. Bonikowski, MD, PhD
Lifespan Care	Unoma Akamagwuna, MD
Membership	Kathryn Sigford, MD
Publications	Unni G. Narayanan, MBBS, MSc, FRCS(C)
Research	Jill Heathcock, MPT, PhD
Nominating	Lesley Pritchard, PT, PhD
Scientific Program	Vedant Kulkarni, MD and Sruthi P. Thomas, MD, PhD
Community Council	Angela Harris
Care Pathways Council	Jilda N. Vargus-Adams, MD, MSc

# **THANK YOU!**

# Join an AACPDM Special Interest Group (SIG) AACPDM SIGs offer additional herefits for Aards

SIGs offer additional benefits for Academy members, such as access to subject-specific information and resources, educational opportunities, networking with like-minded peers, and volunteer leadership opportunities.

#### What SIGs does AACPDM offer?

- Adults and Aging
- Adapted Sports and Recreation
- Complex Care
- Technology



Visit www.aacpdm.org/about-us/aacpdm-special-interest-groups-sigs for more information!

# Registration

Annual Meeting registration will be open online through October 21, 2024.

# **E-Poster**

An E-Poster is an electronic version of the traditional paper poster in PowerPoint format, and is displayed on a personal devise using the mobile app. In addition to traditional paper posters on bulletin boards, Scientific, Demonstration and Clinical Observation/Single Case Study Poster Presenters were also required to submit their poster as an E-Poster. There will be computer kiosks throughout the Quebec City Convention Center dedicated to E-Posters. 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**

Some medical devices or pharmaceuticals not cleared by the FDA or cleared by the FDA for a specific use only may be used "off-label" (i.e., a use not described on the product's label) if, in the judgment of the treating physician, such use is medically indicated to treat a patient's condition. "Off label" uses of a device or pharmaceutical may be described in AACPDM

educational programs or publications so long as the lack of FDA clearance for such uses is also disclosed. Results from scientific studies known to the author or presenter relating to the described intended use should be discussed, if so doing will not adversely affect the study or violate some other regulatory requirement. Some drugs or medical devices described or demonstrated in Academy educational materials or programs have not been cleared by the

FDA or have been cleared by the FDA for specific use only. The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or device he or she wishes to use in practice.

# **Americans with Disabilities Act**

The AACPDM wishes to ensure that no individual with a disability is excluded, denied services, or otherwise treated differently than other individuals because of the absence of auxiliary aides and services. If you need any auxiliary aids or services identified in the Americans with Disabilities Act please notify AACPDM at least 14 working days prior to the program to allow time to acquire the support needed.

#### **SESSION EVALUATIONS**

We need your feedback! As a dedicated attendee of the AACPDM 78th Annual 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 the AACPDM 78th Annual Meeting in the in the following ways:

 Participants will be asked to provide input on the educational program of the AACPDM 78th Annual Meeting through the online CME /CEU Claim System when claiming credit for participation.

# Insurance/Liabilities and Disclaimer

The AACPDM will not be held responsible for injuries or for loss or damage to property incurred by participants or guests at the Annual Meeting, including those participating in social and fitness events. Participants and quests are encouraged to take out insurance to cover loss incurred in the event of cancellation, medical expenses, or damage to or loss of personal effects when traveling outside of their own country. The AACPDM cannot be held liable for any hindrance or disruption of Annual Meeting proceedings arising from natural, political, social or economic events, or other unforeseen incidents beyond its control. Registration of a participant implies acceptance of this condition. The material presented at this continuing medical education activity is made available for education purposes only. The material is not intended to represent the only, nor necessarily the best, methods or procedures appropriate for the medical situations discussed, but rather is intended to present an approach, view, statement, or opinion of the faculty that may be helpful to

others who face similar situations.

#### Disclosure

The presenting authors on the Free Papers and Posters are underlined. All corresponding authors were responsible for querying the coauthors 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
- Miscellaneous, non-income support (e.g., equipment or services), commercially derived honoraria, or other non-research 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.

# AACPDM Online Job Board Start your job search today!

**Looking for a place to post a job opening?** AACPDM offers options to help you connect with qualified professionals in a variety of fields and specialties.

www.aacpdm.org/resources/job-postings

# 2024 Scientific Program Overview

This year's program was developed from a submission total of 650 abstracts. All electronically submitted abstracts were independently rated by the multidisciplinary scientific program committee of 34 members. The committee met in March 2024 to review the abstracts and finalize the program (e.g. Scientific poster or free paper, demonstration poster, clinical observation or single case study posters). Scientific posters and free papers were rated (masked to authors) on research question/ objectives, design, methodology, conclusions and relative impact, relevance and importance to the care and treatment of children with childhood onset disabilities. Mini Symposia were rated (unmasked) on course objectives, content, presenters and level of impact, relevance and importance to conference attendees and the AACPDM membership at large. The feedback from the previous year's evaluations are utilized in the process of creating the program with the aim of better meeting the needs of meeting attendees.

# The 2024 program includes:

- 8 Pre-Conference Sessions
- 39 Morning Seminars
- 39 Mini Symposia
- 136 Scientific Papers
- 170 Scientific Posters
- 48 Demonstration Posters
- 18 Clinical Observation/Single Case Study

#### **Scientific Review Process**

- · Blinded abstracts submitted electronically
- Abstracts are scored independently by the program committee with scores submitted electronically and then tallied/averaged
- Highest scored abstracts are selected
- Program Committee meets in March to make final decisions re: scientific program planning and to ensure that the program is balanced in content.

# Free Papers and Posters are rated on:

- Research Question/Objectives
- · Research Design, Methodology
- Impact, Relevance & Importance

## Mini Symposia are rated on:

- · Course Objective
- Content/Presenters

• Impact, Relevance & Importance

# Morning Seminars are rated on:

- · Course Objective
- Content/Presenters
- Impact, Relevance & Importance

# **Scholarships**

The American Academy for Cerebral Palsy and Developmental Medicine Scholarship Program supports the vision of the AACPDM to advance the health and well-being of all individuals with cerebral palsy and other childhood-onset disabilities. The Academy seeks applications from North America and internationally who are highly motivated, currently in clinical practice, and who are in a position which will enable them to disseminate knowledge acquired at the meeting to others in their home country once they return. Particular emphasis is placed on assisting those from areas with under supported medical systems and limited financial resources. The AACPDM also awards scholarships to students each year so that they may attend the Annual Meeting.

# **Grant Awards**

A key mission of the Academy is to promote excellence in research for the benefit of persons with cerebral palsy and childhoodonset disabilities. One way in which the Academy promotes research is through the annual Research Grants. Historically, the AACPDM has partnered with the Pedal with Pete Foundation, and the Center for Progress to fund multiple grants, up to \$30,000 USD each! Areas of research should focus on topics related to cerebral palsy. Research grant funding supports high-quality, clinical research projects/programs. The award may be used to fund planning for a project or to complete a small research project of high impact in any area relevant to the AACPDM's mission. The successful applicant will have a solid track record in childhood-onset disability research. The Principal Investigator on the grant must be an AACPDM member in good standing. Only one grant application per member will be considered in a given budget year.

# Program and Events — Wednesday, October 23, 2024

8:00 AM - 9:00 AM EDT

**Committee Chair Training** 

9:00 AM - 10:00 AM EDT

**AACPDM All Committees Meeting** 

10:00 AM - 12:00 PM EDT

**Committee Meetings** 

**Preconference Sessions** 

8:00 AM - 12:00 PM EDT

PC1: An International Perspective on Technology Integration in Rehabilitation: Overcoming Barriers and Innovating Care Anna McCormick MD FRCPC, Danielle Levac pht, MSc, PhD, Elizabeth Condliffe PhD, MD, Claire Shrader MS OTR/L, R. James Cotton MD, PhD, Theresa Sukal Moulton PT, DPT, PhD, Katherine Steele PhD, Christelle Pons MD, PhD, Laura Prosser PT, PhD, Andrew H. Fagg, PhD

8:00 AM - 12:00 PM EDT

# PC2: Foot Deformities in Cerebral Palsy: A Comprehensive Approach

Rachel Thompson MD, Jason Howard MD, Robert Wimberly MD, Pooya Hosseinzadeh MD, Andrew Georgiadis MD, Mara Karamitopoulos MD, MPH, Benjamin Shore MD, MPH, FRCSC, Robert Kay MD, Kristan Pierz MD, Andrew Skalsky MD

8:00 AM - 12:00 PM EDT

PC3: HABIT-ILE Masterclass: Unveiling the Key Ingredients and Practical Implementation Needs for Children with Cerebral Palsy

Yannick Bleyenheuft PhD, Daniela Ebner-Karestinos PhD, Rodrigo Araneda PhD, Geoffroy Saussez PhD - Physiotherapist 8:00 AM - 12:00 PM EDT

PC4: Transforming Your Early-Stage Research Program into an Established One Jill Heathcock MPT, PhD, Christopher Modlesky PhD, Christos Papadelis PhD, Stacey Dusing PhD

1:00 PM - 5:00 PM EDT

PC5: Learning to Read and Interpret Gait Lab Kinematics and Kinetics: Testing Your Skills

Kirsten Tulchin-Francis PhD, Joseph Krzak PT, PhD, Kristan Pierz MD, Freeman Miller MD, Jon Davids MD, Ross Chafetz, PhD, DPT

1:00 PM - 5:00 PM EDT

PC6: Operationalizing the Black Box of Coaching: The Applied Coaching Tool Laura Brunton PT, PhD, Debra Teitelbaum MSc, Patti Thomas PT

1:00 PM - 5:00 PM EDT

PC7: Initiating a Research Program Focused on Cerebral Palsy or Other Child-Onset Developmental Disabilities

Jill Heathcock MPT, PhD, Christos Papadelis PhD, Christopher Modlesky PhD, Stacey Dusing PhD

1:00 PM - 5:00 PM EDT

PC8: Unlocking Solutions: Strategies for Managing Self-Injurious and Aggressive Behaviors in Pediatric and Adult Populations with Developmental and Intellectual Disabilities

Unoma Akamagwuna MD, Claire Wallace PhD, Jessica Prokup MD, Toni Benton MD, Kristie Malik MD, Didem Inanoglu MD, Martin Gonzales MD, Cristina Sarmiento MD, Heidi Haapala MD, Mary Schmidt DO

# Program and Events - Wednesday, October 23, 2024

1:00 PM - 5:00 PM EDT

**Board of Directors Meeting** 

5:30 PM - 6:00 PM EDT

**New Member and Early Career** 

**Welcome Reception** 

6:00 PM - 8:00 PM EDT

**Welcome Reception** 



# Thursday, October 24,

# 7:00 AM - 8:00 AM EDT

**Breakfast in the Exhibit Hall** 

8:00 AM - 9:30 AM EDT Opening General Session

# 9:45 AM - 10:45 AM EDT

**Morning Seminars 1-13** 

MORNSEM01: 360° of Stakeholder Engagement in Cerebral Palsy: Families, Communities, Clinicians, Researchers, and the Professional Pipeline

Melissa Murphy, PhD, Nathalie Maitre, BA, MD, PhD, Gavin Colquitt, EdD

# Learning Objectives:

- Apply CBPR principles in research to establish equitable partnerships among community members, organizational representatives, and researchers.
- Demonstrate an understanding of stakeholder engagement needs assessment methods that ensure the perspectives the community are central to the research process.
- Demonstrate an understanding of strategies for engaging diverse stakeholder groups.
- Demonstrate an understanding of CBPR and mixed-methods needs assessments can be leveraged to initiate communitydriven change and develop equity-based action plans and interventions.

MORNSEM02: Accessing the Cerebral Palsy Research Network Registries: Clinical and Community Research Joyce P. Trost, PT, PhD, Kristie F. Bjornson, PT, MS, PhD, Julie Stutzbach, DPT, PhD, Jordan

# Learning Objectives:

M. Wyrwa, DO

- Describe the type and amount of data available within the CP Research Network registries.
- Understand how an investigator can access data in the CP Research Network Registries for the purpose of hypothesis generation, recruitment planning, and secondary analyses.
- Describe how clinicians can examine practice variation and perform quality improvement through collaboration and access to CP Research Network Registries data.
- 4. Understand how investigators interested in lived experience research and community-based outcome research can use existing Community Registry data and propose new community studies.

MORNSEM03: Ambulatory Patients with Spina Bifida: A Comprehensive Exploration of MMFC 2 vs MMFC 3

Vineeta T. Swaroop, MD, Jill Larson, MD, Nicole Hroma, PT

- Describe the new functional classification of spina bifida (MMFC) as it relates to manual muscle testing, functional mobility scale and the use of assistive devices for ambulatory patients.
- Review the factors which influence whether a patient remains stable over time in regard to MMFC level of involvement.

- Analyze gait patterns and functional movements in spina bifida patients with MMFC 2 or 3 level of involvement and understand the rational for use of assistive devices or orthotics.
- Define the orthopedic surgery considerations and interventions in spina bifida patients with MMFC 2 vs 3 level of involvement.

MORNSEM04: An International Perspective on the Importance and Challenges of Implementing Neuropsychological Assessments into Clinical Practice in Individuals with Cerebral Palsy.

Ann I. Alriksson-Schmidt, PhD, Petra Karlsson, PhD, Samudragupta Bora, PhD, Seth Warschausky, PhD

# Learning Objectives:

- Recognize when standardized assessment procedures are limiting the full participation of a child with a physical disability and leading to a likely underestimate of cognitive skills and abilities.
- Evaluate specific tests and subtests of cognitive skills and abilities that might be most appropriate for children with motor and related communication impairment.
- 3. Be informed by case studies that illustrate the theoretical elements in this session.
- List the importance and the challenges associated with neuropsychological assessment in individuals with disabilities that might affect motor and abilities to communicate.

MORNSEM05: At Your Fingertips - A Web Based Transition Tool that Interfaces with BridgingAPPs Resources Aloysia L. Schwabe, MD, Cristen Reat, MA

## Learning Objectives:

- Describe how a website regarding transition can be used to access APPs also related to transition.
- 2. List categories of transition resources.
- 3. Navigate a transition website to obtain information about guardianship and alternatives to guardianship.
- 4. Understand the ideal timeline for transition preparedness.

MORNSEM06: Bimanual Skills in Unilateral Cerebral Palsy: Translating Knowledge of Development and Motor Control into Clinical Applications

Rachel L. Hawe, DPT, PhD, Samuel T. Nemanich, PhD, MSCI, Swati M. Surkar, PT, PhD, Claudio L. Ferre, PhD

# Learning Objectives:

- Describe the relation between development of skilled bimanual manipulation and brain function during infancy.
- Describe typical and atypical development and learning of bilateral coordination skills in childhood and adolescence.
- Describe the challenges and opportunities in assessing bilateral coordination including traditional clinical assessments and the use of kinematic, robotic, and computer vision assessments.
- Describe the use of accelerometers to quantify the intensity of bimanual activities during and gains in real-world bimanual performance following hand arm bimanual intensive therapy (HABIT).

# MORNSEM07: Cerebral Palsy: Maybe Its Not So Cerebral

Joline E. Brandenburg, MD, Matthew Fogarty, DVM, PhD

#### Learning Objectives:

1. Describe gaps in current definition and construct of cerebral palsy

- Evaluate how spinal mechanisms may be playing a role in cerebral palsy symptoms
- Integrate spinal mechanisms into understanding of clinical cerebral palsy symptoms
- Develop an awareness of the developmental disruption of the brain-spinal cord-muscle interaction in cerebral palsy

# MORNSEM08: Determining Risk for Renal Complications in Children with Cerebral Palsy

Mary Keen, MD, MRM, Sarah Macabales, DO, Anton Dietzen, MD

## Learning Objectives:

- recognize risk factors for worsening renal function
- inquire about clinical signs possibly indicative of changing bladder function
- 3. devise a monitoring protocol for patients at risk for worsening renal function

list some treatment strategies for urinary retention in individuals with cerebral palsy

# MORNSEM09: Five Palliative Care Principles for Your Level V's

Elizabeth Martin, MD, Heather Brown, MD, Tracy Hills, DO

# Learning Objectives:

- Define the role of palliative care in the treatment of individuals with cerebral palsy.
- 2. Explain the difference between primary and secondary palliative care.
- 3. Implement primary palliative care practices in their own clinical practice.
- Describe various palliative care formats at different centers and ways they can collaborate with secondary palliative care providers.

# MORNSEM10: From Theory to Practice: Translating Disability Training in Medical Education

Christine Murphy, MD, Richard C. Adams, MD Learning Objectives:

- Foster an engaging and insightful dialogue on innovatively incorporating disability competencies into medical education.
- Actively engage with their peers as they explore and discuss strategies aimed at enhancing student preparedness and confidence.
- Translate the conceptual components to the functional application in the unique and differing teaching environments of the participants.
- Attain deeper understanding of the importance of scaling these initiatives, thereby contributing to measurable improvement in the skills and attitudes of future physicians – medical and surgical, generalists and specialists.

MORNSEM11: Implementing Hip Surveillance for Children with Cerebral Palsy: Moving Beyond the Guidelines Stacey D. Miller, BSc(PT), MRSc, Maria Juricic, MRSc, BScPT, BScKin,

- 1. describe the evidence for hip surveillance in children with cerebral palsy.
- 2. describe strategies for implementing hip surveillance.
- 3. list barriers and potential solutions to implementing hip surveillance guidelines in their local context.
- recognize potential side benefits to implementing hip surveillance in their local context.

# MORNSEM12: One Step at a Time: The Case for Daily Weightbearing in Non-Ambulatory Children and Adults

Claire Shrader, MS, OTR/L, Barri Alexander, PT, DPT, MBA, Laura L. Owens, MD

# Learning Objectives:

- Define the benefits of standing and supported stepping devices for nonambulatory children and those at GMFCS Levels IV & V.
- Analyze barriers and potential solutions to increased access to supported standing and stepping across home, school and community.
- Identify novel areas where client engagement and participation could be enhanced by supported stepping and standing devices.
- 4. Create an action plan to add supported standing and stepping into their settings (home, hospital, outpatient, school etc).

# MORNSEM13: Overview of the British Columbia's Early Motor Screening Program (EMSP)

Nandy Fajardo, PT, Keith O'Connor, MS, Mor Cohen-Eilig, MD, Ram A. Mishaal, MD

#### Learning Objectives:

- Understand the structure and delivery of the provincial selective early motor screening program in BC.
- 2. Learn the medical risk factors identified by the EMSP and the reasoning behind them.
- Understand the benefits and challenges of a provincial screening program for CP including how to effectively navigate conversations of uncertainty with families.
- Receive practical ideas for implementing similar programs within their local communities.

# 10:45 AM - 11:45 AM EDT

Coffee Break and Exhibit / Poster Review

11:45 AM - 12:45 PM EDT

Lunch

#### 12:45 PM - 2:15 PM EDT

Free Paper Sessions A-D

Free Paper Session A: Care Delivery & Epidemiology

12:45 PM - 12:52 PM EDT

A1: Assessing Web-based Early
Intervention for Children (3-8 years)
with Motor Delay Using Multimodal
Rehabilitation: Findings from a Hybrid Type
1 Effectiveness-Implementation Trial
Karen Hurtubise, PhD, Michelle Phoenix, PhD,
Isabelle Gaboury, PhD, Jade Berbari, MA,
Chantal Camden, PhD

#### 12:52 PM - 12:59 PM EDT

# A2: Epidemiology of Cerebral Palsy among Children in Low- and Middle-Income Countries

Israt Jahan, B.Sc (Hons), MS, MPH, PhD,
Mohammad Muhit, MBBS, MSc, MSc, PhD,
Denny Hardianto, MBBD, MPH, Samuel Kofi
Amponsah, MPH, Francis Laryea, BSc., Amir
Banjara Chhetri, Masters, Marlies Declerck,
PhD, Maria de las Mercedes Ruiz Brunner, PhD,
Thembi J. Katangwe, MBBS, MMED Paeds,
MPhil Neuro Paeds, Andrea N. Burgess, B Occ
Thy I, Grad Cert Epi, PhD., Claudia Durán, MS,
Reem Alsayed M Khalil, MD pediatrics and child
health MRCPCH, Hayley J. Smithers-Sheedy,
BAppSc (SpPath), MPH, PhD, Sarah McIntyre,
PhD MPS BAppSc (OT) Hons, Nadia Badawi,
MBBCh, MSc, DCH, FARCP, PhD, FRCPI, Gulam
Khandaker, MBBS, DCH, MPH, PhD, FAFPHM

## 12:59 PM - 1:06 PM EDT

A3: Health-Related Quality of Life in Arthrogryposis Multiplex Congenita: Results of a Pediatric North American Registry

Shahrzad Nematollahi, PhD, Michael Amara, MSc, Reggie C. Hamdy, n/a, Frank Rauch, n/a, Lauren C. Hyer, MD, Michelle A. James, n/a, Haluk Altiok, n/a, Ellen Raney, n/a, Jonathan Pellett, n/a, Cary Mielke, n/a, Sarah B. Nossov, n/a, Emmanouil Rampakakis, n/a, Sena Tavukcu, n/a, Noémi Dahan-Oliel, n/a

## 1:11 PM - 1:18 PM EDT

A4: Sustainable Model of Early Intervention and Tele-rehabilitation for Children with Cerebral Palsy in Rural Bangladesh (SMART CP): A Cluster Randomised Controlled Trial Mahmudul Hassan Al Imam, PhD, MPH, BSCPT, Israt Jahan, PhD, Mohammad Muhit, MBBS, MSc, MSc, PhD, Delwar Akbar, PhD, Shafiul Islam, BSCPT, MPH, Nadia Badawi, MBBCh, MSc, DCH, FARCP, PhD, FRCPI, Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM

#### 1:18 PM - 1:25 PM EDT

A5: Women with Cerebral Palsy receive significantly less Gynecologic Preventative Care

Michael J. Gouzoulis, BS, Ally Yang, MD, Anthony E. Seddio, BS, Anne Smith, MD, Jonathan N. Grauer, MD, <u>David B.</u> Frumberg, MD

## 1:25 PM - 1:32 PM EDT

A6: Family Experiences with a communitybased Resistance Intensive Personal Training (RIPT) for youth with cerebral palsy: A qualitative study.

<u>Candice Natrasony, BS</u>, Karin Eldred, MSc Rehabilitation Science, BSc Physical Therapy, Elizabeth G. Condliffe, PhD, MD, Lesley Pritchard, PT, PhD

#### 1:37 PM - 1:44 PM EDT

A7: Community Deprivation and Ambulatory Function Among Children in Washington State enrolled in the Cerebral Palsy Research Network Registry through Seattle Children's Hospital

<u>Deborah Grenard</u>, Daniel Enquobahrie, MD, PhD, MPH, Stephen J. Mooney, PhD, MS, Desiree Roge, MD, Kristie F. Bjornson, PT, MS, PhD

#### 1:44 PM - 1:51 PM EDT

A8: Prevalence of varus and valgus deformity in Children with Cerebral Palsy: a register based cross-sectional study Evgenia Manousaki, MD, PhD, Elisabet Rodby-Bousquet, PhD, Katina Pettersson, PhD, Jenny Hedberg-Graff, PhD, Erika Cloodt, PhD

#### 1:51 PM - 1:58 PM EDT

A9: Fall outcome difference in unilateral and bilateral cerebral palsy

Elizabeth R. Boyer, PhD, Marissa Esterley, MS, Kari Pederson, MSW, LICSW, Sandy C. Tierney, PhD, MSSW, Nathan G. Wandersee, AS, Linda E. Krach, MD

# Free Paper Session B: Neuroscience

#### 12:45 PM - 12:52 PM EDT

B1: Use of Functional Near-Infrared Spectroscopy to Investigate Cortical Function, Connectivity and Plasticity in Cerebral Palsy: A Scoping Review Owais A. Khan, PT, Simin Rahman, MS, Kanishka Baduni, MPT, Christopher M. Modlesky, PhD

# 12:52 PM - 12:59 PM EDT

B2: Individuals with Cerebral Palsy Display Improved Synchronization of the Occipital Neural Generators after Gait Training Elizabeth Dao, B.S., Morgan Busboom, PT, DPT, Brad Corr, DPT, Katie Bemis, DPT, Kimberley S. Scott, DPT, PhD, Elizabeth Heinrichs-Graham, PhD, Tony W. Wilson, PhD, Max J. Kurz, PhD

## 12:59 PM - 1:06 PM EDT

B3: Task-Based and Resting-State Functional Magnetic Resonance Imaging Outcomes of School-Age Children Born Very Preterm

Javier A. Urriola, PhD, Alex M. Pagnozzi, PhD, Kerstin Pannek, PhD, DanaKai Bradford, PhD, Samudragupta Bora, PhD, Roslyn N. Boyd, PhD, Bachelor Physiotherapy, <u>Joanne George, PhD</u>, Jurgen Fripp, PhD

# 1:11 PM - 1:18 PM EDT

B4: Multi-modal Functional and Structural Neuroimaging Provides Complementary Understanding of Motor Neural Network Reorganization in Children with Perinatal Stroke

<u>Sadra Shahdadian, PhD</u>, Eryn Armstrong, MS, Stephanie Acord, MD, Fernando Acosta, MD, Warren A. Marks, MD, Christos Papadelis, PhD

#### 1:18 PM - 1:25 PM EDT

B5: Neonatal Advanced Diffusion MRI Measures are Associated with 6-year Motor Outcomes of Children Born Very Preterm: a Fixel Based Analysis

Kerstin Pannek, PhD, Samudragupta Bora, PhD, Roslyn N. Boyd, PhD, Bachelor Physiotherapy, DanaKai Bradford, PhD, Paul B. Colditz, MBBS, FRACP, FRCPCH, MBiomedEng, DPhil, Jurgen Fripp, PhD, Alex M. Pagnozzi, PhD, Joanne George, PhD

## 1:25 PM - 1:32 PM EDT

B6: Adults with Down Syndrome Exhibit Altered Cortical Thickness and Somatosensory Gating

<u>Jiraros Meejang, BS</u>, Morgan Busboom, PT, DPT, Sarah Baker, MA, Michael P. Trevarrow, PhD, Yasra Arif, PhD, Gaelle Doucet, PhD, Tony W. Wilson, PhD, Max J. Kurz, PhD

#### 1:37 PM - 1:44 PM EDT

B7: Relationships between Corticospinal Integrity and Neuromotor Behavior in Infants with Perinatal Brain Injury Ellen N. Sutter, DPT, Jose M. Guerrero-Gonzalez, PhD, Cameron P. Casey, PhD, Anna K. Lowe, n/a, Douglas C. Dean, III, PhD, Ryan McAdams, MD, Bernadette T. Gillick, PhD

#### 1:44 PM - 1:51 PM EDT

B8: Functional and structural reorganization of somatosensory network and its relationship with sensorimotor function in children with perinatal stroke <u>Sadra Shahdadian, PhD</u>, Eryn Armstrong, MS, Stephanie Acord, MD, Fernando Acosta, MD, Warren A. Marks, MD, Christos Papadelis, PhD

#### 1:55 PM - 2:02 PM EDT

B9: Persons with Cerebral Palsy that Respond to Gait Training have Improved Somatosensory Cortical Activity

Morgan Busboom, PT, DPT, Liana Chinen, n/a, Brad Corr, DPT, Katie Bemis, DPT, Kimberley S. Scott, DPT, PhD, Sarah Baker, MA, Yasra Arif, PhD, Elizabeth Heinrichs-Graham, PhD, Tony W. Wilson, PhD, Max J. Kurz, PhD

#### 2:02 PM - 2:09 PM EDT

B10: Contributions of the Optic Radiations to Visual Dysfunction in CVI

Marie Drottar, MS, Negin Nadvar, PhD, <u>Corinna</u> Bauer, PhD

# Free Paper Session C: Orthopaedics 1

12:45 PM - 12:52 PM EDT

C1: HipScreen Al: Artificial Intelligence Algorithm Accurately Measures Migration Percentage on Hip Surveillance Radiographs Acquired from a Mobile Device

Anna Kay, BS, Justin Krogue, MD, Marie Villalba, BA, Patrick Donohue, BS, Michael Firtha, DO, Stella Yu, PhD, <u>Vedant A.</u> <u>Kulkarni, MD</u>

#### 12:52 PM - 12:59 PM EDT

C2: The Risk Factors Associated with Increased Anterior Pelvic Tilt in Ambulatory Children with Cerebral Palsy

Chris Church, MPT, Jose J. Salazar-Torres, Ph.D., Tanmayee Joshi, BS, Nancy Lennon, BS, MS, DPT, Thomas J. Shields, BS, John Henley, PhD, Freeman Miller, MD, Wade Shrader, MD, <u>Jason</u> Howard, MD

#### 12:59 PM - 1:06 PM EDT

C3: Femoral Head Shaft Angle Changes Based on Severity of Neurologic Impairment in Children with Cerebral Palsy and Spinal Muscle Atrophy

Luiz Carlos Almeida da Silva, Nemours Children's Hospital, Yusuke Hori, MD, Burak Kaymaz, M.D, Kenneth Rogers, PhD, Jason Howard, MD, Richard Bowen, MD, Wade Shrader, MD, Freeman Miller, MD, Arianna Trionfo, MD

#### 1:11 PM - 1:18 PM EDT

C4: Impact of Social Determinants of Health on hip surveillance in children with Cerebral Palsy

<u>Sriya Byrapuneni, BS</u>, Rhonda G. Cady, PhD, RN, Peter Schavee, BA, Todd Warner, MS, Christian Ishag, BA, Jamie N. Price, BA, Jennifer Laine, MD, Susan A. Novotny, PhD

# 1:18 PM - 1:25 PM EDT

C5: Guided Growth of the Proximal Femur for Hip Displacement in Young Children with Cerebral Palsy: A Preliminary Report Comparing Hypertonic and Hypotonic Motor Types

<u>Christina Herrero, MD</u>, Rachel Lenhart, MD PhD, Arianna Trionfo, MD, Wade Shrader, MD, Jason J. Howard, MD

# 1:25 PM - 1:32 PM EDT

C6: Mortality in a Cohort of Children with Cerebral Palsy Enrolled in Hip Surveillance Stacey D. Miller, BSc(PT), MRSc, Maria Juricic, MRSc, BScPT, BScKin, Christie Yang, n/a, Kishore Mulpuri, MHSc, MSc, MBBS, FRCSC

#### 1:37 PM - 1:44 PM EDT

C7: The Less-Affected Side In Spastic Hemiplegia: Is It The Same As Typically Developing? A Study Of Muscle Properties And Function

Rachel Lenhart, MD PhD, Diego Caban-Rivera, BS, Chris Church, MPT, Curtis L. Johnson, PhD, Arianna Trionfo, MD, Wade Shrader, MD, Jason J. Howard, MD

#### 1:44 PM - 1:51 PM EDT

C8: The Importance of Ambulatory Status on Risk of Hip Displacement in Patients with Leukodystrophy

Nicholas Barbieri, BS, <u>Emily Sergio, BS</u>, Maia D. Regan, BA, Sarah Woidill, MS, Amina N. Khan, MS, Francesco Gavazzi, MD, PhD, Bernard D. Horn, MD, Keith D. Baldwin, MD, MSPT, MPH, David Spiegel, MD, Russell D'Aiello III, MS, Robert W. Grundmeier, MD, Emma Kotes, BA,BS, Adeline Vanderver, MD, Christine M. Goodbody, MD, MBE, Sarah H. Evans, MD

#### 1:55 PM - 2:02 PM EDT

C9: Medialization at the osteotomy site may reduce relapse after varus de-rotational osteotomy (VDRO) of the proximal femur in cerebral palsy Frederico Vallim, PhD, Kerr Graham, MD, MD, João Antônio Matheus Guimarães, PhD, Marcello Henrique Nogueira-Barbosa, PhD

# 2:02 PM - 2:09 PM CT

C10: Increased Pelvic Rotation is Associated with Decreased Knee Power in Pediatric Patients with Diplegic Cerebral Palsy Olivia C. Tracey, BA, Akshitha Adhiyaman, BS, Colson Zucker, BA, Vishnu Deep Chandran, PhD, Silvia Zanini, MS, Jennifer Jezequel, DPT, Bridget A. Assip, DPT, Sherry I. Backus, PT, Dara Jones, MD, David M. Scher, MD, Paulo Selber, MD

# Free Paper Session D: Rehabilitation & Tone

#### 12:45 PM - 12:52 PM EDT

D1: Leg Dystonia Diagnosis in Children with Cerebral Palsy Using Machine Learning

Rishabh Bajpai, B.Tech., PhD, Joanna Blackburn, MD, Rose Gelineau-Morel, MD, Michael C. Kruer, MD, Dararat Mingbunjerdsuk, MD, Jennifer A. O'Malley, MD/PhD, Laura Tochen, MD, Jeff L. Waugh, MD, PhD, Steve W. Wu, MD, Bhooma R. Aravamuthan, MD, DPhil

#### 12:52 PM - 12:59 PM EDT

D2: The impact of dosing schedule on motor skill acquisition in children with Bilateral Cerebral Palsy (BCP)

Susan Sienko, PhD, Cathleen E. Buckon, OTR/L, MS, Grace-Anne M. Herard, PT, DPT, EdD, Yannick Bleyenheuft Bleyenheuft, PhD, Marina B. Brandão, PhD, Andrew M. Gordon, PhD

#### 12:59 PM - 1:06 PM EDT

D3: Deficits in upper limb goal-directed reaching in children with unilateral and bilateral cerebral palsy compared to typically developing children <u>Simin Rahman, MS</u>, Owais Khan, PT, Tarkeshwar Singh, PhD, Deborah A. Barany, PhD, Christopher M. Modlesky, PhD

# 1:11 PM - 1:18 PM EDT

D4: To determine age-related differences in behavioural outcomes of bimanual functional motor tasks in children and adolescents with cerebral palsy: a scoping review.

<u>Hubert Gascon, MS</u>, Maxime T. Robert, PhD, Samuel T. Nemanich, PhD, MSCI

#### 1:18 PM - 1:25 PM EDT

D5: Intensive Motor Skill Learning
Intervention Modify Specifically the TopDown Executive Control Sub-Component
of Attention in Children with Unilateral
Cerebral Palsy

Elisa Vancolen, MS, Daniela Ebner-Karestinos, PhD, Astrid Carton de Tournai, PT, Merlin Somville, PT, Zélie Rosselli, MA, Enimie Herman, PT, Geoffroy Saussez, PhD - Physiotherapist, Yannick Bleyenheuft, PhD, <u>Rodrigo</u> Araneda, PhD

#### 1:25 PM - 1:32 PM EDT

D6: The role of an intensive care plan in a motor skill acquisition in individuals with a motor impairment

Molly Peterson, DPT, Emma Marino, DPT

## 1:37 PM - 1:44 PM EDT

D7: Expanding Our Understanding of Dystonia in Cerebral Palsy: Learning From Caregiver Experts

<u>Laura A. Gilbert, DO, MBA</u>, Emma J. Lott, AS, Susie Kim, BS, Amy McQueen, PhD, Bhooma R. Aravamuthan, MD, DPhil

#### 1:44 PM - 1:51 PM EDT

D8: Is muscle morphology linked to physical activity and nutritional intake in children with spastic cerebral palsy? Ineke Verreydt, MSc, Anja Van Campenhout, MD, PhD, Els Ortibus, MD, Ph.D., Olaf Verschuren, PhD, Marieke De Craemer, PhD, Lauraine Staut, MSc, Britta Hanssen, PhD, Erika Vanhauwaert, n/a, Daisy Rymen, MD, PhD, Kaat Desloovere, PhD

#### 1:51 PM - 1:58 PM EDT

D9: To Stand or Not to Stand: a retrospective review of clinical and health-related quality of life outcomes related to supported standing in patients with MMFC1 spina bifida

<u>Peter Shen, BS</u>, Vineeta T. Swaroop, MD, Ana-Marie Rojas, MD, Jill Larson, MD

#### 1:58 PM - 2:05 PM EDT

D10: Objective Spasticity Assessment: Validity of a Portable Device in Children with Cerebral Palsy

Buddhika J. Senevirathne, BPT, MPhil., Sampath Udaya Tennakoon, MBBS, Jithangi Wanigasinghe, MD, John p. Phillips, MD, Jens B. Nielsen, PhD

# 2:30 PM - 4:00 PM EDT

**General Session** 

#### 4:15 PM - 6:15 PM EDT

Mini Symposia 1-13

MINISYMP01: Genetic Testing for the Non-Geneticist: Practical Tips on the What, When, Why, and How of Genetic Testing in Cerebral Palsy and Developmental Medicine

Steven M. Lazar, MD, MEd, Shannon DiCarlo, MD, Aloysia L. Schwabe, MD, Kathryn K. Ostermaier, MD

- 1. Compare and contrast the indications for five common genetic and metabolic testing options.
- 2. Develop an appropriate step-wise genetic and/or metabolic testing plan for patients with neurodevelopmental disabilities that includes at least 3 layers of testing.

- Identify at least two barriers to genetic testing across familial, clinical, and systems-based practice and their solutions in neurodevelopmental disabilities.
- Describe at least four key characteristics of patients with a neurodevelopmental disability that would warrant genetic and/ or metabolic testing.

MINISYMPO2: Characterizing and Predicting Pain in Children with Cerebral Palsy Undergoing Orthopedic Surgery Chantel Burkitt, PhD, Elizabeth R. Boyer, PhD, Jason Howard, MD, Aleksys Patterson, N/A, BA, Tom F. Novacheck, MD, Wade Shrader, MD, Jay Berry, MD

# Learning Objectives:

- Describe ongoing research efforts to document pain trajectories and identify risk factors that predict chronic postsurgical pain in children with CP undergoing musculoskeletal surgery.
- Describe evidence-based multidisciplinary care coordination pathways supporting the decision making and clinical care of patients with CP undergoing major musculoskeletal surgery.
- Understand of the lived experience of undergoing major musculoskeletal surgery and pain in CP.
- 4. Discuss streamlining research, knowledge translation, and patient care.

# MINISYMP03: Translating Possibility into Participation

Joline E. Brandenburg, MD, Alena Skinner, n/a, Carol M. Shrader, BA, Mason J. Shrader, MA, Claire Shrader, MS OTR/L

## Learning Objectives:

 Advocate and identify resources for participation of individuals with cerebral palsy and other developmental disorders in the community.

- 2. Articulate various ways participation occurs in a practical manner from youth and young adults with cerebral palsy and other developmental disorders.
- 3. Visualize people with disabilities participating in nonsegregated activities.
- Create one action item you can implement to facilitate or encourage participation of individuals with a disability in activities of interest to them.

# MINISYMPO4: Evolution of the Family Engagement Program: Sharing the Scalability, Reach, and Impact of a Novel Training Program

Andrea Cross, PhD, Samantha K. Micsinszki, PhD, Connnie Putterman, MHSc, Rachel E. Martens, N/A, n/a, Alice K. Soper, MSc, Dayle McCauley, MSc, Jan Willem Gorter, MD, PhD

# Learning Objectives:

- 1. Build knowledge and awareness in family engagement in research.
- Understand the importance and impact of training in family engagement for both researchers and individuals with lived and living experience.
- 3. Identify the core concepts and key ingredients of family engagement in research training.
- 4. Critically reflect on the development, implementation, and scaling of an international FER training program.

MINISYMP05: ICF and Care Coordination: Developing a Minimal Functional Data Set to Support Care Coordination for Children Living with Health Complexity in BC and Yukon, Canada

Tessa Diaczun, CNP, Verónica Schiariti, MD MHSc PhD, Elizabeth Stanford, PhD, Lee M. Johnston, MPH, PhD

# Learning Objectives:

- Introduce the BC care coordination service plan, which is guided by the ICF framework
- Discuss the importance of incorporating a best practice engagement approach to service delivery planning for children and youth living with health complexity
- Highlight the importance of functional goal-focused, individualized, longitudinal care as fundamental in the innovative care coordination service plan.
- Identify key functional areas to describe functioning of children and living with health complexity.

# MINISYMP06: Unraveling Uncertainty: Early Diagnostic Dilemmas in Cerebral Palsy

Ram A. Mishaal, MD, Karen Thomas, MD, FRCPC, Paige Terrien Church, MD, Rudaina Banihani, MD, FRCPC, Mor Cohen-Eilig, MD

# Learning Objectives:

- Navigate the complexities of early CP diagnosis and understand the experiences of parents during this uncertain period.
- Effectively disclose an uncertain diagnosis to families, recognizing the impact of language choice.
- 3. Evaluate existing interventions aimed at promoting healthy psychological adjustment and well-being for parents in the uncertainty phase.
- 4. Understand the views of both parents and professionals regarding follow-up processes for infants likely to have CP, considering their perspectives and potential areas for improvement.

MINISYMP07: Improved Understanding of Impaired Muscle Growth in Children with Cerebral Palsy, by Integrating of Macro- and Microscopic Muscle Properties and Impact of Contributing Factors

Kaat Desloovere, PhD, Anja Van Campenhout, MD, PhD, Eva M. Pontén, MD PhD Ass Prof

# Learning Objectives:

- Upon completion the participants will be able to describe altered growth trajectories of lower limb muscles from children with CP compared to typically developing children.
- Upon completion the participants will be able to integrate macro- and microscopic muscular alterations for the lower and upper limbs in children with CP.
- Upon completion the participants will understand potential contribution factors (neuromuscular symptoms, physical activity, nutrition and treatment history) to altered muscle growth in children with CP.
- 4. Upon completion the participants will understand the impact of Botulinum neurotoxin injections on the macro- and microscopic muscle morphology in children with CP.

# MINISYMP08: Knee Surveillance in Children with Diplegia

Kerr Graham, MD, MD, Jon R. Davids, MD, Pam Thomason, M Physio, Erich Rutz, MD

- Upon completion, participants will understand the concept and practice of "knee surveillance".
- 2. Upon completion, participants will be aware of the links between knee surveillance and the stages of musculoskeletal pathology in cerebral palsy.

- Upon completion, participants will understand the links between the stages of musculoskeletal pathology and management of knee dysfunction, both operative and non-operative.
- Upon completion, participants will have engaged with drafting a knee management algorithm, for children with diplegia.

# MINISYMP09: Robotic Mobility Aids: Answering the Question, "Will my child benefit"?

Elizabeth G. Condliffe, PhD, MD, Alicia Hilderley, PhD, Anna M. McCormick, MD FRCPC, Christa M. Diot, MSc, Hunter Loewen, MD, Stefanie S. Bradley, MSc, Thomas C. Bulea, PhD, F Virginia Wright, BScPT, MSc, PhD

# Learning Objectives:

- Describe the available robotic mobility aids
- 2. Discuss the potential benefits of each device supported by evidence
- Identify patients likely to experience these benefits Identify patients unlikely to experience these benefits

# MINISYMP10: Top 10 Articles in Lifespan Care

Mary E. Gannotti, PhD,PT, Heidi Haapala, MD, Cristina A. Sarmiento, MD, David Berbrayer, MD, Unoma Akamagwuna, MD

# Learning Objectives:

- Upon completion participants will be able to describe recent publications and key research findings related to the lifespan care of adults with childhood onset disabilities.
- Upon completion participants will be able to identify any gaps in evidence and future directions related to current research in the lifespan care of adults with childhood onset disabilities.

- Upon completion participants will be able to apply relevant research advances to the lifespan care of adults with childhood onset disabilities in their own clinical practice
- 4. Upon completion participants will be able to identify dissemination and knowledge translation strategies to implement recent research findings amongst key stakeholders (health care teams, those with lived experience, community organisations)

MINISYMP11: Translating Effectiveness Research into Action: Key Principles and Content for Early Intervention for Infants and Young Children with CP or Motor Delays

Regina T. Harbourne, PhD, Stacey C. Dusing, PhD, Catherine Morgan, PhD; BAppSc (Physio), Lynda M. McNamara, PhD, BPhty (Hons), Iona Novak, PhD, Alicia Spittle, PhD

- understand the best-available evidence to support effective early intervention for infants born preterm, with motor delays or cerebral palsy.
- discuss the key ingredients of evidencebased early intervention including, type, population, time, mode, dose and setting.
- 3. critically reflect on the barriers to using this evidence in their workplace and the knowledge translation strategies required to overcome these barriers.
- suggest strategies for intervention based on the most up-to-date evidence for early intervention for infants and children with motor delays.

# MINISYMP12: Implementing Artificial Intelligence in Clinical Care: Enhancing Treatment for Individuals with Cerebral Palsy

Alexis Mitelpunkt, n/a, Kelly R. Greve, PT, DPT, PhD, Amy F. Bailes, PT PhD, Jilda N. Vargus-Adams, MD, MSc

# Learning Objectives:

- Understand how AI technologies can serve healthcare professionals in enhancing care and its limitations.
- Identify resources required to effectively integrate AI into clinical care, including data, technology, and collaborations.
- Discuss current examples of how one center is using AI to create new knowledge and improve care
- 4. Explore future directions to integrate AI in clinical care

MINISYMP13: Use of the Motor Optimality Score-Revised (MOS-R)-to Predict Cerebral Palsy and Other Adverse Neurodevelopmental Outcomes (NDO). Roslyn N. Boyd, PhD, Bachelor Physiotherapy, Colleen Peyton, DPT, Carly Luke,

# MAPaedsPhys, BPT Learning Objectives:

- Upon completion participants will understand the features of the MOS-R scoring.
- Upon completion participants will understand the reproducibility of MOS-R among experienced raters and the implications for clinical practice.
- Upon completion participants will use of MOS-R with HINE, to detect and predict CP, and other adverse NDD in cohorts of Preterm, Term at risk and First Nations infants.
- Upon completion participants will use interactive case studies to determine clinical use of MOS-R to predict CP and NDD.

# 6:45 PM - 8:15 PM EDT

# **Special Interest Groups (SIGs)**

- Adults and Aging
- Complex Care
- Adapted Sports and Recreation
- Technology

# What is a Special Interest Group?

Special Interest Groups (SIGs) are communities within a larger organization, created around a shared interest in specific areas of knowledge, learning, technology, or other characteristics of membership. AACPDM SIGs should complement the Academy's activities.

SIGs offer additional benefits for Association members, such as access to subject-specific information and resources, educational opportunities, networking with like-minded peers, and volunteer leadership opportunities.

# What SIGs does AACPDM offer What do AACPDM SIGs do?

- SIGs will have a minimum of 1 to a maximum of 2 virtual meetings per year. Scheduling should take place in partnership with the AACPDM staff.
- SIGs will have an in-person meeting at the AACPDM Annual Meeting at a time determined by staff and the 1st Vice President to facilitate maximum attendance at the meeting.
- AACPDM staff will maintain a list of active SIG members.
- SIGs will be re-evaluated every 2 years to ensure relevance and alignment with the AACPDM mission and vision.

https://www.aacpdm.org/about-us/aacpdm-special-interest-groups-sigs

#### 7:00 AM - 8:00 AM EDT

**Breakfast in the Exhibit Hall** 

# 8:00 AM - 9:00 AM EDT

Morning Seminars 14-26

MORNSEM14: A Multidisciplinary Approach to Patient Prioritized Outcomes in Shared Decision Making Minnelly Vasquez, LCSW, Hana Azizi, MD, MPH, Jennifer M. Bain, MD, PhD

# Learning Objectives:

- Upon completion, participants will be able to demonstrate approaches for patient engagement to help support individuals with CP & their families in shared decisionmaking process.
- Upon completion, participants will be able to describe how collaborative decisionmaking between healthcare providers, patients, and, where applicable, their caregivers foster health equity.
- Upon completion, participants will be able to define ableism and understand how ableism in the clinical setting impacts medical care.
- Upon completion, participants will be able to implement shared decisionmaking process in a multidisciplinary team treating a patient who experiences psychiatric conditions.

# MORNSEM15: A New Frontier in Head Control Assessment and Intervention for Children with Cerebral Palsy: Revolutionizing care

Bhamini Krishna Rao, Sr., PhD, Jodi Thomas, PT, DPT, DHSc, Sonia Khurana, PT, PhD, Sivakumar Gopalakrishnan, PhD

# Learning Objectives:

- Understand the importance of head control from a developmental perspective and identify the challenges in assessing head control
- Describe the available head control assessment measures
- Compare existing head control measures and gain knowledge about the implementation of novel, objective, and reliable measure: Head Control Scale
- 4. Learn about a novel head and trunk control training device to promote head control

# MORNSEM16: Breaking Barriers: A Unified Approach to Early Detection and Intervention in Cerebral Palsy

Valerie Pieraccini, MS, Nathalie Maitre, BA, MD, PhD, Rachel Byrne, PT

- Understand the collaborative efforts
   of the Cerebral Palsy Foundation and
   United Cerebral Palsy Research Council
   in advancing early detection and
   intervention.
- 2. Gain insights into the thematic framework designed to empower diverse communities and improve outcomes for families affected by Cerebral Palsy.
- 3. Explore practical aspects of developing site-specific frameworks, implementing monitoring and evaluation systems, engaging communities, and conducting research and implementation science in the context of early detection and intervention.
- Engage in interactive discussions to share experiences and insights with fellow professionals and presenters.

MORNSEM17: Building A Partnership to Improve the Inclusion of Underserved Populations in Childhood Disability Research

Sukaina Dada, PhD, Rachel TEPLICKY, MS, Michelle Phoenix, PhD, Vanessa Tomas, PhD Learning Objectives:

- Upon completion, participants will be able to identify existing gaps and opportunities in engaging families from equityseeking and underserved populations in healthcare practice and research
- Upon completion, participants will be able to describe the importance of developing partnerships with community organizations to conduct equitable health research
- Upon completion, participants will be able to reflect on their own health research and/or healthcare practices with equityseeking and underserved populations and identify goals for their work
- 4. Upon completion, participants will be able to apply strategies and guiding questions to their work as health researchers and/ or clinicians to advance equitable health research and service-delivery

MORNSEM18: Participate-CP: Evidence-based Approach to Optimise Participation in Physically Active Leisure for Children with Cerebral Palsy.

Leanne Sakzewski, PhD, Bachelor Occupational Therapy, Sarah E. Reedman, PhD, Bachelor of Physiotherapy, Roslyn N. Boyd, PhD, Bachelor Physiotherapy

# Learning Objectives:

 Upon completion, participants will understand the theoretical underpinnings of Participate CP and the science of health behaviour change.

- 2. Upon completion, participants will know how to frame and set participation goals in a collaborative way with children and their families.
- Upon completion, participants will know how motivational interviewing can be for behaviour change and understand the specific content of Participate CP and how to match strategies to barriers of participation.
- 4. Upon completion, participants will be able to apply the knowledge presented to develop practical solutions to support children's participation in leisure-time physical activities.

MORNSEM19: Enablement counseling: talking with parents after early detection of cerebral palsy in infancy Colleen Peyton, DPT, Michael E. Msall, MD Learning Objectives:

- Utilize an enablement model when discussing early detection and diagnosis of cerebral palsy with families
- 2. Demonstrate supportive communication strategies during early detection and diagnosis of cerebral palsy
- Implement evidence-based practice surrounding discussion of neurodevelopmental disability with families
- 4. Describe the communication guidelines outlined in SPIKES and ouR-HOPE models

MORNSEM20: Every Child's Story is a Treasure: Children with Disabilities and Their Parents Share Their Voices About Supports And Services They Need Post Covid-19 and into the Future.

Genevieve Currie, PhD, Amanda Doherty-Kirby, PhD, Jeanine Lebsack, n/a

# Learning Objectives:

- Recognize key areas of health care and support needs identified by children with disabilities and parents
- Assess existing gaps to providing supports in the areas identified by children and their parents
- Formulate ideas for addressing the gaps to delivering services/supports in both policy and practice
- Explore strategies for engaging children/ youth in health research and policy development

MORNSEM21: Evolving Surgical Algorithms for Spasticity in Cerebral Palsy: Incorporating Nerve Surgery into the Treatment of Upper and Lower Extremity Spasticity

Eugene Park, MD, Sami Tuffaha, MD, Shaun D. Mendenhall, MD

# Learning Objectives:

- describe the mechanism of action for spasticity reduction following hyperselective neurectomy.
- 2. conduct a patient assessment using appropriate instruments to aid in surgical planning for patients with upper and lower extremity spasticity.
- 3. understand the surgical technique for hyperselective neurectomy.
- incorporate hyperselective neurectomy into a comprehensive treatment plan for lower extremity spasticity and contractures.

MORNSEM22: Get RIPT! Delivery of the Resistance Intensive Personalized Training Program for Youth with Cerebral Palsy via an Innovative Hospital/Community Fitness Centre Partnership

Karin Eldred, MSc Rehabilitation Science, BSc Physical Therapy, Candice Natrasony, BS, Lesley Pritchard, PT, PhD, Elizabeth G. Condliffe, PhD, MD

# Learning Objectives:

- 1. Understand the evidence related to power training in youth with Cerebral Palsy.
- 2. Describe how a program can be delivered via an innovative hospital-community fitness centre partnership.
- 3. List barriers and facilitators related to program delivery.
- 4. Enjoy experiencing some of the exercises.

# MORNSEM23: The CPCHECKlist©: A Parent-Reported Evaluation of Comorbidities for Children with NonAmbulatory Cerebral Palsy and CP-Like Conditions.

Unni G. Narayanan, MBBS, MSc, FRCS(C), Laurie Glader, MD, FAAP

- Provide a comprehensive list of the various comorbidities experienced, and health technologies used, by children and young adults with non-ambulatory cerebral palsy
- Become familiar with the CPCHECKList as an effective tool to capture the comorbidity concerns and health technology needs for children and young adults with non-ambulatory cerebral palsy.
- 3. Understand how the CPCHECKlist was developed and validated for research as well as for clinical purposes.
- 4. Discover the applications for the (clinical) utility of the CPCHECKList in their own clinical and research settings.

MORNSEM24: Implementing and Evaluating a New Clinical Program using a Learning Health Systems Lens: Learnings from a Care Coordination Program for Children Living with Cerebral Palsy

Anna Beckstrom, MS, Kari Kubiatowicz, MBA, BSN, Andrea Bushaw, PhD, APRN, CPNP, Meghan E. Munger, PHD, MPH

# Learning Objectives:

- understand Learning Health Systems methodology and its real-world application to implementing and evaluating clinical care delivery innovations, using learnings from a specific cerebral palsy care coordination program
- identify a comprehensive evaluation strategy that prioritizes family wellbeing, allows for measuring program efficacy, and informs operational decisions to scale and sustain a clinical program.
- understand the importance of implementation frameworks and how one was specifically chosen and applied.
- identify early program results including reviewing qualitative and quantitative outcomes, how data informed operational decisions, and what efforts were taken to address equity and inclusion.

# MORNSEM25: Prehabilitation: Building Resilience Before Multi-Level Surgery (MLS) in Cerebral Palsy

Brittany A. Virgil, PT, DPT, Wade Shrader, MD, Laura L. Owens, MD, Nancy Lennon, BS, MS, DPT

# Learning Objectives:

 Review the process of patient identification, interdisciplinary case review and prehabilitation program development in a pediatric service specializing in cerebral palsy.

- 2. Highlight important elements of psychosocial screening, goal setting, and therapy plans of care that make up the prehabilitation program.
- 3. Participate in group discussion of patient cases.
- 4. Discuss the current literature related to prehabilitation and future research needs.

# MORNSEM26: The Impact of Weight on Gait and Function in Spina Bifida

Jill Larson, MD, Vineeta T. Swaroop, MD, Tasos Karakostas, MPT, PhD

- Review current literature about obesity risk and impact in both ambulatory and non-ambulatory patients with spina bifida
- Understand the importance of preventing obesity in spina bifida through addressing individual, family, community and societal factors
- Recognize components of the gait cycle and gait mechanics that are at risk for deterioration with increasing weight in the spina bifida patient
- Utilize strategies to mitigate the impact of obesity and weight on gait in spina bifida through assistive devises or orthotic modifications

9:15 AM - 10:15 AM EDT General Session

10:15 AM - 10:45 AM EDT

Coffee Break in the Exhibit Hall

10:45 AM - 12:30 PM EDT

Free Paper Sessions E-H

Free Paper Session E: Early Development 1

10:45 AM - 10:52 AM EDT

E1: Development of Digitized Biomarkers Associated with Motor Developmental Delay in Preterm Infants

Yae Lim Lee, MD, Jeong Min Kim, MD, Sung Eun Hyun, MD, Han Tae Kim, MD, Moon Suk Bang, MD, Hyung-Ik Shin, MD, Jungwook Kim, MD, Hee Young Cha, MD, <u>Woo Hyung Lee, MD</u>

10:52 AM - 10:59 AM EDT

E2: Outcomes From the Knowledge Translation of Early Cerebral Palsy (Kite CP) Study: Predictive Validity of High Risk of CP Diagnosis.

Amanda K.L. Kwong, BaPhys (Hons), PhD, Abbey L. Eeles, PhD, Kate L. Cameron, PhD, Roslyn N. Boyd, PhD, Bachelor Physiotherapy, Catherine Morgan, PhD; BAppSc (Physio), Alicia Spittle, PhD 10:59 AM - 11:06 AM EDT

E3: Implementation of a State-Wide Early Detection Network Predicts Neurodevelopmental Outcomes at 2 Years in an at Risk Infant Cohort

Carly Luke, MAPaedsPhys, BPT, Morgan
Carlton, PhD, Christine Finn, BPT, Sarah Gibson,
BPT, Bernadette Shannon, BOccThy, Ellena
Oakes, BOccThy, Anya Gordon, MAPaedsPhys,
BPT, Kym Morris, BPT, Lynda McNamara,
PhD, Joanne George, PhD, Rachel Thomas,
BPT, Megan Kentish, BPT, Shaneen Leishman,
PhD, Robert Ware, PhD, Roslyn N. Boyd, PhD,
Bachelor Physiotherapy

11:11 AM - 11:18 AM EDT

E4: Understanding Visual Maturation through Early Vision Screening in Very Preterm Infants

<u>Karen L. Harpster, PhD, OTR/L</u>, Melissa L. Rice, OD, Terry L. Schwartz, MD, Laura Hanson, BA, Andrew Pfander, BS, Nehal L. Parikh, DO

11:18 AM - 11:25 AM EDT

E5: Hammersmith Infant Neurological Examination: Usefulness for Prediction of Developmental Delay in Children born between 29 and 36-weeks of gestation Léanne Brabant, erg., Catherine Bernard, Master, Véronique Belval, OT, Mélanie Gagnon, MSc, Marie-Michèle Gagnon, Master, Gabriel Côté-Corriveau, MD, Mathieu Dehaes, PhD, Thuy Mai Luu, MD, Marie-Noelle Simard, PhD

#### 11:25 AM - 11:32 AM EDT

E6: Motor Optimality Score-Revised and Hammersmith Infant Neurological Examination Predict High Likelihood of Autism at 12 Months Corrected Age in a Developmentally Vulnerable Infant Cohort. Carly Luke, MAPaedsPhys, BPT, Katherine Benfer, PhD, Robert Ware, PhD, Shaneen Leishman, PhD, Margot Bosanquet, FRACP, Anya Gordon, MAPaedsPhys, BPT, Hailey Williams, BPT, Chloe Taifalos, BPT, Arend F. Bos, PhD, Roslyn N. Boyd, PhD, Bachelor Physiotherapy

# 11:37 AM - 11:44 AM EDT

E7: Impact of Preterm Birth on Emotional Availability as Measured in the NICU at Near-Term Age

<u>Corri L. Stuyvenberg, DPT,</u> Rebecca Molinini, DPT, PhD, Corissa T. Rohloff, n/a, Jennifer Burnsed, MD, MS, Stacey C. Dusing, PhD

# 11:44 AM - 11:51 AM EDT

E8: Portable Technologies for the Early Assessment of Motor Development in Infants under 1 Year Old: A Systematic Review

<u>Weiyang Deng, PT, PhD</u>, Rachel A. Andersen, BS, Megan K. O'Brien, PhD, Arun Jayaraman, PhD PT

# 11:51 AM - 11:58 AM EDT

E9: A Follow-Up Study on The Outcomes of Infants Born Preterm at 4 Months After Participating in a Parent-Delivered Intervention Program in the Neonatal Intensive Care Unit.

<u>Sandra Fucile, N/A, PhD</u>, Laurie Snider, PhD, Kimberly Dow, MD

#### 12:03 PM - 12:10 PM EDT

E10: Evolution of Independent Joint Control is Different sn Infants With Higher Likelihood of Cerebral Palsy in the First Three Months of Life

<u>Colleen Peyton, DPT</u>, Ryan Millman, n/a, Raye-Ann deRegnier, MD, Theresa Sukal Moulton, PT, DPT, PhD

#### 12:10 PM - 12:17 PM EDT

E11: Early Screening Tools Predict Neurodevelopmental Outcomes at 12 Months in a Developmentally Vulnerable First Nations Infant Cohort

Carly Luke, MAPaedsPhys, BPT, Leeann Mick-Ramsamy, n/a, Katherine Benfer, PhD, Robert Ware, PhD, Shaneen Leishman, PhD, Margot Bosanquet, FRACP, Anya Gordon, MAPaedsPhys, BPT, Hailey Williams, BPT, Chloe Taifalos, BPT, Ellena Oakes, BOccThy, Maria Smith, n/a, Megan Kentish, BPT, Lynda McNamara, PhD, Arend F. Bos, PhD, Roslyn N. Boyd, PhD, Bachelor Physiotherapy

#### 12:17 PM - 12:24 PM EDT

E12: Barriers Experienced by Caregivers of Preterm Infants in Active Implementation of Therapeutic Intervention from Hospital to Home in South India – A Qualitative Study

Manasa Kolibylu Raghupathy, MPT, Selim Jahangir, PhD, Sonia Khurana, PT, PhD, Leslie E. Edward S Lewis, DNB Pediatrics, Bhamini Krishna Rao, Sr., PhD

#### Free Paper Session F: Lifespan & Equity

#### 10:45 AM - 10:52 AM EDT

F1: Social Determinants of Health in Adults with Chronic Low Back Pain and Cerebral Palsy

<u>Julie Stutzbach, DPT, PhD</u>, Cristina A. Sarmiento, MD, Theresa M. Sax, BS, Tanya S. Kenkre, PhD, MPH, Mary E. Gannotti, PhD,PT

#### 10:52 AM - 10:59 AM EDT

## F2: Why Do Adults with Cerebral Palsy Get Hospitalized?

<u>Michael J. Gouzoulis, BS</u>, Ally Yang, MD, Anthony E. Seddio, BS, Jonathan N. Grauer, MD, David B. Frumberg, MD

#### 10:59 AM - 11:06 AM EDT

F3: What Can Families, Society or Healthcare Systems Do to Reduce Concerns About Falling: Understanding the Lived Experience of Children and Adults with Cerebral Palsy Using a Phenomological Approach

Kari Pederson, MSW, LICSW, Marissa Esterley, MS, Sandy C. Tierney, PhD, MSSW, Linda E. Krach, MD, Nathan G. Wandersee, AS, Elizabeth R. Boyer, PhD

#### 11:11 AM - 11:18 AM EDT

#### F4: Cardiovascular Disease in Adults with Cerebral Palsy

<u>Michael J. Gouzoulis, BS</u>, Meera M. Dhodapkar, BS, Ally Yang, MD, Tony Pastor, MD, Jonathan N. Grauer, MD, David B. Frumberg, MD

#### 11:18 AM - 11:25 AM EDT

F5: Community Factors Related to Employment Pathways for Youth with Disabilities: A Realist Review Amelia Hagelstam Renshaw, BA, Mehrnoosh Movahed, MD, Linda Nguyen, PhD, Roberta Cardoso, PhD, Keiko Shikako, PhD

#### 11:25 AM - 11:32 AM EDT

F6: Exploring the Use of the Transition Readiness Assessment Questionnaire (TRAQ) Among Adults with Cerebral Palsy: A Qualitative Study

<u>Cristina A. Sarmiento, MD</u>, Hannah Friedman, MD, Chloe Glaros, MPH, MSW, Christine Petranovich, PhD, Brooke Dorsey Holliman, PhD

#### 11:37 AM - 11:44 AM EDT

F7: Performance of Reference Centiles in Describing the Distribution and Progression of Gross Motor Development in a Large Cerebral Palsy Clinical Cohort Francis Eusebio, MD, Rachel Sanderlin, BA, Charlotte Schluger, BA, Joe Wu, PhD, Laura A. Prosser, PT, PhD

#### 11:44 AM - 11:51 AM EDT

F10: "We Don't Know What to Do with an Adult": A Qualitative Study on the Transition to Adult Care and Priorities for Adult Cerebral Palsy Care

<u>Cristina A. Sarmiento, MD</u>, Christine Petranovich, PhD, Chloe Glaros, MPH, MSW, Hannah Friedman, MD, Brooke Dorsey Holliman, PhD

#### 11:51 AM - 11:58 AM EDT

F11: Polypharmacy and Associated Patient Factors in Adults with Cerebral Palsy Laura K. Brunton, PT, PhD, Caitlin Cassidy, MD, FRCPC, Joshua Wiener, n/a, Karen Pratt, BScKin, MSc

#### 11:58 AM - 12:05 PM EDT

F12: Incidence Of Lymphedema and Associated Factors Among Adults With Cerebral Palsy

<u>Christine Gettys, MA</u>, Sean Smith, MD, Kimberly K. Rauch, DO, Daniel G. Whitney, PhD

Free Paper Session G: Orthopaedics 2

10:45 AM - 10:52 AM EDT

G1: Is the CPCHILD Questionnaire Responsive - Assessing HRQoL Changes and Performance of the CPCHILD After Hip and Spine Surgery in Children with Severe Cerebral Palsy

<u>Lennert Plasschaert, M</u>D, Patricia E. Miller, MS, Rachel L. DiFazio, PhD, Colyn Watkins, MD, Travis Matheney, MD, Brian D. Snyder, MD,PhD, Benjamin J. Shore, MD, MPH, FRCSC

#### 10:52 AM - 10:59 AM EDT

G2: Pneumonia Induced Mortality and Risk of Pneumonia in Children with Cerebral palsy with Scoliosis Treated With and Without Surgery

<u>Matti Ahonen, MD, PhD</u>, Ira Jeglinsky-Kankainen, PhD, Mika Gissler, PhD, ilkka Helenius, MD

#### 10:59 AM - 11:06 AM EDT

G3: Improving Detection of Underlying Neurologic Etiology for Pediatric Cavovarus Foot Deformity: We Can Do Better <u>Michelle Christie, MD</u>, Rusty L. Hartman, MS, Michael O'Sullivan, MD, Jacob Zide, MD, Anthony Riccio, MD

#### 11:11 AM - 11:18 AM EDT

G4: Burying Flexible Nails in the Femoral Canal Distally Prevents the Need for Removal Surgery in Non-ambulatory Children with Cerebral Palsy Luiz Carlos Almeida da Silva, Nemours Children's Hospital, Yusuke Hori, MD, Burak

Children's Hospital, Yusuke Hori, MD, Burak Kaymaz, M.D, Kenneth Rogers, PhD, Arianna Trionfo, MD, Jason Howard, MD, Richard Bowen, MD, Wade Shrader, MD, Freeman Miller, MD

#### 11:18 AM - 11:25 AM EDT

G6: Greater Implant Density Does Not Improve Pelvic Obliquity and Major Curve Correction in Neuromuscular Scoliosis Patrick Thornley, MD, MSc, FRCSC, Arlene Maheu, n/a, Kenneth Rogers, PhD, ATC, Peter Gabos, MD, M. Wade Shrader, MD, Suken A. Shah, MD

#### 11:30 AM - 11:37 AM EDT

G8: Minimal Bone Deficits in Ambulatory Children and Adults with Cerebral Palsy Tishya A. L. Wren, PhD, Adriana Liang, MS, Melissa Bent, MD, Robert M. Kay, MD

#### 11:37 AM - 11:44 AM EDT

G9: Impact of Comorbidities on Mortality in Neuromuscular Patients with Early Onset Scoliosis

Taylor Adams, BS, Bhavana Gunda, BS, Sydney Lee, BA, Maria F. Canizares, MD MPH, Yoko Matsumoto, PhD, Mark A. Erickson, MD, MMM, John Smith, MD, Pediatric Spine Study Group, n/a, Brian D. Snyder, MD,PhD, <u>Hiroko</u> Matsumoto, PhD

#### 11:44 AM - 11:51 AM EDT

G10: Morphological Variations in the Talus and Calcaneus Following Lateral Column Lengthening in Adults with Cerebral Palsy Andrew Peterson, MS, Kassidy Knutson, MS, Joseph J. Krzak, PT, PhD, Peter Smith, MD, Karen M. Kruger, PhD, Amy Lenz, PhD

#### 11:56 AM - 12:03 PM EDT

# G11: Distal Radius Fracture Repair in Adults with Cerebral Palsy

Michael J. Gouzoulis, BS, Alexander J. Kammien, BS, Maxwell Modrak, MD, <u>Ally Yang,</u> <u>MD</u>, David Colen, MD, Jonathan N. Grauer, MD, David B. Frumberg, MD

#### 12:03 PM - 12:10 PM EDT

G12: A Suture-Based Approach for Correction of Fixed Knee Flexion Deformity in Skeletally-Immature Patients with Cerebral Palsy

<u>Mathangi Sridharan, MD</u>, Nakul Talathi, MD, Enda Kelly, MD, Daniel Weltsch, MD, Rachel M. Thompson, MD

## Free Paper Session H: Therapeutic Interventions

#### 10:45 AM - 10:52 AM EDT

H1: Power Training combined with Interval Treadmill Training to Improve Walking Activity in Cerebral Palsy: A Randomized Controlled Trial

<u>Noelle G. Moreau, PT, PhD</u>, Kristie F. Bjornson, PT, MS, PhD, Joel Licea, PhD, Donald Mercante, PhD

#### 10:52 AM - 10:59 AM EDT

H2: The efficacy of the Hand-Arm Bimanual Intensive Therapy Including Lower Extremities (HABIT-ILE) in young children with bilateral cerebral palsy in a lowincome country: a randomized trial. Emmanuel S. Sogbossi, PhD, Daniela Ebner-Karestinos, PhD, Geoffroy Saussez, PhD - Physiotherapist, Julie Paradis, PhD, Solange Sotindjo Adon, PT, Solange Dossou, PT, Toussaint Kpadonou, MD, Rodrigo Araneda, PhD, Yannick Bleyenheuft, PhD

#### 10:59 AM - 11:06 AM EDT

# H3: Impact of HABIT-ILE on Infants with Unilateral Cerebral Palsy: A Randomized Trial

Astrid Carton de Tournai, PT, Enimie Herman, PT, Daniela Ebner-Karestinos, PhD, Estelle Gathy, PT, Rodrigo Araneda, PhD, Célia De Clerck, PT, Seyma Kilcioglu, PT, Laurence Dricot, Institute of Neuroscience, UCLouvain, PhD, Benoit Macq, PhD, Yves Vandermeeren, PhD, Yannick Bleyenheuft, PhD

#### 11:11 AM - 11:18 AM EDT

H4: Effects of Power Training combined with Interval Treadmill Training on Muscle Performance in Youth with Cerebral Palsy as Compared to Traditional Approaches: A Randomized Controlled Trial

<u>Noelle G. Moreau, PT, PhD</u>, Kristie F. Bjornson, PT, MS, PhD, Mattie Pontiff, DPT, PhD, Joel Licea, PhD, Donald Mercante, PhD

#### 11:18 AM - 11:25 AM EDT

H5: Efficacy of Intensive Training Targeting Mobility for Children and Adolescents with Cerebral Palsy: A Systematic Review And Meta-Analysis

Isabella P. Sudati, N/A, PT, <u>Leanne Sakzewski, PhD, Bachelor Occupational Therapy</u>, Carolina da silva, n/a, Michelle Jackman, n/a, Matthew Haddon, n/a, Dayna Pool, n/a, Maharshi Patel, n/a, Roslyn N. Boyd, PhD, Bachelor Physiotherapy, Ana Carolina de Campos, PhD

#### 11:25 AM - 11:32 AM EDT

H7: Comparison of muscle volume and muscle belly length in children with spastic cerebral palsy without treatment history from Suriname and with treatment history from Belgium

Fenna Walhain, PhD, Britta Hanssen, PhD, Ruby Chin A Fat, MSc, Marlies Declerck, PhD, Chelsi Bardan, MSc, Delaja Plein, MSc, Rhea Cruden, MD, Lynn Bar-On, PhD, Anja Van Campenhout, MD, PhD, Kaat Desloovere, PhD

#### 11:37 AM - 11:44 AM EDT

H8: Speech and Language Development in Children with Cerebral Palsy and Seizures: A Cross-Sectional Clinical Screening Study Helen L. Long, PhD, CCC-SLP, Karen Romer, RN, David Spence, MD, William C. Warner, Jr., MD, Leslie Rhodes, DNP, PPCNP-BC, DNP, PPCNP-BC

#### 11:44 AM - 11:51 AM EDT

H9: Adherence of Parent-Delivered Play Activities for very preterm infants drops during the transition from NICU to home. Shaaron Brown, PT, Jenniifer Burnsed, MD, Richard D. Stevenson, MD, Leroy R. Thacker, PhD, Christine Spence, PhD, Stacey C. Dusing, PhD

#### 11:51 AM - 11:58 AM EDT

H10: Variation in Occupational Therapy Care Delivery for Individuals with Cerebral Palsy by Age, Gross Motor Function, Manual Ability and Area Deprivation Index Amy F. Bailes, PT PhD, Amber Sheehan, OTR/L, Emma M. Austing, n/a, Jillian Kreimer, n/a, Li Lin, MS, Jenny M. Dorich, PhD

#### 12:03 PM - 12:10 PM EDT

H11: Efficacy of Upper Limb Therapies for Children with Cerebral Palsy: A Systematic Review and Network Meta-analysis.

Andrea N. Burgess, B Occ Thy I, Grad Cert Epi, PhD., Mark D. Chatfield, BA, Michelle Jackman, B Occ Thy, PhD, Megan Thorley, Msc, Bachelor of Occupational Therapy, Sarah E. Reedman, PhD, Bachelor of Physiotherapy, Roslyn N. Boyd, PhD, Bachelor Physiotherapy, Leanne Sakzewski, PhD, Bachelor Occupational Therapy

#### 12:10 PM - 12:17 PM EDT

H12: Exploring Parent Perspectives After Intensive Telerehabilation for Children with Hemiparesis: A Qualitative Analysis Elizabeth Maus, PT, Angela Rittler, OTD, Kylie L. Amon, n/a, Stephanie C. DeLuca, PhD, Jill Heathcock, MPT, PhD, Warren Lo, MD, Amy Darragh, PhD

#### 12:30 PM - 1:30 PM EDT

Lunch

#### 1:30 PM - 2:30 PM EDT

Coffee Break and Exhibit / Poster Review

#### 1:45 PM - 2:15 PM EDT

**International Scholar Highlight** 

#### 2:30 PM - 4:30 PM EDT

Mini Symposia 14-26

MINISYMP14: Implementation of the LEAP Program for the Early Detection of Infants at High Risk of Cerebral Palsy and Implementation of Early Intervention in Low Resource Settings.

Roslyn N. Boyd, PhD, Bachelor Physiotherapy, Ana Bedoshvilli, MBBS, Golam Moula, B Social Work, Katherine Benfer, PhD

#### Learning Objectives:

- Upon completion Participants will be informed about implementation of feasible and accurate early detection methods suitable for LMICs.
- Upon completion Participants will be informed about tools including GMA, MOS-R, HINE for CP and SACS-R for Autism.
- Upon completion Participants will be informed about the cultural adaptations required to enhance engagement of Australian First Nations families in early surveillance.
- 4. Upon completion Participants will be informed about implementing EB approaches to Early Intervention in LMICs for infants at high risk of CP (India, Sri Lanka, Georgia, Australia).

MINISYMP15: Empower360: Navigating EDIT-CP (Early Detection and Intervention Toolkit for Cerebral Palsy) for Primary Care Physicians, Rehabilitation Specialists, and Caregivers

Tatiana Ogourtsova, PhD OT, Jessica Hanson, BSc (Honors), MSc, Annette Majnemer, BSc, MSc, PhD, Darcy Fehlings, MD FRCP(C), MSc Learning Objectives:

- Demonstrate a comprehensive understanding of the early detection strategies outlined in the EDIT-CP Toolkit, focusing on attributes detectable by primary care providers and caregivers.
- Demonstrate a comprehensive understanding of the early intervention strategies outlined in the EDIT-CP Toolkit, focusing on evidence-based rehabilitation approaches.
- Effectively navigate the online toolkit and readily apply the learned strategies in realworld scenarios.

 Contribute to collaborative problemsolving discussions about the mobilization of evidence-based practices to foster improved outcomes in the early care journey for children with CP.

MINISYMP16: Equity-Based Co-Creation in Childhood Disability: Innovation in Service Design, Clinician Training, Tool Development, and Family Engaged Research

Michelle Phoenix, PhD, Meaghan Reitzel, OT, Karen Hurtubise, PhD, Martine Nault, BA, Vanessa Tomas, PhD, Samantha K. Micsinszki, PhD, Courtney Weaver, MA

#### Learning Objectives:

- Identify the key elements (philosophy, methods, outcomes) of EqCC as applied to childhood disability contexts.
- Appraise examples to determine how EqCC can be applied in their own clinical or research environments to enhance service or tool development, engagement in service design or research, and training.
- 3. Recognize the challenges in engaging marginalized groups in EqCC and generate solutions for addressing these barriers.
- 4. Determine whether any of the co-design materials presented (clinical tool, clinical training, telerehabilitation solutions) are applicable for use in their own environment. These products are available for audience members.

MINISYMP17: Advocacy Strategies for Health Equity: Multi-Step Actions for a Multi- Level Challenge

Verónica Schiariti, MD MHSc PhD, Lauren Fetsko, DO, Naomi Lorch, PhD, PT, Brenda Agnew, BA, Melissa Villegas, MD

#### Learning Objectives:

- 1. Introduce global evidence on health equity/inequity of people with disabilities.
- 2. Discuss ableism using practical examples

- 3. Highlight the importance of self-advocacy in health equity and ableism
- 4. Review concrete examples of advocacy strategies to achieve meaningful inclusion

MINISYMP18: Translating the NINDS
Cerebral Palsy Common Data Elements
(CP CDEs): Discover Ways to Advance
Your Research, Clinical, and Educational
Productivity While Shaping the Next
Generation of CP CDEs.

Joline E. Brandenburg, MD, Theresa Sukal Moulton, PT, DPT, PhD, Angela Shierk, PhD, Verónica Schiariti, MD MHSc PhD, Susan Sienko. PhD

#### Learning Objectives:

- 1. Define CP CDEs, case report forms, and instruments.
- Identify one way you can use the CP CDEs in research, clinic, or in an educational setting.
- 3. Describe the process for developing and updating CP CDEs and instruments.
- 4. Generate one recommendation for updating the CP CDEs.

MINISYMP19: Global Low- and Middle-Income Country Cerebral Palsy Register- Changing Landscape of Cerebral Palsy Registers for the Majority World Population.

Nadia Badawi, MBBCh, MSc, DCH, FARCP, PhD, FRCPI, Mohammad Muhit, MBBS, MSc, MSc, PhD, Gulam Khandaker, MBBS, DCH, MPH, PhD, FAFPHM, Israt Jahan, B.Sc., MS, MPH, PhD, Maria de las Mercedes Ruiz Brunner, PhD, Thembi J. Katangwe, MBBS, MMED Paeds, MPhil Neuro Paeds

#### Learning Objectives:

 Describe and compare the different innovative methods for population-based and institution-based survey/surveillance in low- and middle-income countries.

- Replicate and adapt the process of establishing multi-country network/ collaboration and conduct epidemiological research on cerebral palsy in low resource settings.
- Describe the epidemiology of cerebral palsy among children in low- and middleincome countries.
- 4. Identify potential scopes for collaboration and future research on cerebral palsy in low- and middle-income countries.

MINISYMP20: Surveillance and Management of Hip Displacement in Children with Cerebral Palsy: Clinical and Ethical Dilemmas

Jason Howard, MD, Benjamin J. Shore, MD, MPH, FRCSC, Kerr Graham, MD, MD, Erich Rutz. MD

#### Learning Objectives:

- To review new thinking on the pathophysiology of hip displacement (HD) in cerebral palsy (CP)
- 2. To review the state of hip surveillance in CP
- 3. To review the role of preventative orthopedic surgery for HD in CP
- 4. To review the best evidence regarding long term outcomes and goals of reconstructive surgery for HD in CP, including controversies and ethical dilemmas

MINISYMP21: More Than an IQ Score: Challenges and Opportunities for Accurately Evaluating Cognitive Strengths and Weaknesses in Children with Cerebral Palsy

Brooke Kimbrell, MD, MSE, Samudragupta Bora, PhD, Eric M. Chin, MD, Anastasia Wilson, BA, Maegan Newell, MD, Sanaya Shenoy, MSPH

#### Learning Objectives:

 Upon completion, participants will be able to identify indications for cognitive evaluation in people with CP

- Upon completion, participants will be able to describe common patterns of cognitive challenges faced by children with CP
- Upon completion, participants will be able to describe the importance of accurate, equitable cognitive evaluation to match abilities and resources
- Upon completion, participants will be able to discuss knowledge and resource gaps limiting accurate cognitive evaluation for children with CP

MINISYMP22: Parallel Lines Never Meet
- So How Can We Connect Parents,
Providers, and Healthcare Systems
to Improve Care for Children with
Disabilities?

Elizabeth A. Hill, DO, Kinga Pozniak, PhD, Alyssa M. Robison, DO, Kim Hesketh, MS, Rachel E. Martens, N/A, n/a, Alison A. Martens, none, Nancy A. Murphy, MD

#### Learning Objectives:

- Upon completion, participants will be able to describe the experiences of families of children with disabilities in healthcare systems.
- Upon completion, participants will be able to reflect on their experiences in caring for their children, including barriers to providing the kind of care they would like to provide.
- Upon completion, participants will be able to explore strategies to advance healthcare delivery for families of children with disabilities through education, enhanced communication training, and workforce development.
- Upon completion, participants will be able to identify three changes to make in their own practices to improve the experience of healthcare delivery for patients, families, and providers.

MINISYMP23: Research and Clinical Application of the Gross Motor Function Measure Item Set in Children 2-24 months of age.

Stacey C. Dusing, PhD, Lin-Ya Hsu, PhD, Silvana A. Pereira, Dr, Shaaron Brown, PT

### Learning Objectives:

- Upon completion, the participant will be able to describe the pros and cons of the GMFM and GMFM item set
- 2. Upon completion of this course we focused on neonatal intensive care.
- Upon completion of this course, the participants will be able to make describe 2 new locations they want to trader.
- 4. Upon Completion, the researcher will describe how they would implement this took in to research for a child under 12 months.

MINISYMP24: Selective Dorsal Rhizotomy: Multi-Center Perspective on Surgical Techniques, Selection Criteria, and Functional Outcomes

Amy E. Barbuto, PT, DPT, Daniel Curry, MD, Aloysia L. Schwabe, MD, Jeffrey Shilt, MD, Jean L. Stout, PT, MS, PhD(c), Michael T. Healy, MD, Mark Gormley, Jr., MD

#### Learning Objectives:

- List two similarities in surgical techniques between traditional and focal SDR procedures.
- List two differences in surgical techniques between traditional and focal SDR procedures.
- 3. Describe three selection criteria for focal SDR.
- 4. Describe three selection criteria for traditional SDR.

MINISYMP25: The World of Modified Sports: Illuminating the Pathway for People with Disability to Enter into, Participate in, and Excel at Leisure Time Physical Activity

Ricardo Sousa Junior, Jr., MSc, Georgina Clutterbuck, PhD, Hercules R. Leite, Sr., PhD

#### Learning Objectives:

- Upon completion, participants will understand: The treatment components of modified sports interventions
- the state of the evidence regarding the effectiveness of modified sports for children with disability
- The implications of implementation of modified sports in different contexts within a global context (Australia & Brazil)
- How to apply their new knowledge of modified sports interventions to implement these interventions for children of different ages and with different impairments in varying contexts.

# MINISYMP26: Top 10 Articles in Developmental Disabilities

Kilby Mann, MD, Garey H. Noritz, MD

#### Learning Objectives:

- to describe recent publications and updates related to the care of children with CP and related disabilities.
- describe what is known and future directions related to current topics in the care of children with CP and related disabilities.
- critically review scientific literature and apply relevant advances to the care of children and adults with CP and related disabilities in their local settings.
- disseminate updates on the care of children and adults with CP and related disorders with local stakeholders (trainees, those with lived experience, communities, others).

#### 4:30 PM - 7:00 PM EDT

**Leisure Time** 

#### 7:00 PM - 11:59 PM EDT

Networking Dinner \*Ticket Required



#### 7:00 AM - 8:00 AM EDT

Breakfast in the Exhibit Hall

#### 8:00 AM - 9:00 AM EDT

**Morning Seminars 27-39** 

# MORNSEM27: Care Pathway to Early Diagnosis of Cerebral Palsy for Community Providers

Ram A. Mishaal, MD, Mor Cohen-Eilig, MD, Olivia Scoten, n/a

#### Learning Objectives:

- Describe the steps along the BC Cerebral Palsy Community Diagnostic Care Pathway;
- Develop a plan to understand barriers pediatricians practicing in the community may face in implementing clinical guidelines pertaining to early CP diagnosis;
- Identify partners and stakeholders for possible KT collaboration to enable early diagnosis of CP
- 4. Conceptualize KT ideas such as a care pathway to enable early diagnosis of CP

#### MORNSEM28: Considerations for Effective School Readiness Assessment of Children with Cerebral Palsy

Stina Oftedal, PhD, B Hlth Sc (Diet), Samudragupta Bora, PhD, Leanne Sakzewski, PhD, Bachelor Occupational Therapy, Roslyn N. Boyd, PhD, Bachelor Physiotherapy

#### Learning Objectives:

- Upon completion, participants will be able to describe the conceptual framework of School Readiness and associated risk and protective factors.
- Upon completion, participants will be able to describe current knowledge of the school readiness of children with CP, and the effect of early intervention.

- Upon completion, participants will be able to list the best available tools for school readiness assessment in children with CP, and understand their limitations.
- 4. Upon completion, participants will be able to apply the knowledge presented to develop practical solutions for effective school readiness assessment of children with CP to optimise their transition to school.

# MORNSEM29: Have We Done Enough?: Attitudes Towards Disability in Healthcare

Ashley H. Harris Whaley, M.S., CCC-SLP, Justin W. Ramsey, M.D., Kathleen N. Friel, PhD

#### Learning Objectives:

- Gain an understanding of ableism and identify its prevalence embedded within society and healthcare related fields.
- 2. Identify treatment barriers, biases and stigma faced by individuals with disabilities and understand the need for formalized disability-focused training in healthcare-related fields.
- Consider the importance of knowledge translation between medical professionals and people with disabilities and how that impacts care delivery and outcomes.
- 4. Discuss strategies for including disability-centric education in core curriculums for healthcare specialties and explore the value of attracting and retaining more individuals with disabilities as healthcare providers.

MORNSEM30: Health Promotion and Obesity Management in Individuals with Developmental Disabilities

Anton Dietzen, MD, Tarra Dendinger, PT, MS, Margaret Tunney

#### Learning Objectives:

- Review obesity risk factors in individuals with developmental disabilities and become familiar with pharmacologic care of obesity in youth and young adults with developmental disabilities
- Discuss behavioral considerations to support weight management in youth with developmental disabilities
- Review the recommended guidelines for physical activity and barriers to participation
- 4. Discuss nutrition approaches for weight management

MORNSEM31: Intensity and Principles of Motor Learning: Integrating Research into Everyday Clinical Practice

Bhavini K. Surana, PT, EdD, Grace-Anne M. Herard, PT, EdD

#### Learning Objectives:

- Define intensity and discuss how it has been defined in cerebral palsy rehabilitation literature
- Describe commonalities across various intensive interventions designed to improve motor function in children with cerebral palsy
- Apply a motor learning framework to create treatment strategies to accomplish children's functional goals.
- 4. Develop an intensive training plan for each activity that incorporates a corresponding progression/shaping program for different clinical cases

MORNSEM32: New Technologies in Severe Cerebral Palsy: Evidence-Based Research Toward Independent Mobility, Communication, and Computer Access Saranda Bekteshi, PhD, Elegast Monbaliu, PhD

#### Learning Objectives:

- get acquainted with new (unconventional) technologies and the current evidence that supports their use in individuals with severe motor impairments, including the goal group of severe CP.
- acquire practical techniques using evidence-based guidelines to introduce, trial, and implement powered mobility with head-foot steering systems and eyetracking technology through structured and intensive training programs.
- assess efficacy and progress using reliable, cost- and time-efficient tools that would further assist in optimizing training programs to meet individual needs and capabilities.
- understand the current gaps and future perspectives within emerging technologies with alternative access methods, encouraging innovative ideas and fostering initiatives for new multidisciplinary collaborations that will advance the field.

MORNSEM33: Orthopedic Aspects of Spinal Muscular Atrophy: Implications for Surveillance and Treatment in the Era of Disease-Modifying Therapies Jason J. Howard, MD, Matthew Halanski, MD, Wade Shrader, MD, Saunder Bernes, MD

#### Learning Objectives:

- Describe the current evidence for the use of disease modifying treatments for spinal muscular atrophy, in particular their impact on improvements in gross motor function
- Describe the epidemiology and treatment of scoliosis in spinal muscular atrophy, including the role of disease modifying treatments on prevalence and surgical outcomes.

- Describe the epidemiology and treatment of hip deformities in spinal muscular atrophy, including the role of disease modifying treatments on prevalence and surgical outcomes.
- Describe the evaluation and treatment of gait function in spinal muscular atrophy and how it has been impacted by disease modifying treatments.

# MORNSEM34: Considering the Hidden Effects of Hearing Loss

Mary Jo Cooley Hidecker, PhD, MA, MS, CCC-A/SLP

#### Learning Objectives:

- 1. Participants will be able to describe hearing loss characteristics.
- 2. Participants will be able to list hearing loss effects on communication.
- 3. Participants will be able to discuss hearing aid and cochlear implants options.
- 4. Participants will be able to discuss assistive listening technology options.

#### MORNSEM35: HipScreen App: A Validated Tutorial for Teaching Hip Surveillance X-Rays Measurement to the Radiology Novice

Vedant A. Kulkarni, MD, Kyra Kane, BScPT, MSc, PhD, Donald Kephart, MD, Jon R. Davids, MD Learning Objectives:

# Use the free HipScreen App to measure a hip's migration percentage.

- Appreciate the role of the HipScreen app in removing barriers to implement a hip surveillance program in their community.
- 2. Identify important landmarks on a hip surveillance radiograph used for quantifying hip displacement.

 Understand protocols for proper positioning of children to obtain accurate hip surveillance radiographs and recognize features of poor patient positioning that could cause inaccuracy of the migration percentage measurement.

# MORNSEM36: Recent Advances in the Genetic Architecture of Cerebral Palsy: What is a Clinician to Do?

Darcy Fehlings, MD FRCP(C), MSc, Richard F. Wintle, PhD, Michael C. Kruer, MD, Maryam Oskoui, MD

#### Learning Objectives:

- Describe the differences between genetic testing (e.g., whole genome sequencing, exome sequencing, CP gene panels) and the clinical implications of ordering specific tests
- Describe research developments in 'Genomics' of cerebral palsy (CP) including a framework to understand the potential impact on brain development/function
- Describe the clinical implications of genomics findings on the etiologic workup for individuals with CP
- Describe clinical actionability of genomic findings on care/management in individuals with CP

# MORNSEM37: Recent Practice Changing Publications for the Pediatric Complex Care Provider (2024)

Kristie Malik, MD, Anna Jesus, MD, Kurtis T. Sobush, MD

#### Learning Objectives:

- 1. Discuss current topics and advances in the care of children with medical complexity.
- 2. Understand the multidisciplinary implications for each recent publication.
- 3. Identify methods to integrate findings into clinical practice.

 Learn novel practical research in realms of patient-prioritized outcomes, health equity, and/or health care delivery including implementation science.

# MORNSEM38: Treatment of children with Walking Impairments: What Do Patients Want, and What Can We Deliver?

Michael H. Schwartz, PhD, PhD, Andrew G. Georgiadis, MD

#### Learning Objectives:

- Upon completion, audience members will be able to define the ICF framework for patients with walking impairments and CP. They will also define the GOAL questionnaire's assessment of family priorities.
- Upon completion, audience members will be able to explain the difference between correlation and causation in the context of specific treatments for patients with cerebral palsy and walking impairment.
- Upon completion, audience members will be able to generally understand how treatment outcomes can be predicted from large data sets using causal methodology, counterfactuals, and machine learning.
- 4. Upon completion, audience members will be able to apply the presented treatment outcome predictions to their own patients who are under consideration for gait treatment.

## MORNSEM39: Creating Technology to Increase Function in Children

Sarah H. Evans, MD, Laura A. Prosser, PT, PhD

#### Learning Objectives:

- define the "dream team" for creating meaningful technology for pediatric rehabilitation
- 2. list the appropriate steps required to create a successful technology product

- 3. identify the value of end user participation in the development of technology
- 4. define motor control and its importance in function

#### 8:15 AM - 3:00 PM EDT

**Community Forum** 

#### 9:00 AM - 9:30 AM EDT

Coffee Break in the Exhibit Hall

#### 9:30 AM - 11:15 AM EDT

Free Paper Sessions I-L

## Free Paper Session I: Basic Science & Genetics

#### 9:30 AM - 9:37 AM EDT

I1: Developmental Motor Neuron Survival Contributes to Neuromotor Disorders Joline E. Brandenburg, MD, Matthew Fogarty, DVM, PhD, Wen-Zhi Zhan, MD, Gary C. Sieck, Ph.D., PhD

#### 9:37 AM - 9:44 AM EDT

I2: Using Vertebral Growth Modulation to Correct Kyphosis: feasibility study in the Hyperkyphotic porcine model.

<u>Matthew Halanski, MD</u>, Cameron Jeffers, BS, Brittney Kokinos, MS, Thomas D. Crenshaw, MS, PhD, Dave Bennett, MD

#### 9:44 AM - 9:51 AM EDT

I3: Proteomic Analysis of Spastic and Non-Spastic Muscles Reveals Cellular Alterations in the Absence of Fibrosis

Kristen Stearns-Reider, PhD, PT, Rachel M. Thompson, MD, Kirk Hansen, PhD, Mark Maslanka, BS, Yiran Deng, BS, Kara M. Shin, MS, Michelle Ma, BS, Richard E. Bowen, MD

#### 9:56 AM - 10:03 AM EDT

I5: Validation of Machine-Learning Based Automatic Diagnostic Tests for Cerebral Palsy

<u>Jonathan R. Hicks, BS</u>, Karyn Robinson, MS, Robert E. Akins, PhD

#### 10:03 AM - 10:10 AM EDT

**I6: Genetics of Idiopathic Toe Walking**<u>Jeremy Bauer, MD</u>, Jon R. Davids, MD, Susan
Sienko, PhD

#### 10:10 AM - 10:17 AM EDT

I7: Reliance on Visual Feedback of Hand Position in Typically Developing Children Triet Lu, BS, Rachel L. Hawe, DPT, PhD

#### 10:22 AM - 10:29 AM EDT

18: Differences in Symmetric and Asymmetric Bilateral Coordination in Children with Hemiparetic Cerebral Palsy Samuel T. Nemanich, PhD, MSCI, Cassandra J. Kemmel-Bartletti, MS, Meghann Sytsma, BS, Karin Goodfriend, MD, MPT, Sheila Schindlerlvens, PhD, PT

#### 10:29 AM - 10:36 AM EDT

19: Assessing Neuromuscular Efficiency by Cardiopulmonary Exercise Testing in Spinal Muscular Atrophy with 3 copies of SMN2 Warren A. Marks, MD, Stephanie Acord, MD, Lindsay Jacobs, PT,DPT, Avery R. Caraway, MS, Britney Rhem, MD, Marcie Baldwin, MSN

#### 10:36 AM - 10:43 AM EDT

I10: Single Cell RNA Sequencing Reveals Disrupted In Vivo Transcription of Stem Cells in Muscle Contractures of Children with Cerebral Palsy

Madison Stewart, BS, Lin-Ya Hu, BS, Taryn Loomis, BS, Lizbeth Macias De La Torre, N/A, Vedant A. Kulkarni, MD, Marie Villalba, BA, Jon R. Davids, MD, <u>Lucas R. Smith, PhD</u>

#### 10:48 AM - 10:55 AM EDT

I11: The Role of Circular RNA Nuclear Factor IX (CircNFIX) in Regulating MEF2C Levels in Spastic Cerebral Palsy

Brigette M. Romero Carpio, MS, Parsa Hoque, MS, Karyn Robinson, MS, Stephanie Lee, MS, Vijay Parashar, PhD, Robert E. Akins, PhD, Mona Batish, PhD

#### 10:55 AM - 11:02 AM EDT

I12: Expression of Micrornas and Target Genes Associated With Extracellular Matrix Remodeling and Mitochondrial Function Are Improved Following Intensive Exercise Training in Children With Cerebral Palsy Noelle G. Moreau, PT, PhD, Joel Licea, PhD, <u>Liz</u> Simon Peter, PhD

## Free Paper Session J: Early Development 2

#### 9:30 AM - 9:37 AM EDT

J1: Associations Between Clinically Accessible Neonatal MRI Scoring and 6-Year Motor Outcomes in a Prospective Longitudinal Cohort of Infants Born Preterm

Karen H. Mistry, DPT, BExSS, Samudragupta Bora, PhD, Kerstin Pannek, PhD, Alex M. Pagnozzi, PhD, Simona Fiori, MD, PhD, Andrea Guzzetta, MD, PhD, Robert Ware, PhD, Paul B. Colditz, MBBS, FRACP, FRCPCH, MBiomedEng, DPhil, Roslyn N. Boyd, PhD, Bachelor Physiotherapy, Joanne George, PhD

#### 9:37 AM - 9:44 AM EDT

J2: The Impact of Early Intervention Timing on Short-term Outcomes: A Composite Score Analysis of the Supporting Play Exploration and Early Development Intervention Trial

<u>Stacey C. Dusing, PhD,</u> Mark R. Conaway, PhD, Richard D. Stevenson, MD, Shaaron Brown, PT, Rebecca Molinini, DPT, PhD

#### 9:44 AM - 9:51 AM EDT

J3: Effect of Family-Centered Care
Interventions on Motor and Neurobehavior
Development of Very Preterm Infants: a
Systematic Review and Meta-analysis
Manasa Kolibylu Raghupathy, MPT, Shradha
S Parsekar, MPH, Shubha R. Nayak, PT, Kalesh
M Karun, PhD, Sonia Khurana, PT, PhD, Alicia
Spittle, PhD, Leslie Edward S Lewis, DNB
Pediatrics, Bhamini Krishna Rao, Sr., PhD

#### 9:51 AM - 9:58 AM EDT

J4: Harnessing Neuroplasticity to Improve Motor Performance, Cognition, and Function in Infants with Cerebral Palsy: A Randomized Controlled Trial

Catherine Morgan, PhD; BAppSc (Physio),
Nadia Badawi, MBBCh, MSc, DCH, FARCP,
PhD, FRCPI, Alicia Spittle, PhD, Roslyn N. Boyd,
PhD, Bachelor Physiotherapy, Adrienne Kirby,
BSc (hon I), MSc, Rodney W. Hunt, PhD, MMed
(ClinEpi), FRACP, FRCP(UK), Koa Whittingham,
PhD, Kerstin Pannek, PhD, Rachael L. Morton,
PhD, Annabel Webb, MS, Michael Fahey, MBBS,
PhD, Andrea Guzzetta, MBBS, Karen Walker,
PhD MCN BAppSc RGN RSCN, Jane Valentine,
MBBS,, Catherine Elliott, PhD, Kristina Prelog,
MBBS FRANCZR, Shannon N. Olivey, N/A, BA,
Iona Novak, PhD

#### 10:05 AM - 10:12 AM EDT

J5: Stability of Motivation to Move in Toddlers with Cerebral Palsy

<u>Tracy Kornafel, PT, DPT, PCS</u>, Athylia C.

Paremski, BA, Julie A. Skorup, DPT, Morgan M.

Alcott, DPT, Laura A. Prosser, PT, PhD

#### 10:12 AM - 10:19 AM EDT

J6: RCT of a Social-Media-Delivered Intervention for Caregivers of Young Children with Motor Delays or Impairments Nathalie L. Maitre, MD, PhD, Paige Ryals, MS, Larken Marra, PhD, Will Kjeldsen, MA, Lisa Pinson, PT, Rachel Byrne, PT, Jennifer Lyman, MA, Melissa Murphy, PhD

**J8: Long Term Outcomes and Predictive** 

#### 10:19 AM - 10:26 AM EDT

Factors After a Randomised Trial of Baby-CIMT and Baby-BIM for Young Children at Risk of Unilateral Cerebral Palsy.

Roslyn N. Boyd, PhD, Bachelor Physiotherapy,
Stina Oftedal, PhD, B HIth Sc (Diet), Iona
Novak, PhD, Susan Greaves, PhD, Nadia
Badawi, MBBCh, MSc, DCH, FARCP, PhD, FRCPI,
Catherine Morgan, PhD; BAppSc (Physio),
Catherine Elliott, PhD, Jane Valentine, MBBS,,
lisa Findlay, OT, Robert Ware, PhD, Leanne
Sakzewski, PhD, Bachelor Occupational
Therapy, Simona Fiori, PhD

#### 10:26 AM - 10:33 AM EDT

J9: Parent Experiences of Early Screening for Cerebral Palsy: A Reflexive Thematic Analysis

Kate L. Cameron, PhD, Free Coulston, PhD, Amanda K.L. Kwong, PhD, Koa Whittingham, PhD, Catherine Morgan, PhD; BAppSc (Physio), Roslyn N. Boyd, PhD, Bachelor Physiotherapy, Cathryn Crowle, PhD, <u>Alicia Spittle</u>, PhD

10:38 AM - 10:45 AM EDT

J10: The HEIGHTEN Trial: A Hybrid Effectiveness-Implementation Trial of Home-based Early Intensive Hand Therapy Alicia J. Hilderley, PhD, Kathleen O'Grady, MS, Mia D. Herrero, BSCOT, BSC, Eleanor Leverington, OT, Sandra Reist-Asencio, n/a, Roxanne Pynn, n/a, John Andersen, MD, Adam Kirton, MD

#### 10:45 AM - 10:52 AM EDT

J11: BRIGHT Coaching to Empower
Caregivers of Children With Suspected
Developmental Delays on Waitlist for
Services: A Randomized Controlled Trial
Annette Majnemer, BSc, MSc, PhD, Tatiana
Ogourtsova, PhD OT, Jillian H. Filliter, PhD,
Maureen O'Donnell, FRCPC, Kristy Wittmeier,
PhD, Marilyn Ballantyne, PhD, MHSc, RN, Carrie
Costello, BFA, Ana C. Hanlon-Dearman, MD,
MSc, Faizan Khan, BA, Lucyna M. Lach, PhD,
Natalina Pace, n/a, Hema Patel, MD, Gina R.
Rempel, FRCPC, Mandy Young, n/a

#### 10:52 AM - 10:59 AM EDT

J12: Parents' Perceptions of Delays and Disabilities in their Children with Invasive Mechanical Ventilation

Amanda Calipo, BS, Emma Lynch, MPH, <u>Sarah</u> A. Sobotka, MD, MSCPw Free Paper Session K: Mental Health, Pain, & Nutrition

9:30 AM - 9:37 AM EDT

K1: Characterization of Mental Health Diagnoses Among Children with Cerebral Palsy: An Electronic Health Record Study Surbhi Bhatnagar, PhD, Alexis Mitelpunkt, n/a, Juliana Rizzo, BA, Nanhua Zhang, PhD, Tess Guzman, BS, Ryan Schuetter, BS, Jilda N. Vargus-Adams, MD, MSc, Amy F. Bailes, PT PhD, Kelly R. Greve, PT, DPT, PhD, Melissa Gerstle, PhD, Bruce J. Aronow, PhD, Brad G. Kurowski, MD, MS

9:37 AM - 9:44 AM EDT

K2: A Mixed Methods Study of the Impact of Selective Dorsal Rhizotomy on Chronic Pain in Children with Cerebral Palsy Nicole Fischer, MD FRCP(C), Rachel Willis, BS, Golda Milo-Manson, MD FRCP(C), George Ibrahim, MD, PhD, FRCSC, FAANS, Darcy Fehlings, MD FRCP(C), MSc

9:44 AM - 9:51 AM EDT

K3: Post-Traumatic Stress Symptoms in Parents of Children with Medical Complexity: Short Term Outcomes After Hospitalization

Tammie Dewan, MD, MSc, Kathryn A. Birnie, PhD, Isabel Jordan, n/a, Laurie Lee, NP, MN, megan K. miller, MSW, Janet E. Rennick, PhD, Jennifer Zwicker, PhD, Andrea M. Whiteley, PhD, Melanie Noel, PhD

American Academy for Cerebral Palsy and Developmental Medicine

#### 9:56 AM - 10:03 AM EDT

K4: Mental Health Diagnoses Among Children with Cerebral Palsy Compared with Typically Developing and Chronic Condition Pediatric Patients: An Electronic Health Record Study

Surbhi Bhatnagar, PhD, Alexis Mitelpunkt, n/a, Juliana Rizzo, BA, Nanhua Zhang, PhD, Tess Guzman, BS, Ryan Schuetter, BS, Jilda N. Vargus-Adams, MD, MSc, Amy F. Bailes, PT PhD, Kelly R. Greve, PT, DPT, PhD, Melissa Gerstle, PhD, Bruce J. Aronow, PhD, Brad G. Kurowski, MD, MS

#### 10:03 AM - 10:10 AM EDT

### K5: Autism Screening in Preschool-age Children with Cerebral Palsy

Georgina M. Perez Liz, MD, Ana Beatriz Vega, MA, Ana Narcizo, BA, Fernanda Alcalde, BA, Maria Jose Batarse, BA, Roberta Contreras, BA, Sofia Garcia, BA, Sofia Villarreal-Zambrano, MS, Alejandra Sagastegui-Roel, MD, Juan Maldonado, MD, MSc, María del Consuelo C. Ibarra-Rodriguez, MD, Diana L. Robins, PhD

#### 10:10 AM - 10:17 AM EDT

K6: Health-Related Quality of Life in Physical Disabilities of Childhood Stephanie Butler, DPT, Nancy Lennon, BS, MS, DPT, Chris Church, MPT, Wade Shrader, MD, Reid Nichols, MD, Sana Patil, BS, Freeman Miller, MD, Jose J. Salazar-Torres, Ph.D., Maureen Donohoe, PT, DPT, Faithe R. Kalisperis, DPT, Stuart Mackenzie, MD

#### 10:22 AM - 10:29 AM EDT

#### K7: One-year Pain Intensity Trajectories in Children and Youth with Cerebral Palsy: A Cohort Study

<u>Heather Shearer, DC, PhD</u>, Pierre Côté, DC, PhD, Sheilah Hogg-Johnson, MMath, PhD, Darcy Fehlings, MD FRCP(C), MSc

#### 10:29 AM - 10:36 AM EDT

K8: Pelvic Floor Physical Therapy for Management of Constipation in Children With and Without Cerebral Palsy Megan T. Burke, MD, Michelle Pouliot, DPT, Dawn Dore-Stites, PhD, Rita Ayyangar, MBBS, FAAP, FAAPMR, Julie Sturza, MPH, Sania Srivastava, n/a, Niko Kaciroti, PhD, Barbara Felt, MD

#### 10:36 AM - 10:43 AM EDT

## K9: A Scoping Review of Pediatric Feeding Tube Weaning Interventions

Amanda Goldstein, MS, Michelle High, MSN, Emma Lynch, MPH, Andrea Fawcett, MLIS, Sarah A. Sobotka, MD, MSCP

#### 10:48 AM - 10:55 AM EDT

K10: Diet Quality and Parental Concern About Diet Adequacy in Children With Cerebral Palsy at School Entry Age. Stina Oftedal, PhD, B Hlth Sc (Diet), Roslyn N. Boyd, PhD, Bachelor Physiotherapy, Robert Ware, PhD, Leanne Sakzewski, PhD, Bachelor Occupational Therapy, Kristie Bell, PhD

#### 10:55 AM - 11:02 AM EDT

#### K12: Prevalence and Prediction of Pain That Limits Activities Among Adults With Cerebral Palsy Receiving Care in a Learning Health Network

Mary E. Gannotti, PT, PhD, Amy F. Bailes, PT PhD, Garey H. Noritz, MD, Elizabeth J. Lucas, MD, Duncan O. Wyeth, MA, Elizabeth Bellisimo, BSN, MSN, Cristina A. Sarmiento, MD, Deborah E. Thorpe, PT, PhD, Jodi M. Kreschmer, MSW, Hana Azizi, MD, MPH, Stephen A. Nichols, MD

Free Paper Session L: Participation & Gait Analysis

9:30 AM - 9:37 AM EDT

L1: Participate-CP 2: Optimising participation in physically active leisure for children with cerebral palsy: Phase III randomized controlled trial.

Leanne Sakzewski, PhD, Bachelor Occupational Therapy, Sarah E. Reedman, PhD, Bachelor of Physiotherapy, Catherine Elliott, PhD, Jenny Ziviani, PhD, Iona Novak, PhD, Stewart Trost, PhD, Annette Majnemer, BSc, MSc, PhD, Tracy Comans, PhD, Keiko Shikako, PhD, Robert Ware, PhD, Lynda McNamara, PhD, Sian A. Williams, PhD, Syed Afroz Keramat, PhD, Denise SK Brookes, PhD, Roslyn N. Boyd, PhD, Bachelor Physiotherapy

#### 9:37 AM - 9:44 AM EDT

L2: IMPACT OF TREATMENT FOR CHILDREN WITH IDIOPATHIC TOE WALKING ON GAIT ABNORMALITIES

Jon Davids, MD, Mark L. McMulkin, PhD, Bruce A. MacWilliams, PhD, Susan Sienko, PhD, <u>Jeremy Bauer, MD</u>

9:44 AM - 9:51 AM EDT

L3: Predictors of Employment Among Emerging Adults with Cerebral Palsy Eduardo S. del Rosario, Jr., PhD, FNP-BC

#### 9:56 AM - 10:03 AM EDT

L4: Effect of Age at the Time of Brain Injury on Hip Rotational Profile During Gait in Children with Unilaterally Affected Cerebral Palsy and Acquired Brain Insult Jose J. Salazar-Torres, PhD, Chris Church, MPT, Freeman Miller, MD, Nancy Lennon, BS, MS,

Jose J. Salazar-Iorres, PhD, Chris Church, MPI, Freeman Miller, MD, Nancy Lennon, BS, MS, DPT, Jason Howard, MD, Thomas J. Shields, BS, Laura L. Owens, MD, Wade Shrader, MD

#### 10:03 AM - 10:10 AM EDT

L5: Peak Joint Motion and Power Generation Timing Correlations in Relation to Propulsive Ground Reaction Forces in Patients With and Without Cerebral Palsy <u>Kirsten Tulchin-Francis, PhD</u>, Mallory Rowan, BS, Matthew Parrett, MS, FMS, Jessica Lewis, PT, DPT

#### 10:10 AM - 10:17 AM EDT

L6: Concordance of Subjective and Objective Measures of Community Participation in Individuals with Cerebral Palsy

<u>Jennifer Kallini, MD</u>, Amith Umesh, BA, Sophie Mesler, BS, Rachel M. Thompson, MD, Kristen Stearns-Reider, PhD, PT

#### 10:22 AM - 10:29 AM EDT

L7: Functional Independence of Children with Arthrogryposis

<u>Lauren C. Hyer, MD</u>, Emily Shull, PhD, Lisa V. Wagner, OTR/L, David E. Westberry, MD



Encourage colleagues and friends to get involved and **JOIN TODAY!** 

https://www.aacpdm.org/membership

10:29 AM - 10:36 AM EDT

L8: Tibial Torsion and Kinematic Correlations During Gait in Patients with Diplegic Cerebral Palsy

Akshitha Adhiyaman, BS, Olivia C. Tracey, BA, Colson Zucker, BA, Vishnu Deep Chandran, PhD, Silvia Zanini, MS, Jennifer Jezequel, DPT, Bridget A. Assip, DPT, Sherry I. Backus, PT, Dara Jones, MD, David M. Scher, MD, Paulo Selber, MD

#### 10:36 AM - 10:43 AM EDT

L9: Parent-identified Barriers to Healthcare, Education, and Childcare for Children with Disabilities Living in Rural Communities Rachel Bican, PT, DPT, PhD, Evan Forsythe, BS, Allyson Hughes, PhD

10:48 AM - 10:55 AM EDT

L10: A Feasibility Trial Combining a Modified Sports Intervention With a Context-focused Intervention for Ambulant Children With Cerebral Palsy

Hercules R. Leite, Sr., PhD, Luana Silva, Physiotherapist, Deisiane O. Souto, N/A, PhD, Rafael Magalhães, PhD, Ricardo Sousa Junior, Jr., MSc, Georgina Clutterbuck, PhD, Dana Anaby, PhD, Egmar L. Longo, PhD, Ana Cristina Resende Camargos, PhD

10:55 AM - 11:02 AM EDT

L12: Not All Made Equal: Al Chatbot Reponses to Common Patient/Family Questions About Gait Analysis

<u>Kirsten Tulchin-Francis, PhD</u>, Jessica Lewis, PT, DPT, Mallory Rowan, BS, Matthew Parrett, M.Ed, FMS, Daryn Strub, BA, Laura Bates, BS 11:30 AM - 1:00 PM EDT Closing General Session

2:00 PM - 4:00 PM EDT

Mini Symposia 27-39

MINISYMP27: Bringing Parents and Therapists Together to Co-Design Service Improvements for Children Living with Disabilities: Facilitating Partnership Working Through Experience-Based Co-Design

Jill Massey, BSc/MSc, Natalie Sadler, n/a

Learning Objectives:

- 1. Describe the principles and six stages of Experience-based Co-design.
- 2. Define the stages of design thinking and connect tool choice with desired output.
- Demonstrate the use of two design thinking tools and conduct a prioritisation activity.
- 4. Discuss and compare participant experiences in traditional service improvement with Experience-based Co-design.

MINISYMP28: Designing and Evaluating Meaningful Interprofessional Educational Experiences: Developmental Disabilities Education as a Lens

Steven M. Lazar, MD, MEd, Mary Jo Cooley Hidecker, PhD, MA, MS, CCC-A/SLP, Pegah Firouzeh, PhD, Briano DiRezze, PhD

Learning Objectives:

- 1. Create meaningful behavioral learning objectives with all 4 key components using the Audience, Behaviour, Conditions, Degree (ABCD) model.
- Describe at least 3 novel teaching techniques that can be applied to the interprofessional clinical context through an instructional methods card game.

- Describe best practices in evaluating interprofessional education and training experiences using the Interprofessional Education Collaborative (IPEC) core competencies.
- Reflect upon their current interprofessional team practice and learning.

MINISYMP29: Implementation of Rehabilitation Early for Infants at High Risk of Congenital Hemiplegia – Informing Clinical Practice and Future Research.

Roslyn N. Boyd, PhD, Bachelor Physiotherapy, Kimberley S. Scott, DPT, PhD, Leanne Sakzewski, PhD, Bachelor Occupational Therapy

#### Learning Objectives:

- 1. Upon completion participants will be able to identify suitable children for very early interventions aimed to improve unimanual and bimanual hand use and commenced from 3-9 months (c.a.).
- Upon completion participants will be able to use of the Hand Assessment of Infants (HAI) to select patients, set level to commence and increment the interventions.
- Upon completion participants will be able to understand how to administer very early interventions aimed to improve unimanual and bimanual hand use and commenced from 3-9 months corrected age (c.a.).
- Upon completion participants will be able to provide early intervention as a homebased program using a coaching model with caregivers.

MINISYMP30: Innovative Models of Early Detection and Intervention for Children with Cerebral Palsy in Low- and Middle-Income Countries

Mahmudul Hassan Al Imam, PhD, MPH, BScPT, Roslyn N. Boyd, PhD, Bachelor Physiotherapy, Ruby Fat, MSc, BSc

#### Learning Objectives:

- Upon completion, participants will gain a comprehensive understanding of the Sustainable Model of eARly intervention and Telerehabilitation for children with CP (SMART CP) and its relevance in low-and middle-income countries.
- Upon completion, participants will be able to describe the Learning through Everyday Activities with the Parents of children with CP (LEAP-CP) intervention and its adaptability in low- and middle-income countries.
- Upon completion, participants will be able to examine the Early Detection and Intervention in Suriname (EDIS) program and consider its scalability to other lowand middle-income countries.
- Upon completion, participants will be able to adeptly describe the Malamulele Onward Carer-2-Carer Training Program and discern its implications for other lowand middle-income countries.

MINISYMP31: Making a Difference with the GOAL Questionnaire - Case Examples: Incorporating Family Priorities into Practice

Jean L. Stout, PT, MS, PhD(c), Andrew G. Georgiadis, MD, Pam Thomason, M Physio, Katie Walt, PT, DPT, Unni G. Narayanan, MBBS, MSc, FRCS(C)

#### Learning Objectives:

 Describe the unique nature of the GOAL Questionnaire and how it can facilitate shared decision making.

- Identify one or more pearls and pitfalls regarding incorporation of the GOAL Questionnaire into clinical practice.
- Explain how priorities change across different age categories and the similarities/differences between patients and caregivers
- Discuss how direct knowledge of family priorities related to functional tasks in conjunction with current evidence base can augment and direct treatment planning.

MINISYMP32: Management of Difficult Clinical Presentations of Complex Neurological Conditions, Hypertonia, and Complex Movement Disorders in Children with Disabilities

Mark Gormley, Jr., MD, Tim Feyma, MD, Patrick Graupman, MD

#### Learning Objectives:

- Upon completion, participants will 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.
- Upon completion, participants will be able to understand when a deep brain stimulator can be useful in managing severe dystonic and dyskinetic conditions.
- Upon completion, participants will be able understand which patients may be successfully treated with a ventral-dorsal rhizotomy or a selective dorsal rhizotomy.
- Upon completion, participants will be able to understand when intrathecal baclofen, phenol neurolysis, and botulinum toxin injections may be useful in treating hypertonic conditions.

MINISYMP33: Mini-SCALE, Selective Control Assessment of the Lower Extremity for Infants and Toddlers: Rationale, Development, Administration and Scoring

Loretta A. Staudt, MS, PT, Eileen G. Fowler, PhD, PT, Barbara Sargent, PhD, PT

#### Learning Objectives:

- Define selective motor control (SMC) of the lower extremities and describe its impact on the function and participation of children with spastic cerebral palsy (CP).
- Describe the development of SMC of the lower extremities for infants with or at high risk for CP, compared to infants with typical development.
- Understand the administration and scoring of Mini-SCALE (Selective Control Assessment of the Lower Extremity for Infants and Toddlers).
- 4. Use Mini-SCALE to accurately evaluate SMC from videos of infants and toddlers with typical development, CP and high risk for CP.

MINISYMP34: Moving Beyond
Implementation and onto Optimization
of Early Detection of and Intervention
for Cerebral Palsy within the United
Cerebral Palsy Affiliate Network

Supreet Deshpande, MD, Nanette Aldahondo, MD, Candice L. Johnson, OTD, Robin McDonald, MPT, Mark Gormley, Jr., MD, Valerie Pieraccini, MS, Brittany Dichraff, DPT, Katie Michalski, MA, CCC-SLP

#### Learning Objectives:

 Upon completion, participant will be able to identify the risk factors and evidence for early and accurate diagnosis in Cerebral Palsy

- Upon completion, participant will be able to Identify various approaches to early CP care through examination of 2 diverse clinical settings: Hospital based & Outpatient Therapy Clinic
- Upon completion, participant will be able to discuss current evidence for early CP intervention to optimize patient outcomes
- Upon completion, participant will be able to strengthen their knowledge by participating in small group discussions of unique cases that will include care giver experiences in video format.

### MINISYMP35: Neuro-orthopaedic Journal Club: Top 10 Articles in the Last Year Relating to the Orthopaedic Management of Children with Neuromuscular Disorders

Monica Payares-Lizano, MD, Jon R. Davids, MD, Benjamin J. Shore, MD, MPH, FRCSC, Mara Karamitopoulos, MD, MPH, Verena M. Schreiber, MD

#### Learning Objectives:

- Introduction to a standardized format for the critical analysis of scientific articles from the medical literature.
- Upon completion the participants will be familiar with the most significant recent advances in the orthopaedic management of children with neuromuscular disorders
- 3. Upon completion, the participants will be able to Incorporate new techniques and technologies into clinical practice.
- 4. Upon completion, the participants will appreciate current research trends in this area and be inspired to contribute to the body of knowledge!

### MINISYMP36: Practical Strategies and Guiding Steps for Implementing High Quality Evidence Based Intensive Therapies

Dory Wallace, MS, OTR/L, MaryRebekah Trucks, MS, OTR/L, Stephanie C. DeLuca, PhD, Elizabeth (Liz) Humanitzki, MS, OTR/L, Julia Brennan, PT, DPT, PCS, Kathleen "Kate" Ann Gypson, BSOT, OTR/L

#### Learning Objectives:

- 1. Identify steps necessary to implement research into clinical practice.
- 2. Identify key practices in gathering clinical data via practice-based evidence.
- Discuss the translational process of a specific evidenced-based intensive therapy model into multiple clinical organizations with varied characteristics.
- Operationalize principles necessary for disseminating therapeutic research protocols into clinical training paradigms.

#### MINISYMP37: Comprehensive Management of Knee Problems in Cerebral Palsy

Henry Chambers, MD, Patrick Curran, MS, MD, John Collins, MS, Andrew Skalsky, MD

#### Learning Objectives:

- Upon completion, participants will be able to understand the specific pathophysiological mechanisms that contribute to knee problems in individuals with cerebral palsy.
- Upon completion, the participant will be able to differentiate between various types of knee problems, such as contractures, instability, and gait abnormalities and patterns.
- Upon completion, the participant will acquire knowledge of evidence-based interventions and treatment modalities for managing knee problems in cerebral palsy.

4. Upon completion, the participant will be able to develop communication skills to effectively work with patients, their families, and a multidisciplinary team to create personalized and comprehensive treatment plans.

MINISYMP38: The Co-Creation of Care: Knowledge Translation and Sharing Between Providers and Adults with Cerebral Palsy

Ashley H. Harris Whaley, M.S., CCC-SLP, Mark Peterson, PhD, MS

Learning Objectives:

- Address the knowledge translation gap existing between medical providers and adults with cerebral palsy, and identify how these deficits have a negative impact on care quality, care delivery, and outcomes.
- Understand how the Preventative Healthcare Guidelines for Adults with CP are community stakeholder driven and will be a tool for communication and improved care between adults with CP and providers.
- Examine the importance of healthcare spaces where providers and patients engage in co-creation of care.
- Discuss how knowledge translation/ dissemination impacts health literacy and health outcomes, considering the successful existing models of other disability populations.

MINISYMP39: Clinical Practice Guidelines (CPG) for Screening, Assessment, Diagnosis, and Classification of Childhood Cerebral Visual Impairment (CVI)

Corinna Bauer, Ph.D., Naomi Dale, PhD

Learning Objectives:

- Understand basics of CVI and the rationale for creating evidence-based consensus practice guidelines
- Review methods to develop sound clinical guidelines
- Learn about potential pathways and discuss barriers and facilitators for implementing the new guidelines
- 4. Understand implementation of the practice guidelines through interactive discussion of cases

#### 2:00 PM - 6:00 PM EDT

**Board of Directors Meeting** 

# Clinical Observation Or Single Case Study Posters

COO1: Intranasal Baclofen: An Innovative Approach for Hypertonici ty Treatment Andrew Skalsky MD, Alyssa Wieand BS, Anna Burch MA, Talia Soto BA

COO2: Promoting motor control in infants with and without neuromotor conditions using artificial intelligence (AI) based toy in tummy time: A case study Arya Salgaonkar MPT, Stacey Dusing PhD

CO04: Clinical Spectrum of ATP1A3 Mutation

Caroline Gormley DO, Kelly Cho MD

CO05: VAMP2 Mutation Clinical Presentation: Case Report

<u>Caroline Gormley DO</u>, Supreet Deshpande MD

CO06: Combined Focal Selective Dorsal Rhizotomy and Orthopedic Surgery in a Child with Cerebral Palsy: Clinical Case Study

<u>Dorothy Harris Beauvais MD</u>, Nisha Gadgil MD, Sruthi Thomas MD

COO7: A case report of AIDP in a 9-yearold girl after bone marrow transplant <u>Dylan Mann MD</u>, Matthew Severson MD, Nanette Aldahondo MD, Cristina Brea MD

CO08: Raynaud's phenomenon and serial casting

<u>Elizabeth Bellisimo BSN, MSN</u>, Jennifer Bain MD, PhD, Hana Azizi MD, MPH CO09: Exploring Parent Perceptions of the Kids Building for Kid Workshop Experience and the Modified Ride on Car: A Case Study of a Young Child with Rett Syndrome

Jennifer Tucker PhD, Julie Feuerstein PhD, CCC-SLP, Heather Feldner BS, MPT, PhD, Natalya Davis DPT, Megan Kuczajda DPT, Casey Deming DPT

CO10: Paraplegia Following Patent
Ductus Arteriosus Repair
Jessica Ace MD, Elizabeth Bellisimo BSN, MSN,
Hana Azizi MD, MPH

CO11: Unraveling the Diagnostic Puzzle: A Case Study of Fibrodysplasia Ossificans Progressiva in a Young Athlete Ricardo Ayala-Jimenez MD

CO12: Improved Ankle Range of Motion using Removeable Polyester Serial Casts Sarah Macabales D.O., Larissa Pavone MD, Trinette Carney BS

CO13: A Unique Case of Progressive Hypertonia and Chorea: VARS2-Related Disorder

<u>Shannon Strader DO, MS</u>, Heather Huxol MD, Marissa Vawter-Lee MD, Loren Pena MD, PhD, Corrie Harris MD

CO14: Noninvasive spinal neuromodulation and subject-specific rehabilitation of child with cerebral palsy (CP) triggers multiple system neural networks reorganization to a more normal physiological state <a href="Susan Hastings DPT">Susan Hastings DPT, PCS</a>

CO15: Introducing literacy through an adapted large-key keyboard: A single case study of a 9-year-old boy with Cerebral Palsy in Sri Lanka.

Thilini Lokubalasuriya PhD, Dinusha Fonseka BS, <u>Nimisha Muttiah PhD</u>, Anila Amarasinghe BS, Hiruni jayathilake BS

CO16: Builders and Bulldozers - Impact of a Motor Skill Mentorship Intervention on an Adult with a Significant Traumatic Brain Injury

<u>Thomas Moran Ph.D.</u>, Erick Teo-Abrego BS, Victoria Guerrero BS

CO17: Shoulder Dislocation in a Quadriplegic Cerebral Palsy Patient with Dystonia: A Case Report

<u>Xiaoyu Pan MD, PhD, MPH</u>, Elizabeth Bellisimo BSN, MSN, Vera Tsetlina MD, Hana Azizi MD, MPH

CO18: Hemiplegic Cerebral Palsy from Post-Varicella Right Basal Ganglia Stroke: A Case Report Yelim Chung MD, Elizabeth Bellisimo BSN, MSN, Hana Azizi MD, MPH

#### **Demonstration Posters**

DP01: Complex Care Service Simulation Program: A Novel Inter-Professional Education Initiative

Allison Shevell MDCM, FRCPC, Yazeed Bahamdan MBBS, Saudi Board in Pediatrics, Maia siedlikowski RN MSc CNCCP-C, Ilana Bank MD, Isabelle St-Sauveur RN DP02: Collaborative Development of a Research Intern Program to Support Developmental Disabilities Research Training and Capacity

Angela Shierk PhD, Heather Roberts PhD, Lou Hintz PhD, Jyothi Gupta PhD, OTR, FAOTA, Lima Ghulmi OTR/L, Rachael De Leon MA, Emily Kirby BA

DPO3: A Pediatric Student Enhanced Program (STEP): One model to help right-size children's healthcare Angelina Woof PT, <u>Kiersten McMaster MPT</u>

DP04: Digital Mental Health Interventions for Adolescents with Neurodevelopmental Conditions

Anita Gardner MS, David Dossetor MD, Ingrid Honan PhD, Sarah Reedman PhD, BPhty (Hons), Jo Ford BA, Anders Hansson BA, Nadia Badawi MD, Rob White BS, <u>Michelle Wong</u> PhD/DCP, BSc(Psych-Hons)

DP05: Applying the 4-Element Movement System to the Physical Therapy Management of Cerebral Palsy Ann Harrington PT, DPT, PhD

DP06: The Technothèque: an innovative service delivery model to promote virtual reality and active video game use in pediatric rehabilitation

Audrey Ferron BS, Martin Lemay BA, MSc, PhD, Danielle Levac pht, MSc, PhD

DP07: Disability Equity in Pediatric Pain Management

Beverley Tann BSN, RN, CRRN, Nicholette Andrews MS, APRN, PCNS-BC, Brooke O'Grady BSN, RN

DP08: An Adaptive Framework for Machine Learning Assisted Brain Tissue Segmentation

<u>Cameron Casey PhD</u>, Alina Grimaldo, Andrea de Abreu e Gouvea BA, Ellen Sutter DPT, Douglas Dean PhD, Ryan McAdams MD, Bernadette Gillick PhD

DPO9: Development of patient specific ankle foot orthoses using 3D printing Chenxi Peng PhD, Phuong Tran PhD, Simon Lalor MSc, Oren Tirosh PhD, Erich Rutz MD

DP10: Neuromuscular Electrical Stimulation as a Modality to Reduce Spasticity and Dystonia during Gait for Individuals with Cerebral Palsy Christopher Joseph DPT, Kelly Greve PT, DPT, PhD, Jessica Rose PhD

DP12: The Cerebral Palsy Research
Network Adult Toolkit: Co-Creation of a
Community Resource

<u>Cristina Sarmiento MD</u>, Jocelyn Cohen BA, JD, Michele Shusterman BA, Jensine Clark MD, Mary Gannotti PhD,PT

DP13: Priority Setting for Multicenter Research Among Adults with Cerebral Palsy: Using Stakeholder Engagement to Co-Create a Research Agenda <u>Cristina Sarmiento MD</u>, Mary Gannotti PhD,PT, Jocelyn Cohen BA, JD, Erika Peterson BA, Edward Hurvitz MD

DP14: Improving Access to Early Intervention in Preterm Infants: A Quality Improvement Initiative Daphne Jackson MScPT, Kamini Raghuram MSc, MD, FRCPC DP15: The Health Hub in Transition: Growth and development of a community of practice aimed to improve healthcare transition across Canada. Dayle McCauley MSc, Anne Fournier MD, Jan

<u>Dayle McCauley MSc</u>, Anne Fournier MD, Jan Willem Gorter MD, Michelle Batthish MD, Karen Cook PhD, Dilshad Kassam-Lallani MSN, Amanda St. Dennis BA

DP16: The Social and Motor Benefits of Group-based Programming for Children with Cerebral Palsy

<u>Don Scott Matthews OT, MS</u>, Lauren Armenti MSOT, Amanda Sarafian EdD, OTR/L

DP17: Development of a Gamified Leisure Activity Mobile Application for Children and Youth with Disabilities: A Human-centered Design Approach Ebrahim Mahmoudi, Mehrnoosh Movahed MD, Carlos Denner PhD, Annette Majnemer BSc, MSc, PhD, Keiko Shikako PhD

DP18: Cerebral Palsy Hip Surveillance: Creating a Best Practice Initiative in a Large Pediatric Hospital System Ed Wright MD, Catherine Velasquez Ignacio MD, Dorothy Harris Beauvais MD

DP19: Trauma Informed Care Interventions for Medical Trauma in Pediatric Populations

<u>Haley Morris BSc</u>, Tammie Dewan MD, MSc, Seija Kromm PhD, Sarah Mooney, Katie Richardson MSW, BPhil, Andrea Whiteley PhD, Kristina Mangonon McGuire

DP20: Technology Enabling Children (TEC) Centre - A Canadian Initiative Hana Alazem MSc PT, MD, FRCPC, Anna McCormick MD FRCPC, Michelle Larin MSc, Albert Tu FRCS(C), Akshay Seth MD, Kevin Cheung MSc MD FRCSC, Hedva Chiu MD

DP21: STructured Early Physiotherapy (Preemie STEP) intervention for Moderate to Late Preterm Infants – A Pilot Randomized Controlled Trial Protocol

<u>Indira Boddapati MPT</u>, Sivakumar Gopalakrishnan PhD, Sonia Khurana PT, PhD, Jayashree Purkayastha MD, Bhamini Krishna Rao PhD

DP22: A Novel Protocol to Assess Active Spinal Movement in Non-Ambulatory Children Undergoing Posterior Spinal Fusion

<u>Jessica Lewis PT, DPT</u>, Matthew Parrett M.Ed, FMS, Mallory Rowan BS, Kirsten Tulchin-Francis PhD

DP23: Disability Day – a historical approach and mindsets awareness among university students

Jessica Stockman MSc, Linda Sandström BS, Sarah Ibrahim MPH, <u>Noor Hussein MSc</u>, Ann Alriksson-Schmidt PhD

DP24: Mighty Knights: An Innovative Model of Service Delivery for Young Children with Complex Needs Julie Feuerstein PhD, CCC-SLP, Jennifer Tucker PhD

DP25: Bridging the knowledge gap regarding early detection and intervention for children with cerebral palsy: CP ECHO

<u>Karen Harpster PhD, OTR/L</u>, Elsie Bush OTR/L, Gretchen Mueller DPT, Hillary Prather LISW-S, Jilda Vargus-Adams MD, MSc

DP26: Assessing Variations in Nutrition, Sleep, and Fatigue Amongst Children with Neuromotor Disabilities: A Prospective Study Kavya Iyer, Stephanie DeLuca PhD DP27: Optimizing Pediatric MRI: Innovations in Infant Sleep Protocols for Sedation-Free Imaging

<u>Kellie Collins DPT</u>, Camilla Matthews MD, Kristin Seaborg MD, Bernadette Gillick PhD

DP29: Organizing an Interdisciplinary
Tone Evaluation Clinic: A How-To Guide
Kristen Blatt PT, DPT, Courtney Bishop PA,
Jeffrey Leonard MD, Nathan Rosenberg MD,
Toni Pearson MD, Laurie Glader MD, FAAP

DP30: Development of A Universal Therapeutic Riding Curriculum for Children with Cerebral Palsy (CP) Lisa Letzkus PhD RN CPNP-AC, Stephanie DeLuca PhD

DP31: Parent Engagement Program in an out-patient rehabilitation setting Lise Mayrand BA, Barbara Mazer PhD, Eva Kehayia PhD

DP32: Academic-Community
Collaboration to Improve Participation
and Impact of Physical Activities in
Youth with Cerebral Palsy
Mara Yale PhD, Brian Wishart DO, MMS,

Mara Yale PhD, Brian Wishart DO, MMS, FAAP, Jacqueline Chen BS, Hana Azizi MD, MPH, Patricia Musolino MD, PhD, Katherine Dimitropoulou PhD, OT, MSPOR

DP33: Do patients with spinal muscular atrophy who receive genetic treatments have a higher incidence of autism or other cognitive/behavioral problems? Screening a clinic population Mark Gormley MD, Jamie Eskuri MD, Supreet Deshpande MD, Gretchen Weatherly PhD, Mo Chen PhD, Mark Jankowski BS, Salma Noor BS, Sylvia Pulkrabek none

DP34: Psychosocial Support for Children with Medical Complexity: Learnings and Next Steps in Clinical Practice and Evaluation

<u>Matthew Witham PhD, LMFT</u>, Amy Grossman MSW, Kari Kubiatowicz MBA, BSN

DP35: Implementation of a Patient-Centered Genetic Cerebral Palsy Clinic in an Academic institution

Maureen Mulhern CGC, <u>Jennifer Bain MD</u>, <u>PhD</u>, Jennifer Pimentel BA, Minnelly Vasquez LCSW, Joshua Hyman MD, Hana Azizi MD, MPH, Elizabeth Bellisimo BSN, MSN, Jessica Dodge MD, Linn Katus DO, Aviva Sopher MD, Christopher Ricupero PhD

DP36: Patient Family Advisory Council Minnelly Vasquez LCSW, Jennifer Pimentel BA, Dina Baum, Gregory Moomjy MS, Belkis Tavarez

DP37: A New Clinical Protocol to Evaluate Standing Transfer Function in the Gait Analysis Laboratory Nancy Lennon BS, MS, DPT, Stephanie Butler DPT, Jose Salazar-Torres Ph.D., Jason Howard MD

DP38: Creation and Implementation of a Multi-Disciplinary NICU Neonatal Hypertonia Protocol to Improve Hypertonia Evaluation and Management, and Timeliness to a Cerebral Palsy Diagnosis and Care

Paola Maria "Lala" Mendoza-Sengco MD, Melissa House MD, Laura Kohus OT, Ashley Pinger DPT, Jilda Vargus-Adams MD, MSc, <u>Marissa Vawter-Lee MD</u> DP39: Remotely Supervised Transcranial Direct Current Stimulation in Children with Cerebral Palsy

Preston Christopher BS, Alex Griffin PhD, Remy Blatch-Williams BS, Michael Fahey MBBS, PhD, Megan Finch-Edmondson PhD, Manoj Kanhangad FRACP, MBBS, Maria McNamara PhD, Iona Novak PhD, Madison Paton PhD, Bernadette Gillick PhD

DP40: Closing the Fidelity Circle: Key Ingredients to Improve Intervention Through Adherence, Program Differentiation, Quality Of Intervention, Participant Responsiveness and Dosage Regina Harbourne PhD, Elena Donoso-Brown PhD, OTR/L, Sandra Willett PhD, Lin-Ya Hsu PhD, Stacey Dusing PhD

DP41: Supporting a Safe Journey - A Pilot Car Seat Clinic for Children with Physical Disabilities

Roselle Adler B.Sc.O.T, Tara Previl M.Sc (OT),

DP42: Made to Measure: A Needs Assessment Approach to Tailor Healthcare Transition Programs for Individuals with Cerebral Palsy Sanaya Shenoy MSPH, Deborah Sahlin RN,

France Bidal B.Sc. OT

<u>Sanaya Shenoy MSPH</u>, Deborah Sahlin RN, Paul Salib BS, Melanie Pinkett-Davis PhD, Theodore Zabel PhD, Eric Chin MD, Deanna Johnson MS, Heather Riordan MD

DP43: A Priority Setting Partnership to Determine the Top Research Priorities in Childhood-Onset Physical Disability: Project Design, Patient Engagement, and Preliminary Findings

<u>Sara Drisdelle MSc</u>, Jordan Sheriko MD, FRCPC, Sarah Moore PhD, Sofia So BS, Victoria MacDonald BS, Shanon Phelan PhD

DP44: High Risk Huddle: A care delivery model to improve multidisciplinary team and parent collaboration

Sarah Heigel MSN, RN, CNL, Boswell Lynn PT, MS, Raye Ann deRegnier MD, Robin Manus OTR/L, Alison Goetgeluck PT, DPT, PCS, Jessica Trenkle DPT, Ann Marie Crean DPT, Colleen Jarema DPT

DP45: Innovation for independence: A Device to Enhance Trunk Control in Children with Cerebral Palsy

<u>Shamantha Madapura</u>, Sivakumar Gopalakrishnan PhD, Harikishan Balakrishna Shetty MTech, Venkateswara Venkatesan PhD, Bhamini Krishna Rao PhD

DP46: Drivin' donuts: The use of joystick-operated ride-on-toys to improve affected arm function in children with Unilateral Cerebral Palsy (UCP)

<u>SUDHA SRINIVASAN PhD</u>, Vaishnavi Shahane PT, Patrick Kumavor PhD, Kristin Morgan PhD

DP47: Increasing Self-Care Independence for Pediatric Patients Diagnosed with Arthrogryposis Multiplex Congenita

<u>Tiffany Grace Evasco OTR</u>, Amy Sitabkhan OT, Scott Oishi MD

DP48: MY ABILITIES FIRST: Global Developmental Milestones Verónica Schiariti MD MHSc PhD

#### **Scientific Posters**

SP01: A Collaborative Posterior Spinal Fusion Surgical Planning Initiative Between a Pediatric Orthopedic Surgery Group and a Complex Care Medical Home for Children with Medical Complexity.

Adam Rosenbloom MD MPH, Lucy Gann BS, Brian Kaufman MD, Rahel Berhane MD, Kirsten Ross MD, Mari-Ann Alexander PhD, RN, Anne Mahan MD

SP02: Associations between Social-Environmental Factors and Psychosocial Outcomes in Young Children with Spina Bifida

<u>Adrien Winning PhD</u>, Allison Payne MA, Monique Ridosh PhD, RN, Elicia Wartman PhD, Grayson Holmbeck PhD

SP05: Correlation between GDI Improvements in Cerebral Palsy Patients after Orthopedic Surgical Interventions and COI Scores

Akshitha Adhiyaman BS, Olivia Tracey BA, Colson Zucker BA, Peter Cirrincione BA, Vishnu Deep Chandran PhD, Troy Amen MD, MBA, Dara Jones MD, Paulo Selber MD, David Scher MD

SP06: School-Based Disability
Awareness Programs for Children and
Youth: A Scoping Review

Alice Soper MSc, Trinity Lowthian, Melissa Shivnauth BS, Holly Marini, Kerry Britt PT, Shree Dave, Michelle Phoenix PhD, Sandra Moll PhD, Christine Imms PhD, Samantha Noyek PhD, Amanda Doherty-Kirby PhD, Peter Rosenbaum BSc, MD, FRCP(C), DSc (HC)

SP07: Functional motor cortex activity associated with lower extremity skills in children with unilateral cerebral palsy Alicia Hilderley PhD, Darcy Fehlings MD FRCP(C), MSc, Margot Taylor PhD, Joyce Chen PhD, F Virginia Wright BScPT, MSc, PhD

SPO8: Upper Extremity Function in Hemiplegic Cerebral Palsy - Functional and Patient Reported Outcomes Alyssa Barré MD, Anita Bagley PhD, Henry Iwinski MD, Donna Oeffinger PhD

SP09: Pain in Children with Myelomeningocele Amanda Rurman Rimstedt Ann A

<u>Amanda Burman Rimstedt</u>, Ann Alriksson-Schmidt PhD

SP10: Characterizing Evidence-Based Occupational Therapy Interventions Delivered to Individuals with Cerebral Palsy at an Outpatient Pediatric Medical Center

Amber Sheehan OTR/L, Amy Bailes PT PhD, Jillian Kreimer, Emma Austing, Jenny Dorich PhD SP11: Tools for Early Detection of Developmental Concerns and/or Disability in Young Children (aged birth-5 years 11 months): A Scoping Review

Andrea Burgess B Occ Thy I, Grad Cert Epi,
PhD., Carly Luke MAPaedsPhys, BPT, Michelle
Jackman B Occ Thy, PhD, Jane Wotherspoon
ba, Koa Whittingham PhD, Katherine Benfer
PhD, Sarah Goodman Speech Pathology,
Rebecca Caesar B Phys, PhD, Tiffney
Nesakumar student, Samudragupta Bora PhD,
David Honeyman Graduate Diploma Applied
Science Library and Information Management,
Danielle Copplin BA, Sarah Reedman PhD,
Bachelor of Physiotherapy, John Cairney PhD,
Natasha Reid BA, PhD, Leanne Sakzewski PhD,
Bachelor Occupational Therapy, Roslyn Boyd
PhD, Bachelor Physiotherapy

SP12: Establishment of a cerebral palsy register of children aged 0-18 years in Tanna Island, Vanuatu

Andrea Burgess B Occ Thy I, Grad Cert Epi, PhD., Lolyne Arranhabath B. Nursing, Steven Moiteau B. Public Health, Mahmud Al Imam B Sc, MPH, PhD, Israt Jahan B.Sc (Hons), MS, MPH, PhD, Roslyn Boyd PhD, Bachelor Physiotherapy, Jeannie Barton B. Nursing, Gaela Kilgour B Phthy, PhD, Nadia Badawi MBBS, PhD, Gulam Khandaker MBBS, DCH, MPH, PhD, FAFPHM

SP13: Randomized Controlled Trial on the Effect of Ankle Foot Orthoses on Patients with Charcot-Marie-Tooth Disease

<u>Andrew Skalsky MD</u>, Alyssa Wieand BS, Anna Burch MA, Talia Soto BA

SP14: Early Intervention Therapists'
Perceptions of Implementing a
Constraint-Induced Movement
Therapy Program Utilizing a Caregiver
Coaching Model

<u>Angela Shierk PhD</u>, Heather Roberts PhD, Rebecca Dharamraj BS, Taylor Lesner BA, Joe De La Torre BS

SP15: Precision Rehabilitation: A Scoping Review

<u>Annie Pouliot Laforte PhD</u>, Évemie Dubé PhD, Dahlia Kairy PhD, Danielle Levac pht, MSc, PhD

SP16: Integrating virtual reality and active video games within intensive motor interventions for children with hemiplegia

Audrey Ferron BS, Marilou Malo BS, Annie Au BS, Hubert Gascon MS, Geoffroy Saussez PhD - Physiotherapist, Yannick Bleyenheuft PhD, Marie-Claude Cardinal OT, Odette Bau PT, Julie Desgagné EdD, Maxime Robert PhD, Danielle Levac pht, MSc, PhD

SP17: Long-Term Efficacy of Serial Casting for Idiopathic Toe Walkers Avery Takata MS, Anna Burch MA, John Collins MS, Patrick Curran MS, MD, Mackenzie Brown DO

SP18: Comparison of Markerless with Marker-based Motion Analysis in Patients with Hemiplegic Cerebral Palsy Avery Takata MS, John Collins MS, Hank Chambers MD, Patrick Curran MS, MD

SP19: Cycling as rehabilitation Berit Gjessing

SP20: Early Detection Screening for Cerebral Palsy-Who is Missed?

Boswell Lynn PT, MS, Raye-Ann deRegnier MD, Alison Goetgeluck PT, DPT, PCS, Jessica Trenkle PT, DPT, PCS, Nicole Pouppirt MD, Deborah Gaebler-Spira MD SP21: What Happens When You Wait? Larger Curves Require More Resources for Less Correction in Neuromuscular Scoliosis

Brandon Yoshida MD, Jacquelyn Valenzuela-Moss BS, Tyler Tetreault MD, Tishya Wren PhD, Nico Silverman-Lloyd BA, Tiffany Phan BA, Lindsay Andras MD, Michael Heffernan MD

SP22: Comparative Analysis of Bone Mineral Density in Cerebral Palsy and Spinal Muscular Atrophy

<u>Brianna Bowden BS</u>, Brett Klamer MS, Garey Noritz MD

SP23: Relationship between Neuromotor Symptoms, Intrinsic Muscle Parameters, and Gait Function at the Ankle and Knee Joint Level in Children with Spastic Cerebral Palsy

Britta Hanssen PhD, Nicky Peeters PhD, Tijl Dewit MSc, Eirini Papageorgiou PhD, Charlotte Lambrechts MSc, Catherine Huenaerts MSc, Kaat Desloovere PhD, <u>Anja Van</u> <u>Campenhout MD, PhD</u>

SP24: Effects of Mollii Suit in Children with Non-Ambulatory Cerebral Palsy: A Preliminary Study

<u>Bulent Elbasan DPT</u>, Hidayet Cuha MSc, Kubra Ugurlu MSc

SP25: Early Intervention Stakeholder Perspectives of Family-Centered Care Coordination: A Pilot Case Study Carla R. Lage OT, MHS, Natalie Murphy MPH, Gregory Tung PhD MPH, Juliane F. Daniel MS, Lindsay Ollerenshaw PhD, Mary Khetani MA,

ScD, Beth McManus PhD

SP26: Bilateral Coordination and Balance Profiles of Children with a diagnosis of Idiopathic Toe-Walking

Cathleen Buckon OTR/L, MS, <u>Susan Sienko PhD</u>, Paige Lemhouse BS, Jeremy Bauer MD

SP27: Smartphone App for Supporting Collaborative Rehabilitation Goal Setting in Children: Development of "Kid'EM" and Usability and Acceptability Study Christelle Pons MD, PhD, Rodolphe Bailly PhD, Alexia Le Gallo PT, Denis Jacquemot MSc, Lea Guiheneuf PT, Emmanuelle Fily MSc, Sylvain brochard MD, PhD

SP28: Effectiveness of clinician supported, parent-mediated participation promoting interventions for children with physical disabilities: A Systematic Review

<u>Daniela Testani MSc</u>, Taryn Simon BA, Heather Shearer DC, PhD, Gillian King PhD, Sarah Munce PhD, Darcy Fehlings MD FRCP(C), MSc

SP29: Effect of Hand-Arm Bimanual Intensive Therapy Including Lower Extremities (HABIT-ILE) on the Range of Motion of Children with Cerebral Palsy. A Randomized Trial

<u>Daniela Ebner-Karestinos PhD</u>, Emmannuel Sogbossi PhD, Julie Paradis PhD, Geoffroy Saussez PhD - Physiotherapist, Rodrigo Araneda PhD, Yannick Bleyenheuft PhD

SP30: Safety of Botulinum toxin A dosing in children with Cerebral Palsy above approved dosing

<u>Deanna Jewell DO</u>, Matthew McLaughlin MD, MS, MS, MBA

SP31: Sleep disorders and sleep disturbances among adults with cerebral palsy: A review of the literature Deepika Nagabhushan BS, Sonia Sharma PhD, Daniel Whitney PhD, Rita Ayyangar MBBS, FAAP, FAAPMR, Daniel Whibley PhD

SP32: Parents Reporting of Quality of Life during the Two Years after Selective Dorsal Rhizotomy in Ambulant Children with Cerebral Palsy

<u>Deepti Chugh BPT, MSc (PT), MRes</u>, Stephanie Cawker PGDip BSc (Hons) PT, Lucy Alderson PhD, Kristian Aquilina FRCS(SN) MD, Eleanor Main FCSP (BSc, BA, MSc, PhD)

SP33: National Assessment of Barriers and Facilitators to Implementation of Intensive Hand Therapies for Young Children with Cerebral Palsy

<u>Divya Vurrabindi BSc</u>, Darcy Fehlings MD FRCP(C), MSc, Alicia Hilderley PhD, John Andersen MD, Adam Kirton MD, Christine Cassidy PhD, Liz Cambridge MSc OT, Kathleen O'Grady MS, Mia Herrero BSCOT, BSC

SP34: Gamification Elements for a Leisure Activity Mobile Application for Children and Youth with Disabilities: A Qualitative Analysis

Ebrahim Mahmoudi, Mehrnoosh Movahed MD, Gillian Backlin, Carlos Denner PhD, Annette Majnemer BSc, MSc, PhD, Keiko Shikako PhD

SP35: Fall outcomes in adults with cerebral palsy – differences by gender Elizabeth Boyer PhD, Kari Pederson MSW, LICSW, Nathan Wandersee AS, Sandy Tierney PhD, MSSW, Marissa Esterley MS, Linda Krach MD

SP36: Should We Remove Hardware in Children with Cerebral Palsy after Hip Osteotomy?

Ellie Montufar Wright BA, Luiz Carlos Almeida da Silva Nemours Children's Hospital, Jason Howard MD, Sarah Raab BS, Kenneth Rogers PhD, ATC, Amelia Lindgren MD, Freeman Miller MD, Arianna Trionfo MD, Wade Shrader MD

SP37: Relationship of motor and sensory processing deficits in children with unilateral cerebral palsy

Eryn Armstrong MS, Sadra Shahdadian Ph.D., Yanlong Song PhD, Stephanie Acord MD, Fernando Acosta MD, Warren Marks MD, Christos Papadelis PhD

SP38: Relationship between microstructural damage in corticospinal tracts and fine motor skill deficits in children with unilateral cerebral palsy Eryn Armstrong MS, Sadra Shahdadian Ph.D., Yanlong Song PhD, Stephanie Acord MD, Fernando Acosta MD, Warren Marks MD, Christos Papadelis PhD

SP39: One injection of BoNT-A in biceps brachii in CP has both a degenerative and regenerative effect.

Eva Pontén MD PhD Ass Prof, Per Stål PhD, Ferdinand von Walden MD, Alexandra Palmcrantz BSc, MSc

SP40: Two years of repeated botulinum toxin injections into biceps brachii in cerebral palsy results in increasing regeneration and a reduced proportion of fast and fatigable type 2X fibers.

<u>Eva Pontén MD PhD Ass Prof.</u> Per Stål PhD, Ferdinand von Walden MD, Alexandra Palmcrantz BSc. MSc

SP41: The Effect of Age and Body Mass Index on Gait Deviations in Hereditary Spastic Paraplegia

<u>Fabiola Reyes MD</u>, Cinthya Meza BA, Lizabeth Bunkell PT, Kelly Jeans MSc, Robert Wimberly MD

SP42: I'm Here, Can I Play Too? A Systematic Review of Assessments of Sport and Physical Recreation Participation for Children and Youth with Disabilities

Georgina Clutterbuck PhD

SP43: "All it takes is a spark." Parent perception of long-term sports participation after a practitioner-led, peer-group sports intervention for ambulant, school-aged children with cerebral palsy.

<u>Georgina Clutterbuck PhD</u>, Mikaila Gent BPHTY (hons), Daniel Thomson BPHTY, PHD

SP44: Identifying and Evaluating Young Children with Developmental Central Hypotonia: A Closer Look Through the Hammersmith Infant Neurological Examination

<u>Ginny Paleg MPT, DScPT</u>, Roslyn Livingstone MSc(RS), Alvaro Hidalgo Robles MScPT

SP45: Automated Artificial Intelligence evaluation of upper extremity function using smartphone video

<u>Gloria Su MS</u>, Kaitlynn Sampel BASc (2026), Albert Tu FRCS(C), Edward Lemaire PhD, Natalie Baddour PhD, Kevin Sun BA, Kevin Cheung MSc MD FRCSC

SP46: Identification of a Functional Profile for Youth with Unilateral Cerebral Palsy Utilizing the Brief Cerebral Palsy International Classification of Functioning, Disability and Health Core Set

<u>Heather Roberts PhD</u>, Angela Shierk PhD, Debbie Baldwin BS, Nancy Clegg PhD, Sydney Chapa BS, Ariel Alexander BS, Lindsay Miles BS, Youstina Habeeb BS, Fabiola Reyes MD

SP47: Program Evaluation of a Multidisciplinary Cross-centre Transition Clinic for Youth with Physical Disabilities: What Do the Metrics Show? Hedva Chiu MD, Anna McCormick MD FRCPC, Tara Previl M.Sc (OT), Micheline Savage RN, Michelle Larin MSc, Hana Alazem MSc PT, MD, FRCPC

SP48: Effect of Ballet-Based Exercise on Gait Function in Adult with Cerebral Palsy: A Pilot Study

<u>Hee Joung Joung</u>, Moon Seok park MD

SP49: Feasibility and Preliminary Effects of Sports Stars Brazil In Adolescents with Autism Spectrum Disorder Hercules Leite PhD, Lidiane Ferreira MSc, Deisiane Souto PhD, Amanda Fernandes MSc, Georgina Clutterbuck PhD, Ricardo Sousa Junior MSc, Ana Amélia Cardoso PhD

SP50: Effects of the EXOPULSE Mollii ® Suit in Children with Cerebral Palsy: A Preliminary Study

<u>Hidayet Cuha MSc</u>, Merve Ozturk MSc, Pelin Atalan Efkere DPT, Bulent Elbasan DPT

SP51: Semantic Diversity Effect on N400 in Children with ADHD During Word Recognition

<u>hsin-Chi Wu PM&R</u>, Chun-Hsien Hsu PhD, Ruo-chi Yao BS SP52: Reference Values for Mobility in Typically Developing Schoolaged Children

<u>Hsiu-Ching Chiu PhD</u>, Louise Ada PhD, Rong-Ju Cherng PhD

SP53: Factors Affecting Mobility from Childhood to Adolescence in Cerebral Palsy: A Prospective Longitudinal Study <u>Hsiu-Ching Chiu PhD</u>, Louise Ada PhD, Rong-Ju Cherng PhD, Chiehfeng Chen PhD

SP54: Feasibility of a Novel Robotic Walking Program at a Children's Hospital Hunter Loewen MD, Christa Diot MSc, Karin Eldred MSc Rehabilitation Science, BSc Physical Therapy, Elizabeth Condliffe PhD, MD, Amanda Beaudin BS

SP55: A Portable Multidimensional Assessment Platform Can Detect Degradation in Dual Task Gait and Balance Performance in Children with Unilateral Cerebral Palsy Jamie Hall PT, DPT, PhD, Dana Chole DPT, Jacob Thomas MBA, Trent Guess BS, MS, PhD

SP56: Investigating an e-health transition intervention in Canadian youth with brain-based disabilities: Feasibility, efficacy, acceptability, and engagement in the context of patient prioritized outcomes.

Jan Willem Gorter MD, PhD, Khush Amaria PhD, CPsych, Adrienne Kovacs PhD,CPsych, Ronen Rozenblum PhD, MPH, Lehana Thabane PhD, Michael Frost, JoAnne Mosel, Kyle Chambers, Jessica Havens, Claire Dawe-McCord, Barb Galuppi BA, Linda Nguyen PhD, Sonya Strohm MSc, Alicia Via-Dufresne Ley m-MBA, PMP, Ariane Marelli MD, MPH, FRCPC, FACC, FAHA

SP57: How well are Families prepared and what coping strategies are they utilizing after Multi-level Surgery (MLS) in Children with Cerebral Palsy? A Pilot Study

<u>Jana Teagle CTRS, CCLS, CBIS</u>, Paul Enlow PhD, Wade Shrader MD

SP58: Characterization of Falls in Children with Ambulatory Cerebral Palsy Jennifer Nelson DPT, Elizabeth Boyer PhD

SP59: Impact of light weight, low-cost exoskeleton on walking outcomes in children with Cerebral Palsy Jennifer Traines PT, DPT, Rebecca Macaluso MS, Zachary Lerner PhD, Arun Jayaraman PhD PT

SP60: Public insurance coverage is associated with longer length of stay in pediatric inpatient rehabilitation Jennifer Wu MD, PhD, Rebecca Siegel MD, Stephanie Cohen CPNP, Tracey Gatha LICSW

SP61: Gait Abnormalities in children with Idiopathic Toe Walking (ITW)

Jeremy Bauer MD, Mark McMulkin PhD,

Bruce MacWilliams PhD, Susan Sienko PhD,

SP62: Idiopathic Toe Walking (ITW): Are parents able to accurately report?

<u>Jeremy Bauer MD</u>, Paige Lemhouse BS, Bruce MacWilliams PhD, Susan Sienko PhD

Jon Davids MD

SP63: Establishing the Minimal Clinically Important Difference and Minimal Detectable Difference for the Gross Motor Function Measure-88 in Young Children with Down Syndrome Jessica Silveira PT, DPT, PhD, Kari Kretch PT, DPT, PhD, Julia Looper PhD

SP64: The impacts of robotic walking on parent-reported physical activity related outcomes following 8-weeks of at home training.

<u>Jessica Youngblood MSc</u>, Benjamin Norman MKin, Christa Diot MSc, Kelly Larkin-Kaiser PhD, Elizabeth Condliffe PhD, MD

SP65: Pulmonary Function in Individuals with Prune Belly Syndrome

Jessica Lewis PT, DPT, Matthew Parrett M.Ed,
FMS, Mallory Rowan BS, Linda Baker MD,
Kirsten Tulchin-Francis PhD

SP66: Physical Examination as a Predictor in Detecting Hip Migration in Children with Cerebral Palsy.

<u>Jim Aalbers BS</u>, Renée van Stralen, Merel Roelen MD, Denise Eygendaal PhD, Max Reijman PhD, Jaap Tolk MD, PhD

SP67: A tractometry approach for analyses of the corticospinal pathway in perinatal brain injury

Jose Guerrero-Gonzalez PhD, Ellen Sutter DPT, Cameron Casey PhD, Anna Lowe, Douglas Dean PhD, Andrew Alexander PhD, Bernadette Gillick PhD

SP68: Implementation of a Shared Decision-Making Process for High-Risk Orthopedic Surgeries

Juliana Mariani, MD, Richard D. Goldstein, MD, Erin Ward, MEd, Betsy Blume, Isabel Stringfellow, BS, Lucia Bastianelli, MSN, Daniel Hedequist, md, Benjamin J. Shore, MD, MPH, FRCSC, Jay Berry, MD, John Emans, MD

SP69: Toe-in/out gait and transverse kinematic correlations between marker-based and markerless motion capture systems

<u>Jutharat Poomulna MS</u>, David Kingston PhD

SP70: Relationship Of Motor And Cognitive Abilities In Infants And Toddlers With/At High Risk Of CP After CAMP

Kanishka Baduni MPT, Caitlin Kjeldsen PhD, Owais Khan PT, Larken Marra PhD, William Kjeldsen, Allison McIntyre OT, Christopher Modlesky PhD, Nathalie Maitre BA, MD, PhD

SP71: Diagnostic accuracy of early neonatal MRI in predicting adverse motor outcomes in children born preterm: systematic review and meta-analysis

Karen Mistry DPT, BEXSS, Roslyn Boyd PhD, Bachelor Physiotherapy, Alex Pagnozzi PhD, Samudragupta Bora PhD, Robert Ware PhD, Joanne George PhD

SP72: Characterizing Everyday
Positioning Experience in Typically
Developing Infants and Infants With or at
Risk for Cerebral Palsy
Kari Kretch PT, DPT, PhD

SP73: Community-based Power Training Programs for Youth with Cerebral Palsy Improve Motor and Goal Performance Karin Eldred MSc Rehabilitation Science, BSc Physical Therapy, Candice Natrasony BS, Lesley Pritchard PT, PhD, Grace Kwong PhD, Elizabeth Condliffe PhD, MD

SP74: Skeletal Muscle Gene Expression in Spastic Cerebral Palsy: A Single Cell RNA-Seq Study

Karyn Robinson MS, Stephanie Lee MS, Jonathan Hicks BS, Wade Shrader MD, Robert Akins PhD

SP75: Effectiveness of School-Based Physiotherapy Intervention for Children Kate Alexander BPhty (Hons), Georgina Clutterbuck PhD, Leanne Johnston PhD SP76: Game On - CP Soccer Intensive Camp Improves Functional Mobility and Fitness in Children and Adolescents with Cerebral Palsy & Other Early Life Brain Injuries

Katherine Dimitropoulou PhD, OT, MSPOR, Brian Wishart DO, MMS, FAAP, Mara Yale PhD, Jacqueline Chen BS, Hana Azizi MD, MPH

SP77: Early Corticospinal Tract
Development and Motor Outcomes in
Infants with Perinatal Brain Injury
Kellie Collins DPT, Ellen Sutter DPT, Cameron
Casey PhD, Douglas Dean PhD, Ryan McAdams
MD. Bernadette Gillick PhD

SP78: Feasibility of Commercial vs.
Research-Grade Tummy Time Sensors
for Infants: Insights from Real-World
Translation

Ketaki Inamdar PT, PhD, Stacey Dusing PhD, Peter Pidcoe PT, DPT, PhD, FNAI, Leroy Thacker PhD, Sheryl Finucane PhD, PT, Kimeran Evans PhD, Virginia Chu OTR/L, PhD

SP79: Tummy to Learn: Exploring the Link Between Prone Skills and Problem Solving in Infants

<u>Ketaki Inamdar PT, PhD</u>, Tanya Tripathi PT, PhD, Rebecca Molinini DPT, PhD, Wei Fang PhD, Arya Salgaonkar MPT, Stacey Dusing PhD

SP80: Innovation toward Promoting Adaptive Motor Response: A pilot study of motor errors for adolescents and young adults with CP

<u>Kimberley Scott DPT, PhD</u>, Lukas Kocher, Brad Corr DPT, Max Kurz PhD

SP81: Functioning profile and healthrelated quality of life in children and youths with cerebral palsy by GMFCS in Argentina

L. Johana Escobar MSc, Natalia Herrera Sterren MD, Eduardo Cuestas PhD, Silvina Berra PhD, <u>Verónica Schiariti MD MHSc PhD</u>, Federico Sánchez PT, María Elisabeth Cieri PhD, Ana Laura Condinanzi OTR/L, Maria de las Mercedes Ruiz Brunner PhD

SP82: Altered Afferent Development May Impact Pain in Cerebral Palsy

LANDON GENRY BS, EMILY REEDICH PhD, Grace Giddings BS, Meredith Singer BS, ELVIA MENA AVILA MD, PhD, Deborah Gaebler-Spira MD, Megan Detloff BS, PhD, <u>Katharina Quinlan PhD</u>

SP84: Rehabilitation Interventions to Improve Bimanual Upper Limb Function and Participation in Daily Activities in Children with Cerebral Palsy: a Scoping Review

<u>Laura Fournier-Poisson BS</u>, Anne Claire David BS, Maxime Robert PhD, Marika Demers PhD

SP85: Collaborative Coaching in Pediatric Rehabilitation: An Effectiveness-Implementation Study of the Applied Coaching Tool

<u>Laura Brunton PT, PhD</u>, Debra Teitelbaum MSc, Zoe Daviault MSc, Lewis Gitelman MA Ed Tech

SP86: The Water is Magic: Evaluation of the usage, benefits, and barriers of adaptive swimming equipment provided from an aquatic assessment program Laura Oldford CTRS, MA, ATRIC, Marie-Claire Paulin Psy.D., Lauren Casey BSc, Natasha Hanson PhD

SP87: Does Tranexamic Acid Reduce Blood Loss for Children undergoing Reconstruction for Neuromuscular Hip Dysplasia

<u>Lauren Hyer MD</u>, Emily Shull PhD, David Westberry MD, Brittney Southerland BS, Daphne Lew PhD

SP88: Fall Risk and Outcomes in Adults with Cerebral Palsy Lauren Kang, Linda Krach MD, Elizabeth Boyer PhD

SP89: Use of a Walker-Mounted Pediatric Lower-Limb Exoskeleton in a Primary School Setting for Children with Cerebral Palsy: Insights from a School-Based Physiotherapist Team

<u>Ledycnarf Holanda PhD</u>, Stefanie Bradley MSc, F Virginia Wright BScPT, MSc, PhD

SP90: Epidural Analgesia after Hip Reconstruction Surgery in Children With Neuromuscular Complex Chronic Conditions – How Long Should the Epidural Stay in For?

Lennert Plasschaert MD, Patricia Miller MS, Colyn Watkins MD, Travis Matheney MD, Brian Snyder MD,PhD, Benjamin Shore MD, MPH. FRCSC

SP91: Are selective dorsal rhizotomies associated with fall outcomes in individuals with cerebral palsy?

<u>Linda Krach MD</u>, Kari Pederson MSW, LICSW, Sandy Tierney PhD, MSSW, Nathan Wandersee AS, Marissa Esterley MS, Elizabeth Boyer PhD

SP92: Transition to Adulthood: Steps to Employment for Youth with Physical Disabilities in Quebec, Canada Linda Nguyen PhD, Hawk Andiqwar OT, Cassandra Bertaggia OT, Fatima Ezzahra Mrah OT, Kinza Hart OT, Mehrnoosh Movahed MD, Julianne Noseworthy MS, Keiko Shikako PhD

SP93: Mobilizing knowledge to co-develop the Siblings Training, Empowerment, and Advocacy Kit (Siblings TEAKit) to support siblings of individuals with a disability

<u>Linda Nguyen PhD</u>, Samantha Bellefeuille, Hanae Davis PhD, Jan Willem Gorter MD, PhD, Marjolijn Ketelaar PhD, Jennifer Zwicker PhD, Keiko Shikako PhD

SP94: Assessment of the Short Grit Scale in children with cerebral palsy as a parent proxy measure.

<u>Lisa Lykken BS</u>, Maykala Owens BS, Elizabeth Boyer PhD, Tom Novacheck MD, Frank Symons PhD, Chantel Burkitt PhD

SP95: Neurosurgical and Developmental Evaluation of Neonates with Grade III and IV Intraventricular Hemorrhage

Louisa Smitherman BS, Andrew Morse BS, Krista Bangs BS, Ahmed Massoud MD, Roshirl Francisco MD, Manish Shah MD, Sarah Wilson MD

SP96: Tendon Transfer Fixation in Patients with Neuromuscular Disease Maia Regan BA, Sarmistha Madan, Sulagna Sarkar MS, Keith Baldwin MD, MSPT, MPH,

David Spiegel MD, Christine Goodbody MD, MBE, Bernard Horn MD

SP97: Who Gets a Gait Analysis? Effects of Socioeconomic Deprivation on Gait Lab Accessibility

<u>Maia Regan BA</u>, Sulagna Sarkar MS, Keith Baldwin MD, MSPT, MPH, David Spiegel MD, Divya Talwar PhD, Christine Goodbody MD, MBE, Bernard Horn MD

SP99: Capacity Building for Youth with Disabilities: A Knowledge Synthesis Mallory Ryan MSc.OT, Nahid Fathi MSc, Michelle Phoenix PhD, Mats Granlund PhD, Fiona Graham PhD, Dana Anaby PhD

SP100: Empower Parents! Development and Validation of an Educational Material to Promote Age-Appropriate Development of Preterm Infants Manasa Kolibylu Raghupathy MPT, Sonia Khurana PT, PhD, Leslie Edward S Lewis DNB Pediatrics, Bhamini Krishna Rao PhD

SP101: Relative motor performance in a bimanual vs. unimanual task in children living with unilateral cerebral palsy compared to typically developing children

<u>Manel Abid MSc</u>, Isabelle Poitras MSc, Léandre Gagné-Pelletier MSc, Charles Sèbiyo Batcho PhD. Catherine Mercier PhD

SP102: Why do patients "no show"? An examination of factors affecting ability to attend appointments.

Mara Karamitopoulos MD, MPH, <u>Micaela</u> <u>Tomaro MS</u>, Claire Thompson BA, Nadim Kheir MD, Claire Manix-Cramer PT, DPT

SP103: Exploring clinical gait analysis needs among healthcare professionals and caregivers of children with cerebral palsy

Marie Lévesque-Jalbert BS, Marie Rousseau-Demers MSc, laurent Ballaz PhD, Yosra Cherni PhD, Philippe Dixon PhD, Louis-Nicolas Veilleux PhD, Katia turcot PhD, Maxime Robert PhD

SP104: The Cerebral Palsy Toe Strike: Perhaps Not Spasticity But a Discovered Gait Adaptation to Prevent Slip Falls Mark Riggle

SP105: Effectiveness of New Multi-Component Virtual Reality Program in the Motor Skills and Functional Postural Control in Hemiplegic Cerebral Palsy <u>Marzieh Babaee</u>, Meysam Roostaei, Saeed Behzadipour, Narjes Jafari, Seyed Mansoor Rayegani

SP106: Pelvic Rotation is not a Sufficient Predictor of Coronal Plane Hip Position in Children with Cerebral Palsy

Matthew Parrett M.Ed, FMS, <u>Kirsten Tulchin-</u> <u>Francis PhD</u>, Mallory Rowan BS, Jessica Lewis PT, DPT

SP107: A multidisciplinary program to wean infants and toddlers from long term tube feeding: Lessons learned from a retrospective study

<u>Maurit Beeri</u>, Tal Dror BA, Patrice L. (Tamar) Weiss PhD, Judith Blinder MS

SP108: The Relation Between the Increase of Knee Range of Motion and Patient's Satisfaction After Rectus Femoris Transfer in Cerebral Palsy Mauro Morais Filho MD, MSc, PhD, Cátia Kawamura PT, Marcelo Fujino MD, José

SP109: Intensive Physical Therapy Practice Patterns in the United States: Thematic Analysis of Open-ended Survey Questions

Augusto Lopes MSc, Ageu Saraiva MD

Meaghan Rubsam PT, DPT, PCS, James Hedgecock DPT, Kelly Greve PT, DPT, PhD, Dana Chole DPT, <u>Jamie Hall PT, DPT, PhD</u>

SP110: Canadian Health Indicators for Children with Disabilities

Mehrnoosh Movahed MD, <u>Keiko Shikako</u>
<u>PhD</u>, Ebele Mogo PhD, Rubab Arim PhD,
Roberta Cardoso PhD, Lisa Wolff, Paul Yoo
PhD, OT, Ananya Chandra BA, Rachel Martens,
Brenda Lenahan

SP111: This is Getting Out of Hand: Hand and Arm Limitations in Late Preterm Infants

Melanie Schultz, Melanie Tommer, Katrina Bucher BHS, BA, Chloe Warham BA,BHS, Aleena Purewal, Emma Costello, Michele Goncalves Maia MS, Sarah Berger PhD, Regina Harbourne PhD

SP112: Trying to Balance the Impossible: Cognitive and Motor Reaching in Late Preterm vs Term Infants

Melanie Tommer, Melanie Schultz, Katrina Bucher BHS, BA, Chloe Warham BA,BHS, Emma Costello, Aleena Purewal, Michele Goncalves Maia MS, Sarah Berger PhD, Regina Harbourne PhD

SP113: User Feedback for Adaptive
Exergaming Mobile App With Augmented
Reality to Promote Physical Activity in
Children With Cerebral Palsy

<u>Melissa Bent MD</u>, Abigail Padilla BS, Susan Rethlefsen DPT, Alison Hanson MPT, Eva Ciccodicola DPT, Tishya Wren PhD

SP114: Differences in Measures of Social Disadvantage: Area Deprivation Index vs. Child Opportunity Index

<u>Melissa Bent MD</u>, Sam Wimmer BS, Susan Rethlefsen DPT, Robert Kay MD, Tishya Wren PhD

SP115: Diagnosis of Neuropathy in Childhood Onset Hereditary Spastic Paraparesis

Michelle Christie MD, Linsley Smith RN

SP116: Parent Perspectives on Education to Support Hospital Discharge for Children with Invasive Mechanical Ventilation

Michelle High MSN, Emma Lynch MPH, <u>Sarah</u> <u>Sobotka MD, MSCP</u>

SP117: Bridging the Evidence-Practice Gap in Family-Centered Service: The Impact of an Online Training on Service Providers

Mihee An PT, PhD, Jeonghui Kim PT, PhD

SP119: Using a Robotic Exoskeleton as a Therapeutic Tool to Induce Salient Motor Errors for Improving the Gait of Adults with Cerebral Palsy Morgan Busboom PT, DPT, Brad Corr DPT, Katie Bemis DPT, Kimberley Scott DPT, PhD, Max Kurz PhD

SP120: The development of a novel atropine mucoadhesive gel for the management of drooling

Nancy Murphy MD, Madison Parrot BS, Venkata Yellepeddi PhD, RPh, DABCP

SP121: A Community-Based Early
Detection and Intervention Program
for Children at Risk of Cerebral Palsy in
Rural Bangladesh

Nasim Mahmud BScPT, <u>Mahmudul Hassan</u>
<u>Al Imam PhD, MPH, BScPT</u>, Shafiul Islam
BScPT, MPH, Israt Jahan PhD, Mohammad
Muhit MBBS, MSc, MSc, PhD, Nadia Badawi
MBBCh, MSc, DCH, FARCP, PhD, FRCPI, Gulam
Khandaker MBBS, DCH, MPH, PhD, FAFPHM

SP123: Identifying Risk Factors for Hip Surveillance Non-Adherence in Pediatric Patients with Cerebral Palsy

Nora Galoustian B.A., Michaela Juels BS, Monica Guirgus MS, Al-Hassan Dajani BS, Michelle Ryder BS, Arianna Konstantopoulos BA, Tatiana Shahinian BS, Rachel Thompson MD

SP124: Rediscovering Down Syndrome: A Narrative perspective on finding one's voice when navigating research equity and family-centred care Oksana Hlyva PhD, Mark Grinberg MD SP125: The Impact of Tibial Derotational Osteotomy on Plantar Pressure Measurements in Pediatric Patients with Cerebral Palsy, Tibial Torsion, and Concurrent Foot Deformity

Olivia Tracey BA, <u>Akshitha Adhiyaman BS</u>, Colson Zucker BA, Silvia Zanini MS, Vishnu Deep Chandran PhD, Jennifer Jezequel DPT, Bridget Assip DPT, Sherry Backus PT, Dara Jones MD, Paulo Selber MD, Howard Hillstrom PhD, David Scher MD

SP126: Coping with pain: Thought patterns and interference with daily activities in communicative adults with cerebral palsy

<u>Paul Salib BS</u>, Sanaya Shenoy MSPH, Heather Riordan MD, Alexander Hoon MD, Lauren Jantzie PhD, Claudia Campbell PhD, Shenandoah Robinson MD. Eric Chin MD

SP127: ADAPT Project: Perception of families and physiotherapists after the use of motorized mobility – A mixed methods study

Paula Chagas PhD, Beatriz Saraiva BS, Michele Alvim PT, Maritza Breder MSc, Rafaela Silva BS, Maisa Garcia BS, Ana Carolina Facchin BS, Ana Carolina Souza BS, Leticia Diogo MSc, Livia Alonso PhD, Flavia Bastos PhD

SP128: Perceived benefits of monthly meetings focusing on the healthcare of children and adolescents with cancer Paula Chagas PhD, Rafaela Silva BS, Maria Clara Assis BS, Maisa Garcia BS, Ana Paula Dias BS, Carolina Silva BS, Bruna Moreira BS, Larisa Dias BS, Maria Eduarda Souza BS, Maria Eduarda Schaefer BS, Devika Chiari PT

SP129: Association of Parental Interactions and Therapies with Cerebral Oxygenation Variability in the Neonatal Intensive Care Unit

<u>Presley Volkema MD</u>, Lisa Letzkus PhD, AC-PNP, RN, Michael Spaeder MD, Santina Zanelli MD

SP131: Using the F-Words Life Wheel to Identify Gaps in Rural Rehabilitation Rachel Bican PT, DPT, PhD, Evan Forsythe BS, Kimberly Ito BS, Lynsey Meeks BS, Allyson Hughes PhD

SP132: Parents' Adaptation of Play Positioning in Infants with Cerebral Palsy: A Comparative Analysis of Free Play and Novel Toy Play Sessions Radhika Attal PT, MPT, Regina Harbourne PhD,

Lin-Ya Hsu PhD, Natalie Koziol PhD, Kari Kretch PT, DPT, PhD, Barbara Sargent PhD, PT, Stacey Dusing PhD

SP133: Do adductor tenotomies prevent hip subluxation in children with cerebral palsy? – a systematic review.

Renée van Stralen, Merel Roelen MD, Pranai Buddhdev BSc MBBS MSc(OrthEng) FRCS(Tr&Orth) MSc(Exec.), Max Reijman PhD, Denise Eygendaal PhD, Jaap Tolk MD, PhD

SP134: Recognizing Care Coordination Beyond the Clinic Walls: Defining and Measuring Parental Care Coordination Activities for Children Living with Medical Complexity

<u>Rhonda Cady PhD, RN</u>, Maykala Owens BS, Tori Bahr M.D.

SP135: Optimizing Diagnosis and Precision Medicine Within the Cerebral Palsy Population Utilizing Multigene Cerebral Palsy and Neurodevelopmental Delay Genetic Panels Ria Shahapeti, Jane Emerson MD

SP136: Take That Back! Hip Surgery is NOT More Painful Than Spine Surgery in Children with Cerebral Palsy

Robert Kay MD, Abigail Padilla BS, Lindsay Andras MD, Michael Heffernan MD, Tishya Wren PhD, Noah Tyau BA

SP137: Community Ambulatory Performance in Children with Hereditary Spastic Paraplegia Robert Wimberly MD, Fabiola Reyes MD, Kelly Jeans MSc, Linsley Smith RN, Lizabeth Bunkell PT

SP138: Implementation of My Abilities First Tool in Brazil: lessons learned in a Qualitative Study

Roselene Alencar MS, Ana Raquel Lindquist PhD, Caline Jesus MS, Veronica Schiariti Schiariti PhD

SP140: Cognitive and motor improvement by tummy time practice in preemies: a randomized clinical trial sabrinne Sampaio MS, Klayton Galante PhD, Carolina Lima-Alvarez Dr, Silvana Pereira Dr

SP141: Scoliosis Correction in Spinal Muscular Atrophy: The Influence of Genetic Severity, Functional Level, and Disease-Modifying Agents on Postoperative Outcomes

Sadettin Ciftci MD, Wade Shrader MD, William Mackenzie MD, Robert Heinle MD, Mena Scavina DO, Jason Howard MD

SP142: Social Disadvantage Does Not Always Delay Access to Hip Surgery in Children with Cerebral Palsy Sam Wimmer BS, Melissa Bent MD, Tishya Wren PhD, Robert Kay MD

SP143: From the Outside, Looking In: What Are the External Indicators of Participation in Leisure-Time Physical Activity for Children with Disabilities? Samantha Lee BPhty (hons), Michael Curtin PhD, Georgina Clutterbuck PhD

SP144: Defining Core Components and Understanding Participant Experiences: A Qualitative Study of the BRIGHT Coaching Program

Samantha Noyek PhD, Allison Mounsey MSW, Carrie Costello BFA, Ana Hanlon-Dearman MD, MSc, Gina Rempel FRCPC, Maureen O'Donnell FRCPC, Annette Majnemer BSc, MSc, PhD, Tatiana Ogourtsova PhD OT, Hema Patel MD, William McKellin PhD, Jillian Filliter PhD, Kristy Wittmeier PhD

SP145: Selective Dorsal Rhizotomy's Effect on the Hips in Children with Cerebral Palsy

Scott Miller MS, Kellen Krajewski PhD, <u>Sayan De MD</u>

SP146: Trends in Timing of Hip Surgery in Children with Cerebral Palsy: Is Surgery Being Performed Earlier? A National Observational Study

<u>Sean Tabaie MS MD MBA</u>, Anthony Chiu BS, Sarah Dance BS, Samantha Ferraro BS, Savyasachi Thakkar MD SP147: Adopting the Hammersmith Infant Neurologic Examination (HINE) Tool for Early Detection of Young Children with High Probability of Cerebral Palsy (CP) in Ethiopia: A Knowledge Implementation Project

Selamenesh Tsige Legas MD, pediatrician, Darcy Fehlings MD FRCP(C), MSc, amber Makino MD, FRCPC, atsede Teklehaimanot MD, Behaylu Yibe MD, Amha Mekasha MD, Rudaina Banihani MD, FRCPC, Asrat Demtse MD, Ayalew moges MD

SP149: Comparing the effect of conservative or surgical treatment of patients with myopathic scoliosis on function and quality of life Sharon Eylon MD, Amihai Rigbi PhD, Patrice L. (Tamar) Weiss PhD, Josh Schroeder MD, Alexandra Satanovsky MD

SP150: Patients with myopathy and scoliosis treated conservatively:
Retrospective long-term follow-up and prospective outcomes

<u>Sharon Eylon MD</u>, Amihai Rigbi PhD, Patrice L. (Tamar) Weiss PhD, Josh Schroeder MD, Alexandra Satanovsky MD

SP151: Awareness about Developmental Milestones among Postnatal Mothers Shubha Nayak PT, manasa Kolibylu Raghupathy MPT, Esha Shetty MPT, Shreya Gadkari MSc, Aditi Goyal MPT, Joseph George Kalathil DPT. Bhamini Krishna Rao PhD

SP152: Perspectives of People with Cerebral Palsy and their Communication Partners of Eye-Gaze Control Technology Opportunities and Service Provision: A Qualitative Study Sonia Elliott BOccThy (Hons), Petra Karlsson PhD, Avril Parry BSW, Michelle McInerney PhD, Margaret Wallen PhD

SP153: Orthopaedic Complications in Rett Syndrome: a case series

Stacey Miller BSc(PT), MRSc, Maria Juricic MRSc, BScPT, BScKin, Anita Datta MD, Gabriella Horvath MD, Kishore Mulpuri MHSc, MSc, MBBS, FRCSC

SP154: Feasibility and Goal-Based Outcomes of First-Time Implementation of an Assistive Lower-Limb Exoskeleton in a School-Based Physiotherapy Program for Young Children with Cerebral Palsy

<u>Stefanie Bradley MSc</u>, Anne Kawamura MD, Tom Chau PhD, PEng, F Virginia Wright BScPT, MSc, PhD

SP155: Services for Youth with Cooccurrence of Physical Disability and Mental Health Problems: A Qualitative Study

Stephanie Tremblay PhD(c), MScAOT, Shalini Lal PhD, Mark Ferro PhD, <u>Dana Anaby PhD</u>

SP156: School readiness outcomes of children identified as high risk of cerebral palsy in infancy.

Stina Oftedal PhD, B HIth Sc (Diet), Roslyn Boyd PhD, Bachelor Physiotherapy, Iona Novak PhD, Nadia Badawi MBBCh, MSc, DCH, FARCP, PhD, FRCPI, Samudragupta Bora PhD, Robert Ware PhD, Catherine Morgan PhD; BAppSc (Physio), Koa Whittingham PhD, Ashleigh Hines PhD, Catherine Elliott PhD, Jane Valentine MBBS,, Michael Fahey MBBS, PhD, Leanne Sakzewski PhD, Bachelor Occupational Therapy

SP157: Feedback on the speed track: Stakeholder perspectives on the feasibility of a clinician-delivered rideon-toy navigation program for children with Unilateral Cerebral Palsy

SUDHA SRINIVASAN PhD, <u>Vaishnavi Shahane</u> <u>PT</u>, Meghan Barrett BS (Ongoing), Madeline Jakubowski BS (Ongoing), Kyle Dubois BS (Ongoing), Patrick Kumavor PhD, Kristin Morgan PhD

SP158: Sidesticks as sidekicks: Can joystick-operated ride-on-toys serve as adjuncts in upper extremity rehabilitation for children with unilateral cerebral palsy?

SUDHA SRINIVASAN PhD, Vaishnavi Shahane PT, Uthara Sundaresh BS (Ongoing), Kara Bowkowski BS (Ongoing), Ruth Cortright BS (Ongoing), Kyle Dubois BS (Ongoing), Patrick Kumavor PhD, Kristin Morgan PhD

SP159: Rewarding Infant Movement to Prevent Disuse

<u>Susan Duff EdD, MPT, OT/L, CHT</u>, Karina Barragan BS, Eric Wade PhD, Audrey Howell BS, Rahul Soangra PhD

SP160: Social capital of families of children with neurodevelopmental disabilities in South India

Tatiana Ogourtsova PhD OT, Diana Banaru MSc Applied OT, Dana Boyd MSc Applied OT, Melanie Halevy MSc Applied OT, Kayla Orsat-Parker Msc Applied OT, Dinesh Krishna PhD, Marie Brien PT, MSc, Franzina Coutinho PhD OT

SP161: Resilience and adolescencetransition in youth with developmental disabilities and their families: A scoping review

<u>Tatiana Ogourtsova PhD OT</u>, Naomi Zukerman MSc Applied OT, Emily Bottone MD student, Maya Low MSc

SP162: The Gait Outcomes Assessment List (GOAL) Questionnaire: Test-Retest Reliability and Validity in Children with Cerebral Palsy in Turkey

Umut Apaydın PhD, Rabia Eraslan MSc, Hatice Adıguzel PhD, Ayse Yıldız PhD, Ramazan Yıldız PhD, Erkan Erol PhD, Bulent Elbasan PhD

SP163: Mental Health Screening in Children with Disabilities Unoma Akamagwuna MD, Allan Lara MD, Lindsey Schuler

SP164: Improvements in the Center of Mass Accelerations after Physical Therapy are Linked with the Mobility of Persons with Cerebral Palsy

<u>Uyen Nguyen BS</u>, Morgan Busboom PT, DPT, Brad Corr DPT, Katie Bemis DPT, Kimberley Scott DPT, PhD, Max Kurz PhD

SP165: Percutaneous tendon lengthening and Selective Percutaneous Myofascial Lengthening (SPML) in Children with Cerebral Palsy: Establishing surgical indications and techniques using the Delphi method Wade Shrader MD, Robert Kay MD, Benjamin Shore MD, MPH, FRCSC, Erich Rutz MD, Kristan Pierz MD, Tim Theologis MSc, PhD, FRCS, James McCarthy MD, Kerr Graham MD, Hank Chambers MD

SP166: PEDIDBS: Early data on deep brain stimulation in cerebral palsy compared to other forms of dystonia Warren Marks MD, Michael Kruer MD, Avery Caraway MS, Stephanie Acord MD, James Kelbert BS, Umesh Sankpal PhD

SP167: Assessing Neuromuscular Efficiency by Oxygen Consumption Testing in Ambulatory Boys with Duchenne: Effects of Exon Skipping Therapies

<u>Warren Marks MD</u>, stephanie Acord MD, Lindsay Jacobs PT,DPT, Avery Caraway MS, Britney Rhem MD, Marcie Baldwin MSN

SP168: Single-event Multi-level
Chemoneurolysis with botulinum
toxin A Reduced Spasticity Not Energy
Expenditure in Children with Lower Limb
Spasticity Due to Cerebral Palsy
Xiaoyu Pan MD, PhD, MPH, Heakyung Kim MD,
Michael Spinner MS, Nancy Lee MS, Hiroko
Matsumoto PhD, Amber Newell OTRL, PNP,
Adam Blanchard MS

SP169: Exploring the Dynamics of Spontaneous Infant Movement: A Longitudinal Study of Movement Patterns and Cortical Activity Xiwen Su MS, Marie Kelly MPH, Hyunjoon Kim MS, Evan Yarnall BS, Claudio Ferre PhD

SP170: Effect of Proximal Femoral Guided Growth on Hip Subluxation in Cerebral P

d B.S., Kyrillos Akhnoukh MD, Jon Davids MD, <u>Sean</u>

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Notes