



JOIN US
VIRTUALLY
OCTOBER 6-9, 2021



FINAL PROGRAM

Real-world experience with a no-charge CP genetic testing program

Please join our expert faculty for a virtual educational satellite symposium as they discuss real-world experience with a no-charge cerebral palsy genetic testing program.



Tuesday, October 12, 2021 • 7:00 - 8:00 PM ET Live Question and Answer Session

The symposium will cover the following objectives:

- Provide an update and overview of the PTC Pinpoint™ Cerebral Palsy Spectrum program
- Explore case studies of patients who had an underlying genetic etiology identified through the use of the Cerebral Palsy Spectrum gene panel and discuss their outcomes
- Present initial **real-world data** from the PTC Pinpoint™ Cerebral Palsy Spectrum program



Tim Feyma, MD
Medical Director, Pediatric Neurology
Medical Director, Complex
Movement Disorder Clinic
Gillette Children's Specialty
Healthcare, St. Paul, MN



Warren Marks, MD
Medical Director,
Movement Disorders
Medical Director,
Motion Analysis Laboratory
Cook Children's Medical Center,
Fort Worth, TX



Michelle Fox, MS, LCGC Adjunct Associate Professor of Pediatrics, UCLA David Geffen School of Medicine, Los Angeles, CA Genetic Counselor Consultant, Invitae



PLEASE REGISTER TO ATTEND



MED-US-AADC-2100023 August 2021

This meeting has been organized and funded by PTC Therapeutics GT, Inc.



It is now more important than ever to find the cause of your patient's hypotonia.

COULD IT BE AADC DEFICIENCY?





Sam enjoys smiling, running, and dressing up like the Incredible Hulk for Halloween. He also has cerebral palsy, and if not for early medical intervention by specialists at Gillette Children's Specialty Healthcare, he wouldn't be doing as well as he is today.

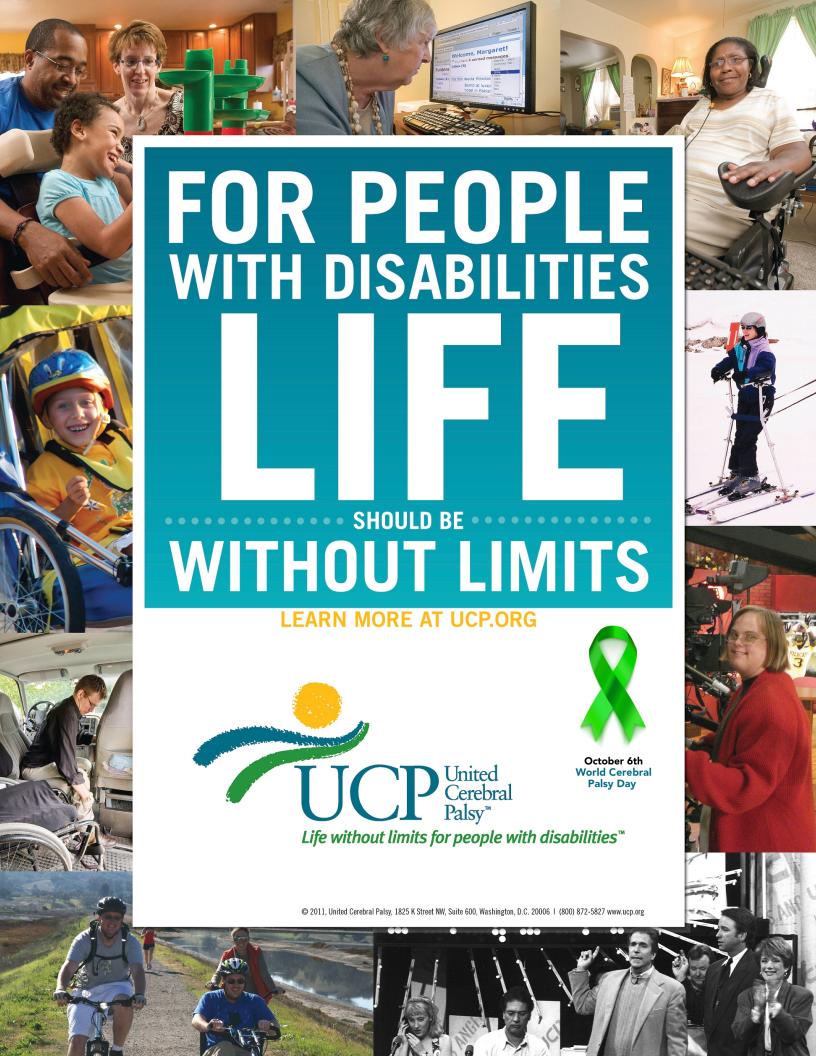
Gillette is your global partner in CP care and ensures patients get the BEST care possible. Gillette creates customized treatment plans and utilizes state of the art technology so kids can achieve healthier, happier, more independent lives.

To read more about Gillette please visit our website: gillettechildrens.org/aacpdm-2021



Specialty Healthcare

To make a referral call: 651-325-2200 gillettechildrens.org/referral





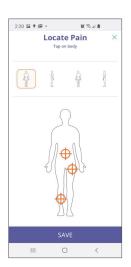
Empowering patients and caregivers

Patients living with chronic illnesses have complex needs, a lengthy path to diagnosis, and overwhelming amounts of tests and paperwork. Managing the administrative burden that accompanies living with a chronic illness, or disability, can be overwhelming.

Chronically Simple allows patients, and their caregivers, to take an active role in the management of their care plan, better advocate for themselves, and ensure continuity of care with information that is available in real-time, anytime, and accessible from anywhere.

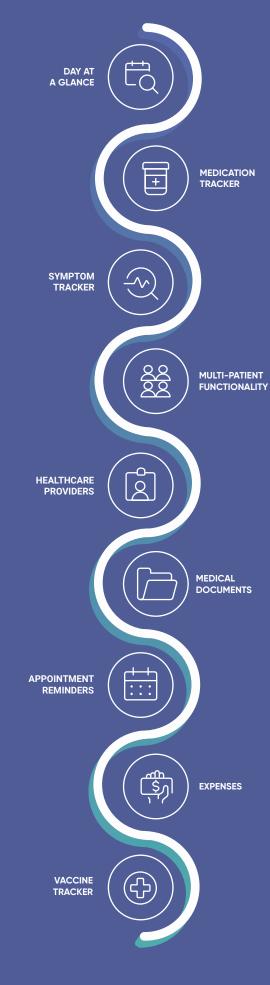
Built by a patient and caregiver, for patients and caregivers.

Chronically Simple empowers patients and caregivers to advocate for themselves by keeping their questions and symptoms at their fingertips. Chronically Simple ensures that their medical team has access to the most accurate health data to make accurate treatment decisions.









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Theresa Sukal Moulton, DPT, PhD

Northwestern University

Chicago, IL



Welcome to the American Academy for Cerebral Palsy and Developmental Medicine (AACPDM)'s Diamond Jubilee Meeting!

Enjoy meeting a dynamic, multi-disciplinary group of decision makers virtually. This is the only meeting where you can reach a physical therapist who heads a program at a major hospital, the chief physician of the neuromotor program at the hospital, an occupational therapist who purchases equipment for a clinic, and a neurologist, physiatrist, or developmental pediatrician who researches the effectiveness of a new

To be conducive to a virtual meeting, one of the key modifications of the meeting format this year is the introduction of Mini-Symposia to replace Breakfast Sessions and Instructional Courses. Mini-Symposia are paired with and 'introduce' free paper sessions based on similar topics. We hope you enjoy the wealth of learning opportunities and CME/CEU's due to the opportunity to access content live during the meeting dates, and at your convenience on-demand after those dates and until

The Scientific Program Committee is pleased to offer a Plenary Session on Healthcare Disparity and Diversity, Equity and Inclusion. The goal is to dispel myths and better understand demographics, the most important determinants of health, and the connection between poverty, disability, and race. Additionally, the Scientific Program Committee was excited about the quality and quantity of submissions for the 75th Annual Meeting! The 2021 Program is full of outstanding research that corresponds specifically to the call for abstract submissions directly addressing the topics:

- diversity, equity and inclusion
- early detection and intervention
- adapted sports and participation
- genetics in developmental disabilities

We hope you join us during the innovative and exciting fun social activities held throughout our live program. Enjoy socializing with other participants during a beverage mixology training, join a trivia team to test your knowledge of our Academy, or take a quick energizing break courtesy of the AACPDM's Adapted Sports and Recreation Committee's virtual "Let's Move."

The past year has been challenging for everyone; however, the AACPDM continues to be forward looking. The "teamwork" mind-set of our members solidifies a worldwide network that provides the best outcomes for patients. This team will continue to support each other through these challenging times. It was for this reason and because the meeting is being hosted in the French speaking Quebec City that the theme for this year's AACPDM meeting is "On y Va!", a French phrase meaning "Let's Go!". It embodies how AACPDM is ready to emerge from these difficult times, together.

On y va! Let's go!



Tom Novacheck, MD First Vice President



Anna McCormick, MD, FRCP(C)



Julieanne Sees, DO, FAAOS, FAOA, FAOAO Scientific Program Committee Co-Chairs

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

Wednesday, October 6, 2021				
10:00 am – 2:00 pm	Pre-Conference Sessions PC1: GRADE Training [IDEAT] PC2: How to Establish a Research Program Focused on Cerebral Palsy [IDEAT] PC3: Cerebral Palsy Lower Extremity Surgical Indications: Expert Consensus Informed by the Delphi Process [IDEAT] PC4: Practical Approaches to Complex Care: Care of Medically Complex Non-Verbal Children with Suspected Pain Behaviors [IDEAT]			
3:00 pm – 7:00 pm	Pre-Conference Sessions PC1: GRADE Training [IDEAT] PC2: How to Establish a Research Program Focused on Cerebral Palsy [IDEAT] PC5: Enhancing Mental Health and Well-being in Adolescents and Adults with Cerebral Palsy [IDEAT] PC6: Development and Analysis of Upright Stability [IDEAT] PC7: Hammersmith Infant Neurological Examination for Telehealth: A Developmental Surveillance Tool [IDEAT] PC8: Ultrasound [IDEAT]			
7:00 pm – 8:00 pm	Welcome Reception			

Thursday, October 7, 2021

8:00 am – 12:00 pm	GRADE Training (continued)		
12:00 pm – 1:00 pm	AACPDM Membership Business Meeting (members only)		
1:00 pm – 2:15 pm	Mini Symposia 1-5		
2:15 pm – 2:45 pm	Session Break Networking Discussions Let's Move!		
3:00 pm – 5:00 pm	Free Paper Sessions A-D A: Basic Science/Tech B: Diversity, Equity and Inclusion/Developmental C: Ortho D: Therapy/Tone		
5:00 pm – 5:30 pm	Networking Discussions Let's Move!		
5:30 pm – 7:00 pm	General Session		
7:00 pm – 8:00 pm	Poster Tours		

^{*}All sessions are scheduled in Eastern Daylight Time Zone (EDT). If you have questions, please use a timezone converter like this one: https://www.timeanddate.com/worldclock/converter.html

Friday, October 8, 2021			
10:00 am – 12:00 pm	Adults and Aging SIG		
12:00 pm – 1:00 pm	International Networking Luncheon		
1:00 pm – 2:15 pm	Mini Symposia 6-10		
2:15 pm – 2:45 pm	Session Break Networking Discussions Let's Move!		
3:00 pm – 5:00 pm	Free Paper Sessions E-H E: Complex Care/Early Development F: Gait G: Ortho: Hip H: Technology		
5:30 pm – 7:00 pm	General Session		
7:00 pm – 10:00 pm	Networking Dinner (TOKET)		
Saturday, Oc	tober 9, 2021		
11:00 am – 1:00 pm	Complex Care SIG		
1:00 pm – 2:15 pm	Mini Symposia 11-15		
2:15 pm – 2:45 pm	Session Break Networking Discussions Let's Move!		
3:00 pm – 5:00 pm	Free Paper Sessions I-L I: Early Diagnosis J: Gait K: Lifespan L: Therapy/Upper Extremity		
5:00 pm – 5:30 pm	Networking Discussions Let's Move!		

Sunday, October 10, 2021 - Thursday, September 1, 2022

Let's Move!

General Session

5:30 pm - 7:00 pm

On-Demand	Mini Symposia 16-31
All Annual Meeting Sessions Available On-Demand.	





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Archives of the AACPDM Village: Past Presidents & Trailblazers









Join AACPDM Past Presidents and Trail Blazers. Their stories tell how each of us contribute to the history of the Academy, making it an organization like no other!

American Academy for Cerebral Palsy and Developmental Medicine

AACPDM 75th Annual Meeting

October 6-9, 2021

Future Annual Meetings

- 76th Annual Meeting September 21-24, 2022 Mirage Las Vegas Las Vegas, Nevada
- 77th Annual Meeting
 September 10-13, 2023
 Chicago Marriott Magnificent Mile
 Chicago, Illinois

AACPDM Office

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Erin Freimark – Senior Meetings Manager
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Heather Schrader – Membership and Administrative Manager



AACPDM PAST AND FUTURE PRESIDENTS

Winthrop Phelps, MD	1948	Robert V. Groover, MD	1985
George G. Deaver, MD	1949	Alfred L. Scherzer, MD	1986
Earl R. Carlson, MD	1950	Robert P. Christopher, MD	1987
Bronson Crothers, MD	1951	Leon Root, MD	1988
Leslie B. Hohman, MD	1952	Alfred Healy, MD	1989
Arnold Gesell, MD	1953	Gayle G. Arnold, MD	1990
Meyer A. Perlstein, MD	1954	James R. Gage, MD	1991
Lenox D. Baker, MD	1955	John F. McLaughlin, MD	1992
Margaret H. Jones Kanaar, MD	1956	Michael A. Alexander, MD	1993
Nicholson J. Eastman, MD	1957	Helen M. Horstmann, MD	1994
William T. Green, MD	1958	Charlene Butler, EdD	1995
Alvin J. Ingram, MD	1959	Robert K. Rosenthal, MD	1996
Raymond R. Rembolt, MD	1960	Peter L. Rosenbaum, MD	1997/1998
G.W.R. Eggers, MD	1961	Dennis C. Harper, PhD	1999
Jessie Wright, MD	1962	John F. Mantovani, MD	2000
Russell Meyers, MD	1963	Michael D. Sussman, MD	2001/2002
Eric Denhoff, MD	1964	James A. Blackman, MD	2003
Chester A. Swinyard, MD	1965	Robert W. Armstrong, MD	2004
Samuel B. Thompson, MD	1966	Luciano S. Dias, MD	2005
Sedgwick Mead, MD	1967	Barry S. Russman, MD	2006
William Berenberg, MD	1968	William L. Oppenheim, MD	2007
William J. Hillman, MD	1969	Diane L. Damiano, PhD PT	2008
Harriet E. Gillette, MD	1970	Hank G. Chambers, MD	2009
Henry H. Banks, MD	1971	Deborah J. Gaebler-Spira, MD	2010
Lawrence T. Taft, MD	1972	Scott A. Hoffinger, MD	2011
Robert L. Samilson, MD	1973	Joseph P. Dutkowsky, MD	2012
Elliott D. O'Reilly, MD	1974	Maureen E. O'Donnell, MDMSc FRCP (C)	2013
Hans U. Zellweger, MD	1975	Richard D. Stevenson, MD	2014
Eugene E. Bleck, MD	1976	Darcy Fehlings, MD MSc FRCP (C)	2015
Leon Greenspan, MD	1977	Eileen Fowler, PhD PT	2016
Gerald Solomons, MD	1978	Unni Narayanan, MBBS MSc FRCP (C)	2017
Hyman H. Soboloff, MD	1979	Sarah Winter, MD	2018
Leonard F. Bender, MD	1980	Jilda Vargus-Adams, MD, MPH	2019
Fred P. Sage, MD	1981	Mauricio Delgado, MD	2020
Paul H. Pearson, MD	1982	Susan Sienko, PhD	2021
Harold B. Levy, MD	1983	Tom F. Novacheck, MD	2022
David H. Sutherland, MD	1984	Lesley E. Pritchard, PhD, PT	2023

Download the Event App

Download the MVP Powered by Markey's app using the links below. Open the app and enter your email used for registration and select "Login with a magic link." This will send an authentication link to your email the first time you use the app on your device.









Download Zoom

Zoom will be used for breakout sessions. You can join from your mobile browser or download and log into the Zoom app.







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, kinesthiologists, nurses, psychologists, special education teachers and educators. *Note: All levels of skill will be addressed.*

AACPDM Vision

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

AACPDM Mission

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

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

After the Combined AACPDM 75th Annual Meeting, all registrants will receive an instructional email about reporting and printing out their own continuing education certificates. The online self-reporting will be open by no later than November 2021. To verify your correct email address, please visit the registration desk before you leave the meeting. *Please note: In self-reporting, if you miss more than 15 minutes of a session/course, it is not considered full attendance, and cannot be claimed.*

Certificate of Attendance

All attendees may claim a Certificate of Attendance.

Accreditation Statement

In support of improving patient care, this activity has been planned and implemented by Amedco LLC and American Academy for Cerbral Palsy and Developmental Medicine.



Amedco LLC is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Physicians (ACCME) Credit Designation

Amedco LLC designates this live activity for a maximum of 23.75 AMA PRA Category 1 CreditsTM. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

California Physical Therapy

Physical Therapists / Physical Therapy Assistants
The American Academy for Cerebral Palsy and Developmental
Medicine is recognized as an Approval Agency by the Physical
Therapy Board of California. http://ptbc.ca.gov/licensees/cc_
agency.shtml

Texas Physical Therapy

2021 AACPDM Annual Conference has been approved for 23.75 continuing competence unit(s)(CCUs). Course Approval Number: 75248TX.

Occupational Therapists / Occupational Therapy Assistants

The American Academy for Cerebral Palsy and Developmental Medicine is an Approved Provider of Continuing Education by the American Occupational Therapy Association (AOTA) #6379. Occupational Therapists and Occupational Therapy Assistants will be able to claim AOTA CEU's. All sessions during the AACPDM 75th Annual Meeting are available for credit. Note: The assignment of AOTA CEUs does not imply endorsement of specific course content, products, or clinical procedures by AOTA.

Nursing Credits

The American Academy for Cerebral Palsy and Developmental Medicine (AACPDM) is a Provider approved by the California Board of Registered Nursing, Provider # CEP 14720. AACPDM provides contact hours. Please register the number of hours you spent in total in the AACPDM 2021 Annual Meeting courses. If you participate in 20 hours worth of course material you will earn 20 contact hours.

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

Annual Meeting

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

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

Advisor Support Program

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

eCourses

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

Networking

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

Publications

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

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

Research

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

Website

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

Committees

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

- Adapted Sports and Recreation
- Advocacy
- Awards
- Care Pathways
- Communications
- Community Council
- Complex Care

- Education
- International Affairs
- Life Span Care
- Membership
- Nominating
- PublicationsResearch
- Scientific Program

Member Events at the Meeting

Membership Business Meeting Agenda

What: AACPDM Annual Membership Business Meeting

Who: All current AACPDM members

Where: Join on the AACPDM website under the Members

Only log-in tab: https://aacpdm.execinc.com/edibo/ Login?ReturnURL=https://aacpdm.execinc.com/edibo/

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If you registered for the 75th Anniversary Diamond Jubilee Meeting, you can click on the Business Meeting button referenced in the screenshot below:

쇼

12:00 PM - 1:00 PM EDT / 11:00 AM - 12:00 PM Your local time (1 Hour)

Membership Business Meeting

BROADCAST

Starts 2 min before the session time



Tom Novacheck MD Orthopaedic Physician Gillette Children's Speci. Speaker



Susan Sienko PhD Shriners Hospitals for C... Speaker

When: Thursday, October 7
Time: 12:00 – 1:00 pm ET



75th ANNUAL MEETING



Diamond Jubilee Meeting

2021 Membership Business Meeting AGENDA

12:00 pm ET Welcome

Susan Sienko – 2020-21 *President* Tom Novacheck – 2021-22 *President*

12:05 - 12:30 pm ET Committee Updates

Lesley Pritchard –

2020-21 Second Vice President

COMMITTEE	CHAIR	
Adapted Sports & Recreation Chair:	Zachary Boychuck, PhD, OT	
Advocacy Chair:	Kelly Pham, MD	
Awards Chair:	Lane Wimberly, MD	
Care Pathways Chair:	Kat Kolaski, MD	
Communications Chair:	Sruthi Thomas, MD	
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Education Chair:	Didem Inanoglu, MD	
International Affairs Chair:	Nigar Dursun, MD	
Lifespan Care Chair:	Prue Morgan, PhD	
Membership Chair:	Deidre McDowell, PT, PCS	
Publications Chair:	Unni Narayanan, MBBS, MSc, FRCS(C)	
Research Chair:	Amy Darragh, OTR/L, PhD	

12:30 - 12:45 pm ET Treasurer's Report

Francisco Valencia Treasurer

12:45 - 1:00 pm ET Questions from members

AACPDM's annual meeting of members is typically held during the Annual Meeting. The Annual Meeting consists of scientific sessions and at least one Business Session.

We look forward to seeing you soon.

Registration

Annual Meeting registration will be open online through May 1, 2022.

E-Poster

An E-Poster is an electronic version of the traditional paper poster in PowerPoint format, and is displayed on a monitor.

Attire

Attire for the educational sessions of the meeting is business casual.

Camera/Recording Policy

It is the policy of AACPDM that no cameras are permitted in the meeting sessions, exhibit hall, or poster sessions, even in a virtual environment. Please refrain from taking any photos in those sessions. 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.

SESSION EVALUATIONS

We need your feedback! As a dedicated learner during the AACPDM 75th 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 75th Annual Meeting in the in the following ways:

- The Annual Meeting website will include access to the online survey tool to complete various session evaluations.
- Participants will be asked to provide input on the educational program of the AACPDM 75th 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 of the Annual Meeting, including those participating in social and fitness events. 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 co-authors regarding the disclosure of their work. The AACPDM does not view the existence of these disclosed interests or commitments as necessarily implying bias or decreasing the value of the author's participation in the course. To follow ACCME guidelines the Academy has identified the options to disclose as follows: a. Research or institutional support has been received b. Miscellaneous, nonincome support (e.g., equipment or services), commercially derived honoraria, or other nonresearch related funding (e.g., paid travel) has been received c. Royalties have been received d. Stock or stock options held e. Consultant or employee f. Received nothing of value g. Did not respond or unable to contact.

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

2021 Scientific Program Overview

This year's program was developed from a submission total of 462 abstracts. All electronically submitted abstracts were independently rated by the multidisciplinary scientific program committee of 22 members (see page 4 of the program). The committee met in March 2021 to review the abstracts and finalize the program (e.g. Scientific paper or poster, mini symposia, on-demand mini symposia). Scientific papers and posters 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 2021 program includes:

- 120 Scientific Papers
- 78 Scientific Posters
- 38 Demonstration Posters
- 13 Clinical Observation/Single Case Study Posters
- 7 Pre-Conference Sessions
- 15 Mini Symposia
- 16 On-Demand Mini Symposia

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

Scholarships

The American Academy for Cerebral Palsy and Developmental Medicine Scholarship Program supports the mission of the AACPDM to improve the health and general status of children and adults with cerebral palsy, developmental disorders and childhood acquired disabilities. The Academy seeks international applicants 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 childhood-onset 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, the Center for Progress, and the Cerebral Palsy Alliance Research Foundation to fund multiple grants, up to \$25,000 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.

2021 Research Grant Recipients

EEG in Children with Hemiplegia for Biomarker Development: The EMBARK Study

PI: Jessica M. Cassidy, DPT, PhD University of North Carolina at Chapel Hill

Measuring Gross Motor Function Change in 3- to 24-Month-Old Children With or at High Risk for CP: Validation of the Gross Motor Function Measure-66 Item Sets

PI: Natalie A. Koziol, PhD University of Nebraska-Lincoln

Therapeutic Intervention Supporting Development from NICU to 6 months for Infants Post Hypoxic Ischemic Encephalopathy

PI: Barbara Sargent, PhD, PT University of Southern California

Cardiorespiratory Analytics in the Neonatal Intensive Care Unit and Risk for Cerebral Palsy

PI: Lisa C. Letzkus, PhD RN CPNP-AC University of Virginia Children's Hospital

Shared Decision Making in Cerebral Palsy through Goalbased Patient Reported Outcome Measures

PI: Unni G. Narayanan, MBBS, MSc, FRCS(C) The Hospital for Sick Children

2020 Research Grant Recipients

Immersive Virtual Reality for Eye-Hand Coordination Assessment in Children with Hemiplegia.

PI: Danielle Levac, PT, PhD Northeastern University

Early Powered Mobility for Toddlers with Cerebral Palsy: A Comparative Case Series of the Permobil® Explorer Mini and a Modified Ride-On Car.

PI: Heather A. Feldner, PT, PhD, PCS University of Washington

Multi-modal Neuroimaging in Children with Hemiplegia to Assess Brain Functional Network Reorganization in Relation to Manual Response Inhibition.

PI: Yanlong Song, PhD Cook Children's Medical Center

Teleneuromodulation in Children with Cerebral Palsy

PI: Bernadette Gillick, PhD, PT University of Wisconsin- Madison

Testing the Feasibility of a Teletherapy plus Parent Coaching Intervention for Children with Autism

PI: Roseann Schaaf, PhD, OTR/L Thomas Jefferson University

Sensorimotor neurophysiology during locomotor learning in infants with and without cerebral palsy

PI: Laura Prosser, PT, PhD The Children's Hospital of Philadelphia

Babies Flying Drones: Examination of infant-robot interactions in a novel mobile kicking contingency paradigm Pl: Elena Kokkoni, PhD University of California, Riverside

BI-UPCAT: BIlateral UPper-limb Children Action observation Training for children with bilateral cerebral palsy

PI: Giuseppina Sgandurra, MD, PhD IRCCS Fondazione Stella Maris and University of Pisa

Upper Extremity Function, Activity, Participation, and Engagement before and after Hippotherapy in Children with Co-Occurring Autism Spectrum Disorder and Cerebral Palsy

PI: Jill Heathcock, MPT PhD The Ohio State University









Richard L. Lieber. Ph.D.

Rick Lieber is a physiologist who earned his Ph.D. in Biophysics from U.C. Davis developing a theory of light diffraction that was applied to mechanical studies of single muscle cells. He joined the faculty at the University of California, San Diego in 1985 where he spent

the first 30+ years of his academic career, achieving the rank of Professor and Vice-Chair of the Department of Orthopaedic Surgery. He received his M.B.A. in 2013 and is currently Chief Scientific Officer and Senior Vice President at the Shirley Ryan AbilityLab and Professor of Physical Medicine & Rehabilitation and Biomedical Engineering at Northwestern University in Chicago, IL.

Dr. Lieber's work represents a translational approach, applying basic scientific principles to help patients who have experienced spinal cord injury, stroke, musculoskeletal trauma and cerebral palsy —an approach that is relevant to those who study biomechanics, rehabilitation and orthopaedic surgery. He has published almost 300 articles in journals ranging from the very basic such as The Biophysical Journal and The Journal of Cell Biology to clinical journals such as The Journal of Hand Surgery and Clinical Orthopaedics and Related Research.

Lieber was introduced to the field of cerebral palsy through the eminent surgeons Dr. David Sutherland and Dr. Jackie Perry, both of whom ran courses at the then Children's Hospital of San Diego. Lieber then teamed with Dr. Hank Chambers who, together, performed experiments to understand the structural and biological changes in muscle contractures in children with cerebral palsy.

In recognition of the clinical impact of his basic science studies, Dr. Lieber has been honored by the American Academy of Orthopaedic Surgeons (Kappa Delta Award; twice), the American Bone and Joint Surgeons (Nicolas Andry Award) the American College of Sports Medicine (Fellow), the Council for the International Exchange of Scholars (Fulbright Fellowship) and the American Society for Biomechanics (Borelli Award; Hay Award). He was also named a Senior Research Career Scientist from the Department of Veterans Affairs from which he has received continuous support since 1985.



Bernadette Gillick, PhD, MSPT, PT

Bernadette Gillick, PhD, MSPT, PT is an Associate Professor and Director of Neuromodulation at the Waisman Center, University of Wisconsin-Madison. Dr. Gillick earned her undergraduate degrees in Physical Therapy and Psychology at Marquette

University, an Advanced Master's Degree at Chicago Medical School and a PhD in Rehabilitation Science with a minor in Neuroscience from the University of Minnesota. Thereafter she completed a Fellowship in Randomized Behavioral Clinical Trials at the National Institutes of Health (NIH). She is an internationally respected expert on the use of innovative technologies and interventions in perinatal stroke and cerebral palsy from infancy to young adulthood. Her clinical research focus surrounds pediatric neuromodulation and rehabilitation in optimizing outcomes throughout the lifespan. Her current grant support includes AACPDM C-Progress award, and NIH R01 and R21 awards investigating infant cortical and behavioral development after perinatal stroke and early brain injury using non-invasive brain stimulation, neuroimaging and neuromodulation interventions. Her work has been supported by over \$10M in international and national funding. Among other positions, she is an active member of the American Academy of Cerebral Palsy and Developmental Medicine and a global representative within the International Alliance of Academies of Childhood Disability. Her experience in diverse mentoring roles spans the last 30 years of her career including the Clinical Coordinator of Education at Loyola University/Rehabilitation Institute of Chicago, Clinical Instructor at the Institute of Latin American Concern in the Dominican Republic, Manager of Inpatient Rehabilitation at Providence Alaska Medical Center and in formal academic training and mentoring roles at Marquette University, Chicago Medical School, University of Alaska, Seattle University, University of Minnesota and University of Wisconsin.



Bradley Heaven

My name is Bradley Heaven. I was born with Non Verbal Spastic Cerebral Palsy, but I don't let it hold me back. I communicate using an Eye Tracker and a Surface Book 3. I graduated with a degree in Social Science from Dawson College in Montreal, Quebec. A

few years ago, my best friend and business Danny and I noticed it was hard to keep up with trending resources to assist people with disabilities. We decided to create a one stop shop to help people keep up. Our website has 7 different categories, Physical Disability, Cerebral Palsy, Autism, Down Syndrome, Deaf/Hard of Hearing, Blind/Visual Impairment, and the Elderly. Each of these categories have technology/gadgets to help make daily life easier, Apps, Inspirational Videos, and other resources. We also review Adaptive products, do vlogs to break the stigmas surrounding Cerebral Palsy, and much more on YouTube. Our YouTube is allaccesslife, and our website is www.allaccesslife. org. Danny and I are running a marathon this fall to raise funds for All Access Life. Danny is pushing me 40 kms in my Josi Jogging Adaptive Stroller, and then Danny is going to transfer me to my Adaptive Walker and I'm going to finish the last 2.2km in my walker!!! No Limits!!!



Ben Philpot, Ph.D.

Dr. Ben Philpot is a Kenan Distinguished Professor in the Neuroscience Center and Department of Cell Biology & Physiology at the University of North Carolina. He earned his Ph.D. in psychobiology from Dr. Peter Brunjes at the University of Virginia and

performed a postdoctoral fellowship in the laboratory of Dr. Mark Bear at Brown University and M.I.T., where he made important contributions to our understanding of experiencedependent brain development. He is currently the Associate Director of the UNC Neuroscience Center and a member of the Carolina Institute for Developmental Disabilities, for which he helps direct a cross-disciplinary postdoctoral training grant for neurodevelopmental disorders. Dr. Philpot's current research seeks to understand the pathophysiology underlying monogenic neurodevelopmental disorders, and he uses this information to develop small molecule and gene therapies to treat these disorders. His research focuses on early-stage development of treatments for Pitt-Hopkins, Dup15q, and Angelman syndromes. Dr. Philpot has made key therapeutic discoveries, including developing an approach to unsilence the epigeneticallyrepressed paternal UBE3A allele as a novel treatment strategy for Angelman syndrome. Dr. Philpot has >90 peer-reviewed scientific publications. He has advised prominent biotech and pharmaceutical companies, and serves on the scientific advisory committee for the Angelman Syndrome Foundation. He has won multiple awards, including the NARSAD Young Investigator Award, a Whitehall Foundation fellowship, and the Dr. Claudia Benton Award for Scientific Research, and is currently a SFARI Investigator of the Simons Foundation.



Margaret A. Turk, MD

Margaret A. Turk, MD is SUNY Distinguished Service Professor of Physical Medicine & Rehabilitation, Pediatrics, and Public Health & Preventive Medicine at SUNY Upstate Medical University (UMU). She is Vice Chairman of SUNY UMU Department of Physical Medicine

& Rehabilitation (PMR), began and directs the PMR Pediatric Rehabilitation Medicine clinical program serving children and adults with childhood onset disabilities, and participated in developing the brain injury medical services program at Upstate and the Centers at St. Camillus. She has continuously promoted health and wellness for people with lifelong disabilities and the integration of disability education within medical school curricula locally and nationally, with presentations and publications.

Along with her clinical and education responsibilities, she has been active in research on life-long disability and health care accessibility issues, contributing peer-reviewed articles and book chapters on the topic. Most recently she contributed to the limited national information available about the adverse outcomes of people with Intellectual and Developmental Disabilities (I/DD) and the pandemic. She is a co-PI for the Disability Research and Dissemination Center, a cooperative agreement with Center for Disease Control and Prevention National Center on Birth Defects and Developmental Disabilities, to increase their capacity for research and training related to disability and health, and co-chairs the advisory group for the New York State Department of Health Disability and Health Program. She serves as a consultant related to the health of people with I/DD on a National Institute on Aging project and as a member of a National Institute of Dental and Craniofacial research Data and Safety Monitoring Board funded project; she is a National Institutes of Health, National Institute of Neurological Disorders and Stroke/National Institute of Child Health and Human Development Common Data Element working group member, serving on the Infant-Pediatric subgroup. She participated in an advisory capacity to the National Council on Disability related to a national agenda to address health equity for people with disability. Dr. Turk is a founding and present Co-Editor-in-Chief of Disability and Health Journal.

Dr. Turk's professional service includes participation in PMR national leadership and contributions to national/international reports on disability, rehabilitation services, health promotion, and research. She serves on a community board that supports person-centered services for people with disability. She has received numerous awards for her contributions.



Damon Tweedy, MD

Damon Tweedy, MD is an associate professor of psychiatry at Duke University School of Medicine and a staff psychiatrist within the Durham Veteran Affairs Health Care System. He completed both medical school and his specialty training at Duke. He divides his time

between clinical and administrative duties within the VA system and medical student teaching and mentorship at Duke.

Dr. Tweedy has written extensively about the intersection of race and medicine, both in academic journals and popular print publications. His 2015 book, Black Man in a White Coat: A Doctor's Reflections on Race and Medicine, made the New York Times bestseller list and was selected by TIME Magazine as a top non-fiction book that year.



Steven Koop, MD

Steven Koop, MD, is Professor of Orthopedic Surgery at the University of Minnesota Medical School. He has worked as a pediatric orthopedic surgeon at Gillette Children's Specialty Healthcare in St. Paul, Minnesota, since 1985. His clinical work has focused on

the musculoskeletal problems of children and adolescents, most of whom have lifelong neuromuscular conditions. Gillette Children's serves as an education site for residents from the University of Minnesota, Henry Ford Hospital and the Mayo Clinic and he enjoys every opportunity to work with them. He served as Medical Director of Gillette Children's from 2001 through 2018, a role which helped him understand the complicated and essential collaboration that must take place between those who have the privilege of serving patients and those who work to make that service possible by managing the facilities and processes of a healthcare organization.



Maurice G. Sholas, MD. PhD

Dr. Maurice Sholas is the Principal for Sholas Medical Consulting, LLC based in New Orleans, LA. In this capacity, he solves operational challenges for individual practitioners, hospitals and health care agencies. In addition, he is a subject matter expert on children with

special health care needs. Dr. Sholas' pursuit of intellectual achievement is matched only by his pursuit of advocacy. He embodies the belief that being a good citizen is a prerequisite to being a great physician/executive.



Rachel A. Wobschall, Ed.D.

Rachel Wobschall is the Planned and Major Gift Officer for True Friends, a nonprofit organization that provides experiences and adventures for people of all abilities. Before joining True Friends, Rachel served as the Senior Major Gift Officer at Gillette Children's

Specialty Healthcare where she was instrumental in securing funding for the advancement of research and treatment of cerebral palsy and other conditions. She participated in an International Research Symposium where an agenda was developed to guide cerebral palsy research worldwide.

From 2002-2015, Rachel was the Executive Director of Alumni and Constituent Relations at the University of St. Thomas in St. Paul Minnesota. As executive director, she served an alumni community of over 110,000 individuals and was a member of the senior leadership team which completed a successful \$515 million capital campaign.

With over 19 years in state and federal government, Rachel served on the executive staff and cabinet of both Governor Rudy Perpich and Governor Jesse Ventura. She established the first Technology Related Assistance program for people with disabilities for the state of Minnesota that became a model for federal legislation (P.L.100-407) and has been replicated in all states and territories.

Rachel received her Doctor of Education in organization development and leadership, her graduate (MIM) and undergraduate (political science) degrees from the University of St. Thomas. Rachel has been locally, nationally, and internationally recognized for her leadership. Her current civic engagement includes serving as chair of the advisory committee of the ombudsman for mental health and developmental disabilities for the state of Minnesota and serving on the board of directors of the Girl Scouts of River Valleys, the Vinland National Center, and MDI. Rachel's experience of living with cerebral palsy is featured in a 2021 book, *Pure Grit:* Stories of Remarkable People Living with Physical Disability.



Laura L. Deon, MD

Dr. Deon graduated magna cum laude from Xavier University in New Orleans, LA and attended the University of Tennessee College of Medicine in Memphis, TN where she obtained her Doctor of Medicine degree. She completed a PM&R residency at UT

Southwestern in Dallas, TX and a fellowship in Pediatric Rehabilitation at Shirley Ryan Ability Lab. She is currently an Assistant Professor in the Department of Physical Medicine and Rehabilitation at Rush University Medical Center and La Rabida Children's Hospital. She is double boarded in adult rehabilitation and pediatric rehabilitation. She is also the course director for the Health Equity and Social Justice Leadership Course at Rush Medical College and was previously the Co-Course Director for the Readings in Special Populations Course on Disparities in Healthcare Research at Rush Graduate College.



Glendaliz Bosques, MD

Glendaliz Bosques, M.D., is an assistant professor in the Department of Neurology, a board-certified physiatrist and chief of Pediatric Rehabilitation Medicine in UT Health Austin Pediatric Neurosciences at Dell Children's. She specializes in treating children

with congenital or acquired physical disabilities.

Bosques earned her medical degree from the University of Puerto Rico School of Medicine in San Juan, Puerto Rico, where she graduated magna cum laude, and her bachelor's in natural sciences from the University of Puerto Rico, Río Piedras Campus, where she graduated summa cum laude. She completed an internship in transitional medicine at San Juan City Hospital in San Juan, Puerto Rico; a residency in physical medicine and rehabilitation at the Physical Medicine and Rehabilitation Alliance of Baylor College of Medicine and The University of Texas Health Science Center at Houston; and a fellowship in pediatric rehabilitation medicine at Cincinnati Children's Hospital/the University of Cincinnati.

Bosques is passionate about understanding the concerns of her patient not only as perceived in the medical visit, but also as their functional difficulties pertain to home and school as well as in their social context. Her clinical interests involve advanced rehabilitation of paralytic diseases in children, including traumatic and nontraumatic etiologies, and her academic interests include the integration of disability management into medical education. She serves on the Medical Educator Council and as the inaugural chair for LatinX in Physiatry, a community for members of the American Academy of Physical Medicine and Rehabilitation with a Latin background. She is also an active member of the Association of Academic Physiatrists.

Wednesday, October 6, 2021:

Full Day and a Half Session 10:00am - 7:00pm (EDT) on October 6 and 8:00am - 12:00pm (EDT) on October 7

PC1: Grading of Recommendations Assessment, Development and Evaluation (GRADE) Guideline Development Workshop

Stacey Miller MRSc, BSc (PT), Shahnaz Sultan MD, MHSC, AGAF, Yngve Falck-Ytter MD

Learning Objectives:

- 1. Understand the basic principles of the GRADE process;
- 2. Create evidence profiles based on the GRADE process;
- Critically evaluate systematic reviews to inform evidencebased concepts;
- 4. Evaluate the process of going from evidence to recommendations.

Full Day (Presented live 10:00am-7:00pm EDT) Pre-Conference Session Held Live 10:00am - 7:00pm (EDT)

PC2: How to Establish a Research Program Focused on Cerebral Palsy Part I

Christos Papadelis PhD, Christopher Modlesky PhD, Kathleen M. Friel PhD, Michael C. Kruer MD, Danielle E. Levac PhD, Mary Jo Cooley Hidecker PhD, MS, MA, CCC-A/SLP, Ralph Nitkin PhD, Meghan Warren PhD, MPH, PT, Amy Darragh PhD, OTR/L, FAOTA, Paul Gross BA

Learning Objectives:

- Identify and establish necessary components for a successful research program focusing on CP;
- 2. Understand the different funding sources and mechanisms to support a research program;
- Understand the different components of a research grant proposal;
- 4. Learn how to prepare a competitive research grant proposal: science and non-science considerations.

Morning Sessions (Presented live 10:00am-2:00 pm EDT)

PC3: Cerebral Palsy Lower Extremity Surgical Indications: Expert Consensus Informed by the Delphi Process

Tom Novacheck MD, Jim McCarthy MD, Kristan Pierz MD, Jason Rhodes MD, Erich Rutz MD, PhD, Jeff Shilt MD, Benjamin Shore MD, Wade Shrader MD, Tim Theologis MD, MSc, PhD, FRCS, Hank Chambers MD, Jon Davids MD, Thomas Dreher MD, PhD, Kerr Graham MD, FRCS (Ed), FRACS, Robert Kay MD, Unni Narayanan MBBS, MSc, FRCS(C), and Anja Van Campenhout MD, PhD

Learning Objectives:

- Understand the strengths and limitations of the Delphi process;
- Define the consensus agreement regarding indications for each of these commonly prescribed procedures;
- 3. Tailor expert consensus to refine indications for surgical procedures in your own patients;
- 4. Discuss future research to improve the understanding of indications in areas where a lack of consensus exists.

PC4: Practical Approaches to Complex Care: Care of Medically Complex Non-verbal Children with Suspected Pain Behaviors

Laurie Glader MD, Sarah Luthy MD, MSCS, and Carrie Sewell-Roberts LCSW, Sangeeta Mauskar MD, Brenna Morse, Naomi Lorch PhD, PT, Kilby Mann MD, Irene C. Dietz MD, Sarah Stiehl MD, Maggie Salzbrenner-Hoopes MSN, APN, CPNP-AC, Laura L. Owens MD, Emily J. Goodwin MD, Ingrid A. Larson MBA, MSN, DNP, APRN, Julie Hauer MD, Matthew D. Sadof MD

Learning Objectives:

- 1. Common presentations of pain behaviors in children with medical complexity (CMC) and approach to assessment in inpatient, outpatient, and telehealth settings;
- 2. The evaluation of pain behaviors in CMC, including with use of the GRASP tool;
- Available evidence and off-label use of potential nonpharmacologic interventions and pharmacologic management and the available evidence for treatments of pain behaviors;
- 4. The role of social determinants of health and resource navigation and psychosocial support for families of children with pain behaviors and medical complexity.

3:00 pm - 7:00 pm EDT

PC5: Enhancing Mental Health and Well-being in Adolescents and Adults with Cerebral Palsy

Prue Morgan BAppSc (PT), MAppSc (PT), PhD, Mark Peterson PhD, Mary Gannotti PT, PhD, Unoma Akamagwuna MD, Amee Moreno APRN, CPNP, AC/PC, Jan Willem Gorter MD, PhD

Learning Objectives:

- 1. The nature and prevalence of mental health problems, and risk factors for mental health disorders in adolescents and adults with cerebral palsy;
- 2. Best practice in identifying, measuring, and implementing strategies to address mental health problems in adolescents and adults with cerebral palsy;
- 3. How to maximize mental well being in adolescents and adults with cerebral palsy in clinical practice;
- 4. Barriers and facilitators to accessing services to support mental health in adolescents and adults with cerebral palsy.

PC6: Development and Analysis of Upright Stability

Christina Bickley PT, PhD, BOCO, C/NDT, Kirsten Tulchin-Francis PhD, Elizabeth Boyer PhD, Eric Dugan PhD, Jennifer Nelson PT, Aloysia Schwabe MD

Learning Objectives:

- 1. Participants will be able to discuss the subsystems that compose and the development of upright standing stability;
- 2. Participants will be able to discuss some of the common medical diagnoses or conditions that adversely affect standing balance;
- 3. Participants will be able to understand the role motion analysis can play with assessing standing balance deficits and the effectiveness of treatment interventions.

PC7: The Hammersmith Infant Neurological Examination for Telehealth: A Developmental Surveillance Tool

Lauren Ayala MD, Andrea Duncan MD

Learning Objectives:

- 1. Participants will be able to characterize the challenges posed by decreased in-person access to standardized surveillance of high-risk infants;
- 2. Participants will be able to compare the limits in validation between the in-person and telehealth performance of the HINE;
- 3. Participants will be able to identify strategies to overcome difficulties of performing a neurological exam via telehealth.

PC8: Ultrasound for Chemodenervation Procedures

Katharine E. Alter, MD, Heakyung Kim, MD, Afua Asante, MD

Learning Objectives:

- 1. Proficiency in the basics of ultrasound imaging
- Identify applications of US in clinical practice including procedural guidance
- 3. Identify sonoacoustic properties of relevant tissues
- 4. Identify benefits and limitations of incorporating US into clinical practice
- 5. Identify key muscles in upper/lower limbs and trunk.

7:00 pm - 8:00 pm EDT - Welcome Reception



You won't want to miss the first ever

AACPDM Trivia Gameshow

during the Welcome Reception
Wednesday, October 6 from
7:00 - 8:00 pm EDT featuring
historical fun and facts to honor the
75th Diamond Jubilee Anniversary!

Thursday, October 7, 2021:

12:00 pm - 1:00 pm EDT - Membership Business Meeting (members only)

1:00 pm - 2:15 pm EDT - Mini Symposia

MS01: Making a Difference with the GOAL Questionnaire: Incorporating Family Priorities into Practice

Jean Stout MS, PT, Elizabeth Boyer PhD, Pam Thomason MPT, Katie Walt PT, DPT, Andrew Georgiadis MD, Unni Narayanan MBBS, MSc, FRCS(C)

Learning Objectives:

- 1. Describe the unique nature of the GOAL Questionnaire and what it adds to functional outcome assessment;
- Explain the validation process, scoring and interpretation of the GOAL Questionnaire across patients with different motor abilities;
- 3. Identify one or more pearls and pitfalls regarding incorporation of the GOAL Questionnaire into clinical practice;
- Discuss how direct knowledge of family priorities related to functional tasks can augment and direct treatment. planning.

MS02: Systemic Racism in Medicine: Toward a Greater Understanding

Lisa Thornton MD, Maurice Sholas MD, PhD, Glendaliz Bosques MD, Laura Deon MD

Learning Objectives:

- 1. Name 3 examples of how racial bias has influenced medicine:
- 2. Discuss the impact of systemic racism on patient health;
- 3. Identify two common tests in medicine that incorrectly use the social construct of race as a feature of human physiology;
- 4. Discuss how systemic bias prevents marginalized groups from equal participation.

MS03: Establishing a Baby Constraint Induced Movement Therapy Program at Your Centre: An Implementation Course

Darcy Fehlings MD, MSc, FRCPC, Kathleen Friel PhD, Annette Majnemer OT, PhD, FCAHS, Sophie Lam-Damji OT, Amber Makino MD

Learning Objectives:

- 1. Understand the evidence for B-CIMT;
- Have knowledge on developmental identifiers of hemiplegia in primary care;
- 3. Interpret the scoring of the Hammersmith as it relates to 'asymmetries' to identify children who may benefit from B-CIMT;
- 4. Understand how to use baby hand assessments to define activities of an individualized B-CIMT program.

MS04: Neuro-Orthopaedic Journal Club: Top Articles of 2020 in the Orthopaedic Management of Children with Neuromuscular Disorders

Amanda Whitaker MD, Benjamin Shore MD, MPH, Jon Davids MD

Learning Objectives:

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

MS05: Artificial Intelligence in Rehabilitation Targeting Participation for Young Persons with Disabilities: Gaps and Opportunity

Vera Kaelin MSc, Mina Valizadeh BSc, Natalie Parde PhD, Mary Khetani ScD

Learning Objectives:

- Describe common types of artificial intelligence (AI) employed in healthcare.
- 2. Summarize the most prevalent Al applications used in pediatric rehabilitation interventions to target participation of young persons with childhood disabilities;
- 3. Appraise gaps for further research on the use of Al in pediatric rehabilitation interventions targeting young persons' participation;
- 4. Describe the Participation and Environment Measure Plus (PEM+) as a participation-focused rehabilitation intervention that may be amenable to the use of AI.

2:15 pm - 2:45 pm EDT - Networking Discussions

Continue the discussion - each session will feature it's own discussion. Open to all registered meeting attendees.

2:15 pm - 2:45 pm EDT - Let's Move!

Take a quick energizing break by moving to upbeat Latin dance music. From classics like "La bamba" to more modern favorite, "con calma." No experience (or even ability) is necessary!

3:00 pm - 5:00 pm EDT - Free Paper Sessions

Free Paper Session A: Basic Science/Technology

*Presenting author is underlined

3:00-3:07 pm

A1: Yield of Clinically Reportable Genetic Variants in an Unselected Cerebral Palsy Cohort

Clare van Eyk PhD, Dani Webber BSc (Hons), Andre Minoche PhD, Luis Perez-Jurado MD, PhD, Mark Corbett PhD, Alison Gardner BA, Jesia Berry MPH, PhD, Kelly Harper BHSc, Alastair MacLennan MB, ChB, FRCOG, FRANZCOG, Jozef Gecz PhD, FAA, FAHMS, FFSc(RCPA)

3:08-3:15 pm

A2: Variation in the Brain-derived Neurotrophic Actor Gene Predicts Risk of Cerebral Palsy in Extremely Low Birth Weight Infants

Stephen Erickson PhD, Michael Cotten MD, Gordon Worley MD

3:16-3:23 pm

A3: A Clinical Trial of Umbilical Cord Blood and Umbilical Cord Tissue Mesenchymal Stromal Cells in Children with Cerebral Palsy

<u>Jessica Sun MD</u>, Laura Case DPT, Colleen McLaughlin DNP, Natalie Skergan CPNP, Joan Jasien MD, Mohamad Mikati MD, Jesse Troy PhD, Joanne Kurtzberg MD

3:24-3:31 pm

A4: Targeted Neuroimmunomodulatory Therapies for Functional Improvement in Cerebral Palsy

<u>Yuma Kitase MD</u>, Nethra Madurai MD, Eric Chin MD, Shenandoah Robinson MD, Lauren Jantzie PhD

3:32-3:39 pm

A5: Hemodynamics and Oxygenation in the Leg Muscles of Young Adults with Cerebral Palsy Using Near-Infrared Spectroscopy

Ronit Aviram MA, Inbar Kima BA, Thierry Willigenburg BA, Haim Bassan MD, Raziel Riemer PhD, Simona Bar Haim PhD

3:40-4:00 pm - Discussion

4:00-4:07 pm

A6: Augmentative and Alternative Communication and Interpreter Use for the Cognitive Assessment of Children with CP: A Question of Equity

Elisabeth O'Regan BA, Ann Alriksson-Schmidt PhD, MSPH, Pia Ödman PT, PhD, Kristine Stadskleiv PhD, Maja Knudsen Cand.psychol

4:08-4:15 pm

A7: Heart Rate Variability in Children with and Without Dyskinetic Cerebral Palsy During Rest and Eye-tracking Gaming Performance

Saranda Bekteshi MSc, Petra Karlsson PhD, Inti Vanmechelen MSc, Tamaya Van Criekinge PhD, Marco Konings PhD, Patrick Hellin OT, Hans Hallez PhD, Jean-Marie Aerts PhD, Els Ortibus PhD, MD, Elegast Monbaliu PhD

4:16-4:23 pm

A8: Eye Metrics in Children with Dyskinetic Cerebral Palsy During Eye-tracking Performance Compared to Typically Developing Children

Saranda Bekteshi MSc, Petra Karlsson PhD, Inti Vanmechelen MSc, Marco Konings PhD, Tamaya Van Criekinge PhD, Patrick Hellin OT, Jean-Marie Aerts PhD, Hans Hallez PhD, Els Ortibus PhD, MD, Elegast Monbaliu PhD

4:24-4:31 pm

A9: Telerehabilitation for Children and Youth with Brainbased Developmental Disabilities and Their Families: Systematic Review

<u>Tatiana Ogourtsova OT, PhD</u>, Maureen O'Donnell MD MSc, Zachary Boychuck OT, PhD(c), Sara Ahmed PT, PhD, Galil Osman, Annette Majnemer OT, PhD, FCAHS

4:40-5:00 pm - Discussion

Free Paper Session B: Diversity, Equity and Inclusion/ Developmental

*Presenting author is underlined

3:00-3:07 pm

B1: Perspectives of Children and Youth with Disabilities Regarding Their Experiences in Inclusive Education: A Metaaggregative Review

Tithi Paul BS, Wenonah Campbell PhD

3:08-3:15 pm

B2: Healthcare Resource Utilization by Children with Cerebral Palsy

Maria Juricic BScPT, MRSc, Stacey Miller MRSc, BSc (PT), Jaimy Coates, Nandy Fajardo, Christopher Chapman MD, BSc, Eva Habib MPH, Kishore Mulpuri MBBS, MS, MHSc, FRCSC

3:16-3:23 pm

B3: Labour Market Consequences of Cerebral Palsy: A Register-Based Study

Derek Asuman MS

3:24-3:31 pm

B4: Social Capital of Primary Caregivers of Children with and Without Disability in Rural Bangladesh- Findings from a Case-Control Study

<u>Israt Jahan MPH</u>, Rosalie Power PhD, Mohammad Muhit PhD, Nadia Badawi AM, Gulam Khandaker MBBS, MPH, DCH, PhD, FAFPHM

3:32-3:39 pm

B5: Rehabilitation and Education Status of Children with Cerebral Palsy (CP) in Bangladesh: Findings from the Bangladesh CP Register

Mahmudul Hassan Al Imam MPH, Israt Jahan, Manik Chandra Das, Mohammad Muhit PhD, Hayley Smithers-Sheedy, Sarah McIntyre, Nadia Badawi AM, Gulam Khandaker MBBS, MPH, DCH, PhD. FAFPHM

3:40-4:00 pm - Discussion

4:00-4:07 pm

B6: Autism and ADHD Are Main Associated Impairments in Children with Cerebral Palsy

Magnus Påhlman MD, PhD, Kate Himmelmann MD, PhD

4:08-4:15 pm

B7: Initial Validation of the Ignite Challenge for Children and Youth with Autism Spectrum Disorder

Kerry Evans Bach App Sc in Physiotherapy, Annemarie Wright PhD, Bsc (Hons), Catriona Bauve BPhysio, F Virginia Wright PhD

4:16-4:23 pm

B8: Construct Validity of the Autism Classification System of Functioning: Social Communication Across Childhood and Adolescence

Diana Tajik-Parvinchi PhD, Peter Rosenbaum MD, Eric Duku PhD, Mary Jo Cooley Hidecker PhD, Lonnie Zwaigenbaum MD, Caroline Roncadin MD, Stelios Georgiades PhD, Stephen Gentles PhD, Hanna Fang MSc, Briano Di Rezze PhD

PROGRAM AND EVENTS

4:24-4:31 pm

B9: Selective Motor Control and Strength in Individuals with Spina Bifida

Elizabeth Boyer PhD, Linda Krach MD

4:32-4:39 pm

B10: CO-OP Approach Improves Activity Performance and Participation – in Children with Cerebral Palsy and Spina Bifida

<u>Ann-Marie Öhrvall PhD</u>, Caisa Hofgren PhD, Lena Bergqvist PhD, Barbro Lindquist PhD, Kate Himmelmann MD, PhD, Marie Peny-Dahlstrand PhD

4:40-5:00 pm - Discussion

Free Paper Session C: Orthopaedics

*Presenting author is underlined

3:00-3:07 pm

C1: Epidemiology of Fractures in Children with Cerebral Palsy in Sweden: A Population-based Registry Study

Gustaf Linton, Ann Alriksson-Schmidt, PhD, MSPH, Gunnar Hägglund PhD

3:08-3:15 pm

C2: Better Understanding the Orthopaedic Burden of Neurosurgical Hemispherectomy in Pediatric Patients

William Belshe BS, Nicholas Gajewski MD, Rachel Thompson MD

3:16-3:23 pm

C3: A Systematic Review and Meta-analysis: Does Age and Follow-up Affect Outcomes for Pediatric Upper Extremity Cerebral Palsy Surgery?

Amy Song BS, Lauren Hutnik BA, Yash Shah BS, Kunj Jain BA, Anugya Mittal BA, Vaishali Ravikumar BS, Anam Purewal BS, JenFu Cheng MD, Alice Chu MD

3:24-3:31 pm

C4: Calcaneal Sliding versus Calcaneal Lengthening Osteotomy for Valgus Foot Deformity Correction in Children with Cerebral Palsy

<u>Susan Rethlefsen DPT</u>, Alison Hanson MPT, Tishya Wren PhD, Robert Kay MD

3:32-3:39 pm

C5: Mid-term Health-Related Quality of Life and Caregiver Burden Following Orthopedic Surgery in Children with Cerebral Palsy

Rachel DiFazio PhD, RN, Judith Vessey PhD, MBA, RN, DPNP, Patricia Miller MS, Brian Snyder MD, PhD, Benjamin Shore MD, MPH

3:40-4:00 pm - Discussion

4:00-4:07 pm

C6: The Risk of Scoliosis in Children with Dystonic Cerebral Palsy Is Less Than in Children with Spasticity

Supreet Deshpande MD, Rashmi Acharya, Mark Gormley Jr MD

4:08-4:15 pm

C7: Concurrent Hip Dysplasia and Scoliosis in Children with Cerebral Palsy: should We Fix the Hip or Spine First?

<u>Wade Shrader MD</u>, Ali Asma MD, Armagan Can Ulusaloglu MD, Kenneth Rogers PhD, Mutlu Cobanoglu MD, Jason Howard MD, Suken Shah MD

4:16-4:23 pm

C8: Baclofen Pump Use: Complications After Growth-Friendly Instrumentation for Early-Onset Scoliosis

Amy Xu BS, Majd Marrache MD, Christina Hardesty MD, Mari Groves MD, Mark Erickson MD, Robert Murphy MD, George Thompson MD, Paul Sponseller MD

4:24-4:31 pm

C9: Postoperative Urinary Retention After Pediatric Orthopedic Surgery: Increased Risk in Children with Neurodisabilities

Mohan Belthur MD, FRCSC, Jessica Burns MD, MPH, Ian Singleton BS, M'hamed Temkit PhD, Thomas Sitzman MD, MPH

4:32-4:39 pm

C10: The Impact of Preoperative Anxiety on Postoperative Pain in Patients with Cerebral Palsy Undergoing Orthopaedic Surgery

Rachel Wahhab BS, Danielle Greig MD, Rachel Thompson MD

4:40-5:00 pm - Discussion

Free Paper Session D: Therapy/Tone

*Presenting author is underlined

3:00-3:07 pm

D1: Treatment of Spasticity in Children and Adolescents with Cerebral Palsy in Northern Europe: A CP-North Registry Study

Ann Alriksson-Schmidt PhD, MSPH, Gunnar Hägglund PhD, Sandra Hollung PhD, MS, Matti Ahonen MD, PhD, Guro L Andersen MD, PhD, Gudbjörg Eggertsdottir MScPh, Msc, PT, Mark Gaston, Reidun Jahnsen PhD, Ira Jeglinsky Kankainen PT, PhD, Kirsten Nordbye-Nielsen MSc, Ilaria Tresoldi MD, PhD

3:08-3:15 pm

D2: Efficacy of Incobotulinumtoxin/A Treatment for Children/Adolescents with Sialorrhea Associated with Neurological Disorders

<u>Steffen Berweck MD</u>, Heakyung Kim MD, Marta Banach MD, PhD, Angelika Hanschmann MS, Michael Althaus MD, Marcin Bonikowski MD

3:24-3:31 pm

D4: Effect of Activity-based Training on Lower Extremity Contracture and Spasticity in People with Cerebral Palsy: A Systematic Review

David Yang BSc, <u>Caitlin Hurd MSc, MScPT</u>, Diane Lorenzetti MLS, PhD, Jaynie Yang BSc(PT), MSc, PhD, Elizabeth Condliffe PhD, MD, FRCPC

3:32-3:39 pm

D5: Quality of Systematic Reviews of Interventions for Children with Cerebral Palsy

Kat Kolaski MD, Lynne Romeiser Logan PhD, Charlene Butler MA, Edd

3:40-4:00 pm - Discussion

4:00-4:07 pm

D6: What Is the Effect of Progressive Resistance Training in Muscle Function, Activity and Participation in People with Cerebral Palsy?

<u>Theofani Bania PhD</u>, Nicholas Taylor PhD, Hsiu-Ching Chiu, Garyfallia Charitaki, Evdokia Billis

4:08-4:15 pm

D7: Contribution of Sensory-Motor Impairments to Mobility in Pre-Adolescent Children with Cerebral Palsy: An Observational Study

Hsiu-Ching Chiu PhD

4:16-4:23 pm

D8: Participation Measures for Young People Aged 15 to 26 Years with Cerebral Palsy: A Systematic Review

Jacinta Quartermaine PhD Candidate, BSpPath(Hon1), Leanne Johnston PhD, BPhysio, Tanya Rose PhD, BSpPath(Hon1), Megan Auld PhD, BPhysio

4:24-4:31 pm

D9: Physical Literacy and Behaviour Outcomes Associated with Program Participation in Youth with and Without Disabilities

<u>Kelly Arbour-Nicitopoulos PhD</u>, F Virginia Wright PhD, Emily Bremer PhD, Jennifer Leo PhD

4:32-4:39 pm

D10: Association Between Social Distancing and Participation at Home of Children and Adolescents with Neuromotor Impairments

<u>Beatriz Brugnaro PT</u>, Olaf Kraus de Camargo MD, PhD, Gesica Fernandes, Ana Carolina de Campos PT, PhD, Silvia Letícia Pavão PhD, Nelci Adriana Cicuto Ferreira Rocha PhD

4:40-5:00 pm - Discussion

5:00 pm - 5:30 pm EDT - Networking Discussions

Continue the discussion - each session will feature it's own discussion. Open to all registered meeting attendees.

5:00 pm - 5:30 pm EDT - Let's Move!

Join us for an adaptive wheelchair dance class. Amanda Trott is a professional dancer and has extensive teaching and performance experience.

5:30 pm - 7:00 pm EDT - General Session

<u>Opening Address and Gavel Exchange</u>: Susan E. Sienko, PhD to Tom F. Novacheck, MD

<u>Presidential Guest Lecture</u> supported in part by an unrestricted grant from Gillette Children's Specialty Healthcare: Damon Tweedy, MD

Reflections on Race and Medicine in the Era of COVID-19 and Nationwide Protests

<u>Diversity, Equity and Inclusion Panel:</u> Glendoliz Bosques MD, DAAP, FAAPMR ,Laura Deon MD, Tom Novacheck MD, Maurice G. Sholas MD, PhD, and Damon Tweedy MD

7:00 pm - 8:00 pm EDT - Posters with Past Presidents

Past/present and future presidents will guide attendees through a thought provoking session highlighting the quality work of our members and attendees. Attend, learn and connect! Each poster tour will highlight a different topic including Diversity, Equity and Inclusion, Tone, Technology, Lifespan, Therapy, Gait and Early Diagnosis/Complex Care.



Friday, October 8, 2021

10:00 am - 12:00 pm EDT - Adults and Aging SIG

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

12:00 pm - 1:00 pm EDT - International Networking Lunch

1:00 pm - 2:15 pm EDT - Mini Symposia

MS06: Driving Technology Development in the Right Direction: On y Va!

Anna McCormick BMSc, MD, FRCPC, Elaine Biddiss MASc, PhD, Jan Willem Gorter MD, PhD, Adam Scheinberg MBBS, DCH, FRACP, FAFRM, MMed, Joanna Butchart PT, MPT, MPH, Hana Alazem MD; Christina Bayon, PhD

Learning Objectives:

- Be introduced to the six F-Words in Child Development built upon the World Health Organization's International Classification of Functioning, Disability and Health (ICF) framework:
- Review scientific assessment of cutting edge technology including robotic gait trainers, social robots and mixed reality therapy games;
- 3. Apply the F-words lens to these specific examples of technology;
- 4. Participate in active discussion regarding how this framework can be utilized to drive the development of powerful cutting edge technology forward.

MS07: Hip Surveillance for Children with Cerebral Palsy: Strategies and Technologies to Overcome Barriers to Implementation

Vedant Kulkarni MD, Jon Davids MD, Stacey Miller MRSc, BSc (PT), Kerr Graham MD, Amanda Whitaker MD

Learning Objectives:

- 1. Describe the evidence for hip surveillance in children with cerebral palsy;
- 2. Describe models for the implementation of hip surveillance that have been developed in multiple countries;
- 3. List barriers and potential solutions to implementing hip surveillance within varying health systems;
- 4. Understand resources and technology that can overcome common barriers for implementation of a hip surveillance program.

MS08: Top Ten Articles in Developmental Disabilities

Richard Adams MD, Nancy Murphy MD

Learning Objectives:

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

MS09: Primary and Secondary Gait Deviations and Compensatory Mechanisms in Persons with Neuromuscular Disorders

Sylvia Ounpuu MSc, Kristan Pierz MD

Learning Objectives:

- Define primary and secondary deviations and compensations seen in gait;
- 2. Differentiate between primary deviations that need to be treated and compensations that will resolve if the primary problem is addressed;
- 3. Understand common multi-level gait patterns in persons with neuromuscular disorders;
- 4. Describe how motion analysis can help us better understand gait function and make more informed treatment decisions.

MS10: Management of Difficult Clinical Presentations of Hypertonia and Complex Movement Disorders in Children with Disabilities

Mark Gormley Jr, MD, Tim Feyma MD, Patrick Graupman MD Learning Objectives:

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

2:15 pm - 2:45 pm EDT - Networking Discussions

Continue the discussion - each session will feature its own discussion. Open to all registered meeting attendees.

2:15 pm - 2:45 pm EDT - Let's Move!

Take a few minutes to center and focus your mind and body through meditation with movement. A great way to try out some meditation techniques.

3:00 pm - 5:00 pm EDT - Free Paper Sessions

Free Paper Session E: Complex Care/Early Development

*Presenting author is underlined

3:00-3:07 pm

E1: Age of Diagnosis, Fidelity and Acceptability of an Early Diagnosis Clinic for Cerebral Palsy: Single Site Implementation Study

Anna te Velde PT, Catherine Morgan PT, PhD, Esther Tantsis FRACP, MBBS, BMedSci, PhD, Prue Golland PT, MPH, Jane Berry OT, MSc Paediatric OT, Johanna Korkalainen B App Sci, Robyn McMurdo BSW, Ronda Shehata BSpeechPath, Nadia Badawi AM, Iona Novak BAppSc, MSc (Hons), PhD

3:08-3:15 pm

E2: Diagnostic Preferences in the Cerebral Palsy Community – A Tale of Two Diagnoses

<u>Bhooma Aravamuthan MD, DPhil, Michele Shusterman BA, LeAnne Snyder PhD, Monica Lemmon MD, Jennifer Bain MD PhD, Paul Gross BA</u>

3:16-3:23 pm

E3: Emergency Room Utilization for Children with Medical Complexity Following Community Emergency Medical Service Collaboration

Kurtis Sobush MD, Tricia Casey EMT-P, Nicholas Salzman EMT-P

3:24-3:31 pm

E4: Quantifying Neurodevelopmental Impairment: Cerebral Palsy and the Encephalopathy of Prematurity

<u>Karnika Mehrotra</u>, Lauren Jantzie PhD, Alexander Hoon MD, MPH, Shenandoah Robinson MD, Eric Chin MD

3:32-3:39 pm

E5: Exploration of Cardiovascular Risk Factors During Childhood in Children with and Without Cerebral Palsy

Theresa Sukal-Moulton PT, DPT, PhD, Xiaoyun Yang MS, Dana Coons BA, Amy Krefman MS, Norrina Allen PhD, MPH, Deborah Gaebler-Spira MD

4:00-4:07 pm

E6: Parents' Perspective of Receiving a Diagnosis for Their Child

Stacey Miller MRSc, BSc (PT), Maria Juricic BScPT, MRSc, Jaimy Coates, Maureen O'Donnell MD, MSc, Kishore Mulpuri MBBS, MS, MHSc, FRCSC

4:08-4:15 pm

E7: Early Childhood Developmental Skills of Children with Tracheostomies and Ventilators Recently Discharged Home

Sarah Sobotka MD, MSCP, Emma Lynch MPH, Robert Graham MD, Michael Msall MD

4:16-4:23 pm

E8: Pneumonia Following Hip Reconstruction Surgery in Children with Neurologic Complex Chronic Conditions

Rachel DiFazio PhD, RN, <u>Jay Berry MD, MPH</u>, Patrice Melvin MS, Benjamin Shore MD, MPH

4:24-4:31 pm

E9: Sleep Problems in Children with Cerebral Palsy and Their Parents: Results from the 24-hour Activity Checklist

Raquel Hulst MSc, Jan Willem Gorter MD, PhD, Jeanine Voorman MD, Eveline Kolk MSc, Sanne van der Vossen MD, Anne Visser-Meily MD, Marjolijn Ketelaar PhD, Sigrid Pillen MD, Olaf Verschuren PhD

4:32-4:39 pm

E10: Home Health Nursing Care Utilization in Children with Medicaid

<u>Sarah Sobotka MD, MSCP</u>, David Hall MD, Cary Thurm PhD, James Gay MD, Matt Hall PhD, Jay Berry MD, MPH

4:40-5:00 pm - Discussion

Free Paper Session F: Gait

*Presenting author is underlined

3:00-3:07 pm

F1: Finding Consensus for Knee Surgery in Children with Cerebral Palsy Using the Delphi Method

Robert Kay MD, James McCarthy MD, Kerr Graham MD, Unni Narayanan MBBS, MSc, FRCS(C), Jon Davids MD, Kristan Pierz MD, Anja Van Campenhout MD, PhD, Jason Rhodes MD, Benjamin Shore MD, MPH, Henry Chambers MD, Tom Novacheck MD, Thomas Dreher MD, PhD

3:08-3:15 pm

F2: International Consensus Regarding Surgical Indications for Distal Femoral Extension Osteotomy in Children with Cerebral Palsy

Robert Kay MD, James McCarthy MD, Kerr Graham MD, Unni Narayanan MBBS, MSc, FRCS(C), Kristan Pierz MD, Tom Novacheck MD, Thomas Dreher MD, PhD, Matthew Veerkamp BA, Wade Shrader MD, Erich Rutz MD, Tim Theologis MD, MSc, PhD, FRCS, Jeffrey Shilt MD

3:16-3:23 pm

F3: Anterior Distal Femoral Hemiepiphysiodesis in Children with Cerebral Palsy: Establishing Surgical Indications and Techniques

Benjamin Shore MD, MPH, Kerr Graham MD, Unni Narayanan MBBS, MSc, FRCS(C), Jon Davids MD, Kristan Pierz MD, Anja Van Campenhout MD, PhD, Wade Shrader MD, Tim Theologis MD, MSc, PhD, FRCS, Matthew Veerkamp BA, Thomas Dreher MD, PhD, Robert Kay MD, James McCarthy MD

3:24-3:31 pm

F4: Association Between Pain and Patella Alta in Patients with Cerebral Palsy and Crouch Gait

Carolina Santini MD, <u>Lauro Neto MD</u>, Guilherme Brodt PharmD, Eduardo Comparsi MD

3:32-3:39 pm

F5: Kinetic and Kinematic Repercussion of the Hip During Knee Hyperextension Gait in Hemiplegic Cerebral Palsy

Carolina Santini MD, <u>Lauro Neto MD</u>, Guilherme Brodt PharmD, Eduardo Comparsi MD

3:40-4:00 pm - Discussion

4:08-4:15 pm

F7: Combination of Orthopaedic Surgery & Post Surgery Rehabilitation in Treatment of CP with Crouch Gait - Preliminary Experience in China

Haiqing Cai MD, Min Shen MD, Zhigang Wang MD, Sheng Jin MD, Chunxin Xu MD, Cen Chen MD, Yangyang Lu PT

4:16-4:23 pm

F8: Gait and Mobility Outcomes After Multi-level Surgery for Youth with Cerebral Palsy: Differences in Rehabilitation Setting & Dose

Nancy Lennon MS, PT, DPT, Christina Bourantas BS, Jason, Beaman PT, Tim Niiler PhD, Laura Owens MD, Wade Shrader MD

4:24-4:31 pm

F9: The Impact of Preoperative Factors and Surgical Burden on Postoperative Recovery of Walking Activity in Children with Cerebral Palsy

Chris Church MPT, Isabel Biermann BS, <u>Nancy Lennon MS, PT, DPT</u>, John Henley PhD, Stephanie Butler DPT, Tim Niiler PhD, Wade Shrader MD, Freeman Miller MD, Jason Howard MD

4:32-4:39 pm

F10: The Relationship Between Pelvic-Hip Musculature and Functional Ambulation in Patients with Spina Bifida

Tasos Karakostas PhD, <u>Ana-Marie Rojas MD</u>, Jill Larson MD, Suruci Batra BS, Vineeta Swaroop MD, Luciano Dias MD

4:40-5:00 pm - Discussion

Free Paper Session G: Orthopaedics: Hip

*Presenting author is underlined

3:00-3:07 pm

G1: Suspension of Provincial Hip Surveillance for Children with Cerebral Palsy: The Impact of COVID-19

<u>Stacey Miller MRSc, BSc (PT)</u>, Maria Juricic BScPT, MRSc, Jennifer Farr, Kishore Mulpuri MBBS, MS, MHSc, FRCSC

3:08-3:15 pm

G2: How Well Does Physical Examination Predict Radiographic Hip Displacement in Children with CP?

Susan Stott MD, PhD, <u>Unni Narayanan MBBS, MSc, FRCS(C)</u>, Darcy Fehlings MD, MSc, FRCPC, Kerr Graham MD, Kate Willoughby PT, Kishore Mulpuri MBBS, MS, MHSc, FRCSC, Benjamin Shore MD, MPH, Tim Theologis MSc, PhD, FRCS, Moon Seok Park MD, PhD

3:16-3:23 pm

G3: Surgeon Practice Variation and Factors Influencing Intervention Indications for Hip Displacement in Children with Cerebral Palsy

Maximillian Mifsud MD, MScRes, FRCSEd, Unni Narayanan MBBS, MSc, FRCS(C), Kishore Mulpuri MBBS, MS, MHSc, FRCSC, Benjamin Shore MD, MPH, Wade Shrader MD, Tim Theologis MSc, PhD, FRCS, Susan Stott MD, PhD, Jason Rhodes MD, Vedant Kulkarni MD, Marek Jozwiak MD, PhD, Uri Givon MD, Eva Ponten MD, PhD

3:24-3:31 pm

G4: Hip Displacement in mecp2 Disorders: Prevalence and Risk Factors

Bidzina Kanashvili PhD, Kenneth Rogers PhD, Freeman Miller MD, Wade Shrader MD, <u>Jason Howard MD</u>

3:32-3:39 pm

G5: Is Epidural Analgesia Necessary for Unilateral Hip Reconstruction in Children with Neuromuscular Conditions?

Kevin Cho BS, Aribah Shah BS, Evan Sheppard MD, Sean Tabaie MD

3:40-4:00 pm - Discussion

4:00-4:07 pm

G6: Utilization of Blade vs. Locking Plate in Cerebral Palsy Patients Undergoing Femoral Osteotomy

Afolayan Oladeji BA, Andrew Landau MD, J. Eric Gordon MD, <u>Pooya</u> <u>Hosseinzadeh MD</u>

4:08-4:15 pm

G7: Evaluating Postoperative Immobilization Following Hip Reconstruction in Children with Neuromuscular Conditions

Sean Tabaie MD, Kevin Cho BS, Aribah Shah BS, Evan Sheppard MD

4:16-4:23 pm

G8: A Thousand Hips over Two Decades: What We Have Learned About Complications After Hip Surgery in Children with Cerebral Palsy

<u>Wade Shrader MD</u>, Ahmet Imerci MD, Kenneth Rogers PhD, Jason Howard MD, Freeman Miller MD

4:24-4:31 pm

G9: Total Hip Arthroplasty in Patients with Cerebral Palsy: A Matched Comparison of 90-day Adverse Events and 5-year Implant Survival

Harold Moore BS, Mursal Gardezi BS, Patrick Burroughs BS, Lee Rubin MD, David Frumberg MD, Jonathan Grauer MD

4:32-4:39 pm

G10: Urinary Tract Infections Increase Hospital Stay and Costs After Hip Surgery in Children with Neurologic Complex Chronic Conditions

Shay Seth MD, Benjamin Shore MD, MPH, Patrice Melvin MS, Jay Berry MD, MPH

4:40-5:00 pm - Discussion

Free Paper Session H: Technology

3:00-3:07 pm

H1: In Clinic Motion Analysis of the Upper Extremity for Children with Neuromuscular Conditions: A Systematic Review

<u>Shannon Garvey MS</u>, Patrick Curran MD, Benjamin Shore MD, MPH, Carley Vuillermin MBBS, MPH

3:08-3:15 pm

H2: Stochastic Resonance Stimulation Improves Manual Function in Children with Hemiplegic Cerebral Palsy

Olivier Rolin MD, Jessica Lynn OTR/L, Allison Wolf OTR/L

3:16-3:23 pm

H3: Actigraphy to Measure Real-life Performance for Children with Hemiparesis in Rehabilitation Trials

Anna Bourgeois, Adam Kirton MD, MSc, FRCPC, Megan Metzler OT, MSc, Adrianna Giuffre BA, Asha Hollis MSc, BHSc, Ephrem Zewdie PhD, BSc

3:24-3:31 pm

H4: Ontogenesis of Precision Grip Control While Walking down a Step in Typically Developing Children

<u>Daniela Ebner-Karestinos PhD</u>, Rodrigo Araneda PhD, Jean-Louis Thonnard PhD, Yannick Bleyenheuft PT, PhD

3:32-3:39 pm

H5: Efficacy of a Semi-immersive Virtual Device Intervention in Children with Unilateral Cerebral Palsy: A Randomized Controlled Trial

Geoffroy Saussez PhD, Rodolphe Bailly MSc, Rodrigo Araneda PhD, Julie Paradis PhD, Daniela Ebner-Karestinos PhD, Anne Klöcker PhD, Marie Delsaute, Emmanuel Sogbossi PT, Inmaculada Riquelme PhD, Sylvain Brochard MD, PhD, Yannick Bleyenheuft PT, PhD

3:40-4:00 pm - Discussion

4:00-4:07 pm

H6: Power Training Improves the Sensorimotor Cortical Oscillations in Youth with Cerebral Palsy

Morgan Busboom DPT, Anna Reelfs BS, Mike Trevarrow BS, Brad Corr DPT, Heidi Reelfs DPT, Sarah Baker MA, Hannah Bergwell BS, BA, Tony Wilson PhD, Noelle Moreau PT, PhD, Max Kurz PhD

4:08-4:15 pm

H7: Power Training Improves the Mobility and Somatosensory Cortical Activity of Individuals with Cerebral Palsy

Hannah Bergwell BS, BA, Max Kurz PhD, Tony Wilson PhD, Sarah Baker MA, Heidi Reelfs DPT, Noelle Moreau PT, PhD, Brad Corr PT, DPT

4:16-4:23 pm

H8: Morpho-Histological Assessment on Gastrocnemius Muscle Microbiopsy of Young Children with Cerebral Palsy

Jorieke Deschrevel MSc, Karen Maes PhD, Jules Peeters, Marlies Corvelyn MSc, Anja Van Campenhout MD, PhD, Nathalie De Beukelaer MSc, Julie Uytterhoeven MSc, Kaat Desloovere PhD, Domiziana Costamagna PhD, Ghislaine Gayan-Ramirez PhD, Els Ortibus MD/Professor, Stefaan Nijs MD

4:24-4:31 pm

H9: Interrelations Between Lower Limbs Sensory Aspects and Postural Stability in Individuals with Cerebral Palsy

Camila Santana PhD, Carolina Corsi PhD, Beatriz Brugnaro PT, Mariana Santos PhD, Nelci Adriana Cicuto Ferreira Rocha PhD, Isabella Sudati BS, Ana Carolina de Campos PT, PhD

4:32-4:39 pm

H10: Barcoding Leg Movements to Compare Infants with Typical Development and Infants at Risk of Developmental Disabilities

Weiyang Deng MS, Vivien Marmelat PhD, Beth Smith PT, DPT, PHD

4:40-5:00 pm - Discussion

5:00 pm - 5:30 pm EDT - Networking Discussions

Continue the discussion - each session will feature its own discussion. Open to all registered meeting attendees.

5:00 pm - 5:30 pm EDT - Let's Move!

Take a quick energizing break by moving to upbeat swing dance music. Enjoy this Elvis, Ray Charles, Dion and Simon & Garfunkel medley. No experience (or even ability) necessary!

5:30 pm - 7:00 pm EDT - General Session

Duncan Wyeth Award

Bradley Heaven, All Access Life

MacKeith Press Basic Science Lecture

Angelman Syndrome Biomarkers and Treatment

Opportunities

Ben Philpot PhD

Mentorship Award

Bernadette Gillick PT, MSPT, PhD

Lifetime Achievement Award

Richard Lieber, MD

7:00 pm - 10:00 pm EDT - Networking Dinner

Join us for this one of a kind opportunity to network with leaders in your field! Learn how to mix a specially-designed 75th Anniversary beverage and connect with your colleagues! Each "table" will be hosted by an AACPDM leader and dinner menus will be selected to engage participants to prepare and share with each other virtually!





Diamond Jubilee Meeting

Saturday, October 9, 2021

11:00 am – 1:00 pm EDT - Complex Care SIG - The Future of Health Care Delivery for Children with Medical Complexity

Purpose: To promote advancement of clinical care, education, research, and advocacy for children with medical complexity. Through moderated breakout sessions, this is a working meeting intended as a transformative discussion on complex care management in the next decade. Available to clinical and research professionals, hospital administrators, and those involved in medical innovation who focus on the care of children with medical complexity

1:00 pm - 2:15 pm EDT - Mini Symposia

MS11: What Physical Distancing Meant for Us: Pandemic Measures, Telehealth, and Solutions for Interdisciplinary Care in CP Clinic

Jilda Vargus-Adams MD MSc, Caroline Colvin DPT, Hillary Prather LISW-S, Paola Mendoza-Sengco MD

Learning Objectives:

- List three challenges to comprehensive care created by pandemic circumstances;
- Describe several strategies to ensure quality care, including use of telehealth, in the face of pandemic constraints; participants;
- 3. Employ new approaches in the delivery of telehealth care;
- 4. Challenges presented by symposium participants.

MS12: Cerebral Palsy: Moving Beyond the 'label' to the Ingredients

Darcy Fehlings MD, MSc, FRCPC, Bhooma Aravamuthan MD, DPhil, Michael Kruer MD, Peter Rosenbaum MD, Bernard Dan MD, PhD

Learning Objectives:

- Understand that a CP diagnosis requires simultaneous thorough description of the associated clinical phenotype, etiologic risk factors, functioning, and developmental/health conditions;
- 2. Describe the benefits and limitations of a 'diagnosis' of CP;
- 3. Describe the distinction between a 'diagnosis' of CP and identification of etiologic risk factors for CP (such as prematurity or genetic variation);
- 4. Discuss potential benefits and challenges in applying this diagnostic framework across specialties, communities and geographical contexts.

MS13: Controversy in the Utility of Gait Analysis: Does It Matter If Interpretation Consistency Can Be Achieved?

Andrew Georgiadis MD, Katie Walt PT, DPT, Michael Healy MD, Jean Stout. MD

Learning Objectives:

- Discuss the controversy related to gait interpretation consistency and its influence on the utility of gait analysis as a clinical tool;
- 2. Explain the sources of variability that may contribute to lack of consistency of interpretation and the benefits of a structured, on-going consistency assessment program;
- 3. Identify challenges associated with achieving consistency of problem identification and treatment recommendations among course participants;
- 4. Discuss the impact of consistency and consensus of gait data interpretation on providing quality patient care.

MS14: Spasticity Management, Contracture Prevention, and the Need for Orthopaedic Surgery: Emerging Evidence

Jason Howard MD, Tandy Hastings-Ison PhD, Kristina Tedroff MD, Ph.D, Wade Shrader MD

Learning Objectives:

- 1. Define spasticity in CP, in particular how it relates to its measurement and impact on gross motor function;
- 2. Understand the pathophysiology of muscle contracture in CP, as described in the most up-to-date evidence;
- 3. Understand the pathophysiologic effects of botulinum toxin on CP skeletal muscle, and how these effects are modulated by dosage and frequency of injection;
- Understand the impact of spasticity management on the development of muscle contractures and need for orthopedic surgery.

MS15: All the Moving Parts: Developing a Transition Program Using QI Methodology

Unoma Akamagwuna MD, Jensine' Norman MD, Amee Moreno MSN, APPRN, CPN, Jason Woodward MD, MS

Learning Objectives:

- 1. Describe and identify key components of a framework for change and apply them to developing a transition program;
- 2. Apply strategies to identify and integrate outcome measures of change using electronic medical record systems;
- 3. Apply strategies to engage and work with inter-professional colleagues during program planning and implementation;
- 4. Identify and discuss strategies to engage youth and increase self-management skills throughout the transition process.

2:15 pm - 2:45 pm EDT - Let's Move!

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

3:00 pm - 5:00 pm EDT - Free Paper Sessions

Free Paper Session I: Early Diagnosis

*Presenting author is underlined

3:00-3:07 pm

I1: Analyzing Infant General Movements Using Machine Learning

<u>Lisa Letzkus PhD</u>, Zanelli Santina MD, Anvesh Mylavarapu, Sandeep Pillutla MS, Vince Pulido MS

3:08-3:15 pm

I2: Feasibility of Parent-collected General Movement Assessment Data Using a Smartphone Application in a United States City

<u>Colleen Peyton PT, DPT</u>, Ryan Millman, Sarah Rodriguez MD, MPH, Alicia Spittle PhD, Raye-Ann de Regnier MD, Vanessa Barbosa PhD, OTR/L, Theresa Sukal-Moulton PT, DPT, PhD

3:16-3:23 pm

13: Evaluation of Writhing Movements in Infants with a Novel Quantitative Approach

Halil Ibrahim Celik PhD, Ayse Yildiz MSc, Ramazan Yildiz MSc, Akmer Mutlu PhD, Abdullah Ruhi Soylu PhD, Kivilcim Gucuyener MD, Aysu Duyan Camurdan PhD, Esin Koc PhD, Eray Esra Onal PhD, Bulent Elbasan PhD

3:24-3:31 pm

I4: Uncoordinated Sucking Pattern in Premature Infants Is Associated with Motor Development at 2 Years of Age

You Gyoung Yi MD, Hyung-lk Shin MD, Moon Suk Bang MD

3:32-3:39 pm

I5: Cardiorespiratory Analytics in the Neonatal Intensive Care Unit and Risk for Cerebral Palsy

<u>Lisa Letzkus PhD</u>, Harshini Pyata, Robert Andris, Karen Fairchild MD, Doug Lake PhD

3:40-4:00pm - Discussion

4:00-4:07 pm

I6: Diagnosis of Cerebral Palsy in a Neonatal Brachial Plexus Palsy Clinic

Kathleen Vonderhaar MD, Tonye Sylvanus, Victoria Blake BA, Linda Krach MD

4:08-4:15 pm

17: Stroke in Children Under 2-years of Age

<u>Bithi Roy FRACP</u>, Karen Walker PhD, Catherine Morgan PT, PhD, Nadia Badawi AM, Iona Novak BAppSc, MSc (Hons), PhD

4:16-4:23 pm

I8: Acceptability, Feasibility and Fidelity of a Neonatal Rehabilitation Program for Preterm Infants at High Risk for Cerebral Palsy

Zanelli Santina MD, Elizabeth Connaughton DPT, Nancy Kelly DPT, Hyde Megan DPT, Lisa Letzkus PhD

4:24-4:31 pm

19: Explorer Baby Early Intervention Program Effects on Premature Infants: A Stratified Randomized Controlled Study

<u>Turgay Altunalan PhD</u>, Zübeyir Sarı PhD, Tuba Derya Doğan MSc, Nilüfer Eldeş Hacıfazlıoğlu MD, İpek Akman MD

4:32-4:39 pm

I10: Parents' Experiences with Home Activities During Early Intervention

Afnan Gmmash PT, MS, PhD, Susan Effgen PT, PhD, FAPTA, Kimberly Wynarczuk DPT, PhD, MPH

Free Paper Session J: Gait

*Presenting author is underlined

3:00-3:07 pm

J1: Effect of Orthotics on Balance in Cerebral Palsy: Traditional Solid AFO versus Ankle-foot Orthoses Footwear Combination:

<u>Kristie Bjornson PT, PhD</u>, Stefania Fatone PhD, Michael Orendurff PhD, Chuan Zhou PhD, Garth Shippen BS

3:08-3:15 pm

J2: Ankle Dorsiflexion During Stance Predicts Cmtpeds Outcomes in Children with Charcot-Marie-Tooth Disease Type 1

Sylvia Ounpuu MSc, Kristan Pierz MD, Gyula Acsadi MD, PhD, Erin Garibay MS, Tishya Wren PhD

3:16-3:23 pm

J3: Variation in Gait Phenotypes at the Ankle in Youth with Charcot-Marie-Tooth Disease Type 1

Sylvia Ounpuu MSc, Kristan Pierz MD, Erin Garibay MS, Gyula Acsadi MD, PhD, Tishya Wren PhD

3:24-3:31 pm

J4: Factors Related to Better Outcomes After Single-event Multilevel Surgery (SEMLS) in Patients with Cerebral Palsy

Mauro Morais Filho MD, Francesco Blumetti MD, MSc, PhD, Marcelo Fujino, Cátia Kawamura PT, José Augusto Lopes MS

3:32-3:39 pm

J5: Predictors Affecting Outcome After Single-event Multilevel Surgery in Children with Cerebral Palsy: A Systematic Review

Tomos Edwards MBChB, Tim Theologis PhD, James Wright PhD

3:40-4:00 pm - Discussion

4:00-4:07 pm

J6: The Gait Outcomes Assessment List (GOAL) Questionnaire Distinguishes Family and Patient Priorities Across GMFCS Levels

<u>Jean Stout MS, PT</u>, Katie Walt PT, DPT, Andrew Georgiadis MD, Madeline Palmer BS, Elizabeth Boyer PhD

4:08-4:15 pm

J7: Goal Outcomes Assessment List (GOAL): Randomized Trial of Orthotic Management in Ambulatory Cerebral Palsy

<u>Kristie Bjornson PT, PhD</u>, Stefania Fatone PhD, Michael Orendurff PhD, Chuan Zhou PhD, Garth Shippen BS

4:16-4:23 pm

J8: Variability of Functional Mobility Scale Ratings Within a Given GMFCS Level

Alison Hanson MPT, <u>Susan Rethlefsen DPT</u>, Eva Ciccodicola DPT, Tishya Wren PhD, Robert Kay MD

4:24-4:31 pm

J9: Perceived Gait Limitations in Children with Cerebral Palsy and the Associations with Objective Gait Scores

Andrea Marron MA, Karen Brady MSc, Damien Kiernan PhD

4:32-4:39 pm

J10: Muscle-Tendon Loading Measured via Non-invasive Sensor Shows Minimal Net Work Done by Triceps Surae in Children with Cerebral Palsy

<u>Anahid Ebrahimi PhD</u>, Michael Schwartz PhD, Jack Martin PhD, Tom Novacheck MD, Darryl Thelen PhD

4:40-5:00 pm - Discussion

Free Paper Session K: Lifespan

*Presenting author is underlined

3:00-3:07 pm

K1: Investigating a Core Outcome Set for Multimorbidity Risk Assessment in Adolescents and Adults with Cerebral Palsy

Patrick McPhee PhD, Joyce Benner PhD, Liam Sanvido BHSc, Marij Roebroeck PhD, Wilma van der Slot MD, PhD, Olaf Verschuren PhD, Edward Hurvitz MD, Mark Peterson PhD, Heidi Haapala MD, Mary Schmidt DO, Jan Willem Gorter MD, PhD

3:08-3:15 pm

K2: The Progression of BMI Status over Time in Irish Ambulant Children with Cerebral Palsy

Karen Brady MSc, Damien Kiernan PhD, Andrea Marron MA

3:16-3:23 pm

K3: The Whitney Comorbidity Index to Monitor Health for Adults with CP: Validation and Thresholds to Assist Clinical Decision Making

Daniel Whitney PhD

3:24-3:31 pm

K4: Patterns of Multimorbidity and Their Association with Mortality Among Adults with Cerebral Palsy: A Principal Component Analysis

Daniel Whitney PhD

3:32-3:39 pm

K5: Health Service Use Among Adults with CP in Ireland

Manjula Manikandan MSc, Claire Kerr PhD, Aisling Walsh PhD, Jennifer Ryan PhD

3:40-4:00 pm - Discussion

4:00-4:07 pm

K6: Initial Validation of the Feelings About Balance-cerebral Palsy Questionnaire for Youth

Megan Towns MSc, Kelly Arbour-Nicitopoulos PhD, Avril Mansfield PhD, Sally Lindsay PhD, F. Virginia Wright PhD

4:08-4:15 pm

K7: Age-related Changes in the Strength of Sensorimotor Cortical Oscillations Are Aberrant in Adults with Cerebral Palsy

<u>Saihari Dukkipati MS</u>, Sarah Baker MA, Mike Trevarrow BS, Elizabeth Heinrichs-Graham PhD, Tony Wilson PhD, Max Kurz PhD

4:16-4:23 pm

K8: International Consensus on Outcome Measurement Instruments on Pain in Adults with Cerebral Palsy, A Delphi Study

Ann Katrin Schmidt MSc, Sander Hilberink PhD, Wilma van der Slot MD, PhD, Marij Roebroeck PhD

4:24-4:31 pm

K9: Examining Opioid Prescribing Trends for Adults with Cerebral Palsy Using Estimated Oral Morphine Equivalence

Mark Peterson PhD, Neil Kamdar MA, Heidi Haapala MD

4:32-4:39 pm

K10: Parents' Perception of Adolescence and Transition to Adulthood of Their Children with Cerebral Palsy: Designing a Service for Parents

Ana Paula Silverio MSc, Marisa Mancini PhD, Fernanda Antunes OT, Priscilla Figueiredo MSc, Katia Bueno PhD, <u>Marina Brandao PhD</u>

4:40-5:00 pm - Discussion

Free Paper Session L: Therapy/Upper Extremity

*Presenting author is underlined

3:00-3:07 pm

L1: A Meta-Analysis of Nonsurgical Interventions to Improve Upper Extremity Function in Children with Cerebral Palsy

Kunj Jain BA, Yash Shah BS, Anugya Mittal BA, Amy Song BS, Lauren Hutnik BA, Vaishali Ravikumar BS, Anam Purewal BS, JenFu Cheng MD, <u>Alice Chu MD</u>

3:08-3:15 pm

L2: A Literature Review on Therapeutic Management of Upper Limb Dysfunction in Children with Bilateral Spastic Cerebral Palsy

Giada Sgherri MD, PhD, Elena Beani PT, PhD, Giovanni Cioni MD, Giuseppina Sgandurra PhD

3:16-3:23 pm

L3: Mirror Movement Changes After Intensive Therapy in Paediatric Hemiplegia: A Randomized Controlled Trial

Rodrigo Araneda PhD, Enimie Herman MA, Anne Klöcker PhD, Delcour Louis MA, Geoffroy Saussez PhD, Julie Paradis PhD, Daniela Ebner-Karestinos PhD, Yannick Bleyenheuft PT, PhD

3:24-3:31 pm

L4: Anticipatory Motor Planning of Grasping in Children with Unilateral Cerebral Palsy

Jennifer Gutterman MS, Katherine Dimitropoulou PhD, MSPOR, Trevor Lee-Miller PhD, Andrew Gordon PhD

3:32-3:39 pm

L5: Ideomotor and Limb-kinetic Apraxia in Children with Unilateral Cerebral Palsy

Thalita Karla Cruz, Deisiane Souto PhD, Patrícia Fontes PhD, Vitor Haase

3:40-4:00 pm - Discussion

4:00-4:07 pm

L6: The Role of Engagement in Upper Extremity Interventions for Children with Unilateral Spastic Cerebral Palsy

<u>Dalina Delfing MS</u>, Larissa Hentrich BA, Karen Chin MA, Kathleen Friel PhD, Christine Imms PhD, Victor Santamaria PT, MS, PhD, Jaya Rachwani PhD, Andrew Gordon PhD

4:08-4:15 pm

L7: Quantifying Engagement in a Pediatric Rehabilitation Setting

<u>Dalina Delfing MS</u>, Larissa Hentrich BA, Karen Chin MA, Kathleen Friel PhD, Christine Imms PhD, Victor Santamaria PT, MS, PhD, Jaya Rachwani PhD, Andrew Gordon PhD

4:16-4:23 pm

L8: The Impact of Dosing Parameters on Motor Skill Acquisition in Children with Bilateral Cerebral Palsy (BCP) Following HABIT-ILE

Susan Sienko PhD, Cathleen Buckon OTR/L, MS, Grace-Anne Herard DPT, Yannick Bleyenheuft PT, PhD, Andrew Gordon PhD

4:24-4:31 pm

L9: A Sit-to-stand Exercise Program for Children with Moderately Severe Cerebral Palsy: A Randomized Controlled Trial

Sirawee Chaovalit PhD

4:32-4:39 pm

L10: Aquatic Exercises for Children with Muscular Dystrophy and Spinal Muscular Atrophy: A Systematic Review

Yasser Salem PT, PhD, MS, NCS, PCS, Sonali Aggarwal DPT, Howe Liu PhD, PT, MD, Ahmed Elokda PhD, PT

4:40-5:00 pm - Discussion

5:00 pm - 5:30 pm EDT - Networking Discussions

Continue the discussion - each session will feature its own discussion. Open to all registered meeting attendees.

5:00 pm - 5:30 pm EDT - Let's Move!

Join us for an adaptive wheelchair dance class. Amanda Trott is a professional dancer and has extensive teaching and performance experience.

5:30 pm - 7:00 pm EDT - General Session

Gayle G. Arnold Lecture supported in part by an unrestricted grant from Children's Hospital Foundation: Steven Koop, MD

A Hospital as a School for Service

Chambers Family Lifespan Lecture: Margaret A. Turk, MD Reflecting on the Past 40 years – Changes and Needs in Lifetime Care

Closing Remarks and 2022 Annual Meeting Introduction





Forum is a FREE educational event for individuals with cerebral palsy, other childhood disabilities, and their families or caregivers. The AACPDM Community Forum is developed by the Community Council, and provides an opportunity to hear from clinicians and researchers on a variety of important topics that affect both children and adults; and to exchange ideas and questions about new cerebral palsy research and medical advances.

Watch from the Annual Meeting platform, or by registering at: https://www.aacpdm.org/forms/community_forum.php

Adaptive Gaming and Home Automation

This presentation gives an overview of home automation devices and adaptive gaming including: how home automation and adaptive gaming can benefit individuals with disabilities; what to consider when choosing devices or gaming systems; and how to set up most common devices. Presenters will also cover their personal experiences with adaptive gaming and assistive technology and provide resources to learn more

Adaptive Gaming:

Panelist: Steven Spohn

Steven Spohn, COO of AbleGamers Charity, will discuss the various adaptive gaming systems, ways to choose gaming systems, benefits of gaming, and how to obtain gaming systems.

All Access Life:

Panelist: Bradley Heaven

Bradley Heaven, co-founder of All-Access Life charity, will discuss his personal experience with assistive technology and adaptive gaming over the years.

Home Automation:

Panelist: Stephanie Vasques-Gabela

Stephanie Vasques-Gabela will give an overview of home automation devices, what to consider when choosing home automation, and how to set up most common devices.

How to Advocate For Yourself or a Loved One

The AACPDM Advocacy Committee is pleased to develop this panel in coordination with the Community Council. The goal of this timely panel is to inform and empower parents and people with lived experience to craft a focused message and effectively advocate for their healthcare and education. Join this panel to learn more!

Speakers:

Cynthia Frisina, BA, MA, CARSS - "Getting Your Message Across - How to advocate for your child" Spencer Bowersox - "PADDLE: A tool for advocating" Alison Morse "Effective Parent Advocacy in Education"

Mental Health Panel

Living with a disability or caring for someone with a disability brings with it challenges often associated with physical, medical and societal hurdles, but we rarely discuss the mental health impacts.

It is so incredibly important for people to know they are not alone, that others live with mental health concerns directly related to their disability. Or that as a caregiver, it is ok to not be ok as you navigate incredibly difficult paths.

We have brought together a panel of individuals who will tell their story, share their experiences, and discuss the strategies they have used over the years to manage their mental health.

Panelists:

Brenda Agnew Heather Hancock April Hepler Meredith Shawver

Navigating Local Sports and Recreation Programs

Join the panel as they discuss the importance of exercise and activity for children with CP and other developmental disabilities. Experts, families and people will lived experience will provide examples of integration and adaptation in the community, share lived-experience with accessing and navigating community resources and activities.

Speakers:

Zachary Boychuck, Noelle Moreau, Keiko Shikako-Thomas, Marybeth Grant-Beuttler, Theresa Sukal-Moulton, Aura Shoval, Galvin Colquitt, Kathleen Friel, Eduardo Patino & Diana Rosero

Moderator:

Zachary Boychuck, OT, PhD – Chair, AACPDM Adapted Sports & Recreation Committee.

Panelists:

Join panelists as they discuss the importance of exercise and activity for children with CP and other developmental disabilities, provide examples of integration and adaptation in the community, share lived-experience with accessing and navigating community resources and activities.

Noelle Moreau, PT, PhD - "Exercise and strength training benefits for people with CP"

Keiko Shikako-Thomas, PhD, OT, Canada Research Chair in Childhood Disability: Participation and Knowledge Translation – "Connecting Children and Youth with Disabilities to Leisure: The Jooay App"

Marybeth Grant-Beuttler, PT, PhD, "Creating a ballet program for kids and simultaneously for families"

Theresa Sukal-Moulton, PT, DPT, PhD and one parent - "Frame running"

Aura Shoval, MD – "Wheelchair dancing: Enabling and promoting participation in a non-adapted community program"

Galvin Colquitt, EdD – "Fostering participation in physical education"

Kathleen Friel, PhD – "Earning a black belt in taekwondo" Eduardo Patino & Diana Rosero "Eduardo's Story".

Monday, October 11, 2021

On-Demand Mini Symposia

ODMS01: Ultrasound Guided Botulinum Toxin Injections for Sialorrhea, Bruxism and Oromandibular Dystonia

Katharine Alter MD, Heakyung Kim MD, Monika Desai MD, Stephen Nichols MD, David Cancel MD

Learning Objectives:

- 1. Identify proficiency in the basic physics of Ultrasound scanning;
- 2. Applications of US in clinical practice including procedural guidance;
- 3. Identifying the sonoacoustic properties of relevant tissues;
- 4. Identifying the benefits and limitations of incorporating US into clinical practice;
- 5. Identifying key muscles and structures in the head and neck region including salivary glands.

ODMS02: How Do We Evaluate Children with Cerebral Visual Impairment? connecting the Dots: Diagnosis, Treatment and Maximizing Performance

Karen Harpster PhD, OTR/L, Terry Schwartz MD, Linda Lawrence MD

Learning Objectives:

- Describe the current body of evidence for screening and assessment tools used with individuals with CVI;
- 2. Describe current practices from multiple institutions for collecting a targeted history, administering validated screening and assessment tools to get a comprehensive vision assessment;
- Explain how to set up the environment and tasks during the functional vision evaluation to understand a child's vision functional vision in the real world:
- 4. Understand how to translate/use the results of the multidisciplinary evaluation to inform the individual's treatment plan at home, school and the community.

ODMS03: Knowledge Translation of Clinical Practice Guidelines for Early Detection and Diagnosis of Cerebral Palsy in a Busy Clinical Setting

Karen Harpster PhD, OTR/L, Gretchen Mueller PT, DPT

Learning Objectives:

- Describe infant detectable risks indicating that a child is at high-risk for cerebral palsy (CP) warranting further assessment;
- Describe the assessments that are predictive of cerebral palsy and the ages in which the assessments are appropriate:
- Describe practical solutions used in clinical practice to ensure early detection of CP such as automatic systems to monitor high risk infants and ensure testing happens at specific time periods;
- 4. Identify at least one quality improvement tool that can be implemented in their practice setting, in order to aid early detection and diagnosis of CP.

ODMS04: Sex in the CP – Sexuality and Life Span Care in People with Cerebral Palsy

Heakyung Kim MD, Jan Moskowitz MSW, Nancy Lee MS, Susan Labhard MSN

Learning Objectives:

- Be able to understand the importance of including sex/ sexuality in assessments;
 Learn how to initiate meaningful conversation relating to sex/sexuality;
- 3. Be able to understand physical challenges and limitation that people with CP experience related to sexual activity;
- 3. Be educated on available treatment options for management of medical conditions that people with CP experience related to sexual activity;
- 4. Discuss adaptive means of seeking and having sex.

ODMS05: Atypical Rhizotomies: outside of the Box for Hemiplegia, Spasticity of Noncerebral Origin, Nonambulating and Adult Patients

Marcie Ward MD, Patrick Graupman MD

Learning Objectives:

- Describe the history of surgical rhizotomy which guides the application of that procedure in clinical practice currently;
- Understand the importance of careful patient selection for surgical rhizotomy based on patient and family goals, neuroanatomy principles, and the predictability of outcomes;
- 3. Identify atypical patient presentations that may benefit from selective dorsal rhizotomy, and discuss the anticipated outcomes;
- 4. Recognize patients who may benefit from dorsal-ventral rhizotomy, and discuss the anticipated outcomes.

ODMS06: Pressure Injury and Wound Management in Children and Young Adults with Disabilities

Supreet Deshpande MD, Mark Gormley Jr MD, Jennifer Wilhelmy APRN, CNP, Andrea Paulson MD

Learning Objectives:

- 1. Describe pressure injury classification, risk assessment, skin assessment, and preventive measures;
- 2. Describe the nutrition assessment and intervention, pressure relief, supportive cushions, and medical devices that help prevent and treat pressure injuries;
- 3. Describe pressure injury cleansing, debridement, and dressing, and treatments with biophysical agents and growth factors;
- 4. Describe the infection management and surgical treatments to manage pressure injuries, including antibiotic use, biofilm management, tissue transfers, bone resections, and bowel/bladder diversions.

ODMS07: How to Conduct an AACPDM Care Pathway-Everything You Always Wanted to Know but Were Afraid to Ask

Lynne Romeiser Logan PhD, Kat Kolaski MD, Mohan Belthur MD, FRCSC

Learning Objectives:

- Describe the Care Pathways topics of high interest to the AACPDM;
- 2. Plan a team to formulate a Care Pathway;
- 3. Formulate an application and budget for a Care Pathway;
- 4. Participate on a Care Pathway team.

ODMS08: An International, Multidisciplinary Symposium on Robotic Gait Training: Moving Forward Together, "On Y Va"

Anna McCormick BMSc, MD, FRCPC, Hana Alazem MD, Hubertus van Hedel PhD, PT, Elizabeth Condliffe PhD, MD, FRCPC, Eduardo Rocon PhD, PEng

Learning Objectives:

- Define robotic gait trainers (RGT) and describe their use within neurorehabilitation;
- 2. Describe a new and emerging robotic walker used in cerebral palsy and growing evidence regarding use;
- Describe devices for over-ground robotic training citing methodology / early results;
- 4. Participate in interactive feedback regarding in neurorehabilitation. Where are we now and where are we going together?

ODMS09: Best Practices in Holistic Care for Children and Youth with Developmental Disabilities in the Foster Care System

Veronica Meneses MD, MSHS, Hilda Loria MD, MPH, Natalie Cruz PsyD, Erinne Conner MSW

Learning Objectives:

- Demographically describe the population of children and youth with developmental disabilities in foster care, including age, diagnoses, race/ethnicity, language, and reasons for placement;
- 2. Delineate how abuse and neglect impact the developing brain, resulting in medical and mental health consequences;
- 3. Utilizing a case example, demonstrate how to serve this population holistically through evidenced-based primary care, culturally-competent and trauma-informed practices, and collaboration with subspecialists, therapists, and child welfare and school-based professionals;
- 4. Identify resources supporting children and youth with disabilities who enter foster care.

ODMS10: Telehealth for Children with Medical Complexity: Practical Approaches, Pitfalls and Possibilities

Emily Goodwin MD, Matthew Sadof MD, Kathleen Huth MD, MMSc, Cristina Sarmiento MD, Kilby Mann MD, Rajashree Srinivasan MBBS

Learning Objectives:

- Describe available evidence, benefits and limitations of use of telehealth for children with medical complexity and disability:
- 2. Describe approaches and resources for leveraging telehealth to optimize care for children with medical complexity and disability, including incorporating multiple caregivers, trainees, and members of the interprofessional care team;
- 3. Discuss strategies for evaluating telehealth outcomes for children with medical complexity and disability;
- 4. Apply strategies learned to clinical cases in an interactive discussion, including criteria for a phone call vs audiovisual visit vs in-person visit.

ODMS11: Cerebral Palsy in the Genomics Era: Why, When and How to Pursue a Genetic Diagnosis?

Francisca Millan MD, Michael Kruer MD, Julie Cohen ScM, CGC, Bhooma Aravamuthan MD, DPhil

Learning Objectives:

- 1. Understand fundamental genetic concepts, how these relate to clinical genetic testing for CP, and describe the evidence supporting genetic testing for patients with CP;
- 2. Evaluate a genetic test report and interpret different test outcomes (negative, positive and uncertain clinical significance).
- 3. Discuss the implications and challenges of genetic counseling for patients with CP and their families;
- 4. Identify patients who may benefit from genetic testing and customize patient management based on the results.

ODMS12: Innovations in Power Wheelchair Options: Benefits and Challenges

Linda Krach MD, Jill Gettings MD, Jennifer Wilhelmy APRN, CNP, Britta Schwartzhoff DPT

Learning Objectives:

- 1. Describe 4 features available on power wheelchairs that can facilitate function, pressure relief, or transfers;
- 2. Describe issues that can contribute to the development of skin issues related to specific wheelchair features and list potential ways to mitigate the issues;
- 3. Give examples of patient characteristics that might benefit from a specific wheelchair feature;
- 4. Understand strategies to address third party payer questions about wheelchair features.

ODMS13: Research on Children with Cerebral Palsy in Upper and Low-and-middle Income Countries: Looking Through the ICF Lens

Hércules Leite PhD, Peter Rosenbaum MD, Pranay Jindal PT, PhD, Sandra Abdel Malek MSc

Learning Objectives:

- 1. Understand that cerebral palsy research in LMIC focus on interventions to reduce impairment;
- 2. Understand that activities, participation, and environmental factors are minimally addressed in LMIC studies;
- Understand that many LMIC studies are published in journals that are not indexed in world-wide databases of scholarly journals;
- 4. Understand that future studies need to increase the acknowledgement of all ICF domains in research on CP in LMIC context.

ODMS14: Innovations in Measuring Dystonia and Choreoathosis Using Sensors and Markerless Motion Tracking in Children with Dyskinetic CP

Inti Vanmechelen MSc, Helga Haberfehlner PhD, Annemieke Buizer MD, Laura Bonouvrié MD, Elegast Monbaliu PhD

Learning Objectives:

- Demonstrate a thorough understanding of the movement disorders in patients with dyskinetic cerebral palsy, supported by videos to obtain a maximal understanding in different situations;
- Understand the currently available possibilities for instrumented measurements to objectively evaluate dystonia and choreoathetosis in patients with dyskinetic cerebral palsy such as mobile sensors and markerless motion tracking;
- 3. Demonstrate a thorough understanding of the advantages and disadvantages of using instrumented measurements for the evaluation of dystonia and choreoathetosis, and their possibilities for different functioning levels;
- 4. Describe the importance of instrumented measurement of dystonia and choreoathetosis for clinical decision making and the differentiation of invasive surgical options.

ODMS15: So, You Want to Do Mixed Methods Research? On Y Va!

Lesley Pritchard PhD, PT, F Virginia Wright PhD

Learning Objectives:

- Participants will appreciate the value of using mixed method study designs for certain research questions;
- 2. Participants will understand the various ways in which qualitative and quantitative methods can be used together in pediatric rehabilitation research;
- 3. Participants will appreciate some of the challenges inherent in mixed methods research and some strategies to mitigate those challenges;
- 4. Participants will gain knowledge in mixed methods study design to apply to their own research.

ODMS16: An Innovative Approach for Measuring Community Walking Using Combined Accelerometry and GPS

Kristie Bjornson PT, PhD, Noelle Moreau PT, PhD, Phillip Hurvitz PhD

Learning Objectives:

- To describe community walking activity levels and intensity of ambulatory children with CP relative to typically developing (TD) cohort;
- 2. To describe a process for combining accelerometry-based walking and GPS-based location information by matched time stamps;
- Spatially explicit walking information as an outcome of interventions to enhance walking in children with CP;
- 4. Options for interpretation of this novel combined wearable device information.

Clinical Observation/Single Case Study Posters

CS01: ACQUIRE Telehealth Refresher Protocol: a Tele-rehab Model Delivering a Modified Intensive Therapy Protocol

Dory Wallace OTR/L, Mary Trucks MS, Stephanie DeLuca PhD

CS02: When Do I Prescribe a Hinged Ankle Foot Orthosis (AFO) – and How Do I Assess Response?

Rocio Riveros-Charry DPT, Nanette Aldahondo MD, Andrew Georgiadis MD, Jennifer Klein CPO, Andrew Ries PhD

CS03: Novel Mobile Robotic Gait Training in a Child with -Cerebral Palsy: A Case Study

Hana Alazem MD, MSc PT, FRCP(C), Anna McCormick BMSc, MD, FRCPC

CS04: Congenital Cervical Spinal Cord Tumor Presenting as Positional Plagiocephaly in a 4 Month Old Infant

Mary Lynch MD, Joline Brandenburg MD, Sherilyn Driscoll MD, Amy Rabatin MD

CS05: Improvement in Apnea via Use of Botulinum Toxin a for Oromandibular Dystonia in a Teenager with Dyskinetic Quadriplegic Cerebral Palsy

Jeremy Roberts MD, Heakyung Kim MD, Amy Tenaglia MD

CS06: Declines in Strength, Motor Function, and Gait in a Child with Cerebral Palsy Following Multiple Botox Injections: A Case Report

Nancy Lennon MS, PT, DPT, Jose Salazar-Torres PhD, Chris Church MPT, Faithe Kalisperis DPT, Jason Howard MD, Wade Shrader MD, Freeman Miller MD

CS07: The Impact of COVID-19 on the Care of Children with Cerebral Palsy

Neha Mulpuri BA, Patricia Miller MS, Michael Greenberg BS, Wade Shrader MD, Kishore Mulpuri MBBS, MS, MHSc, FRCSC, Benjamin Shore MD, MPH

CS08: Impact of an Augmentative Communication System on the Social Inclusion of a Person with Cerebral Palsy

Montserrat Elizondo BS, Juana Hernández MS

CS09: Concurrent Intrathecal Baclofen Pump Complications: Catheter Fibrin Sheath Obstruction and Mitrofanoff-associated Infection

Caitlin Chicoine MD, Paola Mendoza-Sengco MD, Charles Stevenson MD, Priya Bolikal MD, Andrew Collins MD, Julie Estenfelder RN, Nathan Evanson MD, PhD

CS10: Rehabilitation of Children with Intrauterine Myelomeningocele Repair: Follow-up and Reflections

Lenamaris Duarte MD, Eliana Borigato MD, Ricardo Gepp MD, Ande Barboza MD, Bernardo Martins MD, Karina Oliveira n/a

CS11: Focus and Calm: Attention and Dystonia Improvements After Stimulant Initiation in Cerebral Palsy

Alyssa Zuziak DO¹, Laura Owens MD², Eileen Shieh MD²

¹Al duPont Hospital for Children, Collingswood, NJ, USA; ²Al duPont Hospital for Children, Wilmington, DE, USA

CS12: Using the 'f-words' Framework to Guide Observations to Develop a Pediatric Feeding Assessment

Annaliese Norris MS University of Kentucky, Lexington, KY, USA

CS13: col4a1-related Disorder Mimicking Spastic Quadriparetic Cerebral Palsy

David Moon MD

Demonstration Posters

DP01: Reimbursement Patterns for Computerized Motion Analysis in the Clinical Setting? are Insurance Companies Getting the Message?

David Westberry MD, Ashley Carpenter MS

DP02: Ready or Not, Let's Go: Partnering with Youth and Families to Conduct the Readyornot™ Brain-based Disabilities Trial During a Pandemic

Linda Nguyen MSc, Claire Dawe-McCord n/a, Barb Galuppi n/a, Nadilein Mahlberg MSc, Sonya Strohm MSc, Donna Thomson n/a, Alicia Via-Dufresne Ley m-MBA, PMP, Adrienne Kovacs PhD, Ronen Rozenblum PhD, MPH, Ariane Marelli MD, MPH, FRCPC, FACC, FAHA, Jan Willem Gorter MD, PhD

DP03: Can We Assess Lower Extremity Selective Motor Control in Infants and Toddlers with or at Risk for Spastic Cerebral Palsy?

Loretta Staudt MS, Barbara Sargent PhD, PT, Rachel Thompson MD, Eileen Fowler PT, PhD

DP04: Go Zika Go Protocol: A Modified Ride-on Car Intervention for Children with Congenital Zika Syndrome in Brazil

Egmar Longo PhD, Ana Carolina de Campos PT, PhD, Jean Felix Msc candidate, Karolinne Monteiro PhD, Amanda Spínola Barreto MsC candidate, Logan Samuel PhD

DP05: Augmentative and Alternative Communication (AAC) Clinic

Karen Romer RN, BSN¹, Leslie Rhodes DNP, PPCNP-BC², David Spence MD³, Leigha Friener BA, MA⁴, William Warner MD⁵¹Campbell Clinic Orthopaedics, Gerantown, TN, USA; ²Le Bonheur Children's Hospital, University of Tennesee Health Science Center, Como, MS, USA; ³Campbell Clinic Orthopaedics, University of Tennessee Health Science center, Gerantown, TN, USA; ⁴Le Bonheur Children's Hospital, Memphis, TN, USA; ⁵Campbell Clinic Orthopaedics, University of Tennessee Health Science center, Germantown, TN, USA

DP06: The Implementation of an Equipment Closet

Karen Romer RN, BSN, Leslie Rhodes DNP, PPCNP-BC, David Spence MD, William Warner MD, Elisabeth Peacock BS, Susan Anderson PTA, BA, Fawn Galvin PT, C/NDT Neuro-IFRAH Certified, Janet Grillis PT, DPT, CEIM, C/NDT, Leigha Friener M.A., CCC-SLP, Sonia Waites PT, DPT, CEIM, C/NDT, Kathryn Butterworth OTR/L, Clabo heather OTR/L, BCP, C/NDT

DP07: Adapt Project - Providing Mobility to Children and Adolescents with disabilities

Paula Chagas PhD, Flavia Bastos PhD, David Fedoce-Silva BS, Leonardo Olivi PhD, Exuperry Costa PhD, Livia Alonso PhD, Aristides Perobelli MSc, Andrea Silva PhD

DP08: Establishment of High-risk Infant Follow up Clinic for Implementation of Early Diagnosis of Cerebral Palsy Guidelines

tarek omar PhD, Hend Abdullah MS, khaled Ashour BA

DP09: Pre-op Psychosocial Assessment and Surgical Admissions in Youth with Cerebral Palsy Undergoing Spine and Hip Reconstruction

Carrie Sewell-Roberts MSW, Nancy Lennon MS, PT, DPT

DP10: Early Detection and Developmental Outcomes in Perinatal Stroke: Pivoting a Clinical Research Study During the COVID-19 Pandemic

Ellen Sutter DPT, Annette Xenopoulos-Oddsson MSc, Kathleen Mantell BS, Michael Georgieff MD, Raghavendra Rao MD, Alexander Opitz PhD, Bernadette Gillick PhD, MSPT, PT

DP11: Racerunning in Chicago: Pivoting to Keep Moving During a Pandemic

Tara Egan PT, DPT, James Nicklas BS, MA, Larke Johnson n/a, Deborah Gaebler-Spira MD, Theresa Sukal-Moulton PT, DPT, PhD

DP12: Effect of Selective Dorsal Rhizotomy on Musculoskeletal Health: A Study Protocol

Marianne Gagnon MSc, Elizabeth Zimmermann PhD, Alessandra Carriero PhD, Betina Willie PhD, Louis-Nicolas Veilleux PhD, Jean-Pierre Farmer M.D., C.M., F.R.C.S.(C)

DP13: Developing a Novel Perioperative Education Program for Families of Patients with Cerebral Palsy Undergoing Orthopaedic Surgery

Rachel Wahhab BS, Danielle Greig MD, Rachel Thompson MD

DP14: Virtual Transition of Care Clinic

Lainie Holman MD, Francois Bethoux MD, Julie Corder MSN, PPCNP - BC, Jennifer Negrey OT, Kara Pickering CCC-SLP, Carrie Cuomo DNP, CPNP (AC/PC), Jacqueline Smith BSN, RN-BC, Katherine Ledyard MSN

DP15: A Portrait of the Rights and Disability Rights of Children in Nigeria: A Policy Review

Rose Elekanachi BSc., MSc., Keiko Shikako -Thomas BSc., PhD., Post-doc., Laurie Snider BSc., PhD., Post-doc., Noémi Dahan-Oliel BSc., MSc., PhD.

DP16: Exploration of Finger Individuation Through Motion Tracking in Hemiparetic Cerebral Palsy

Nayo Hill PT, DPT, PhD, Theresa Sukal-Moulton PT, DPT, PhD, Julius Dewald PT, PhD

DP17: A Mobile Health (mHealth) Solution for Studying Hand Motor Function in Children with Motor Disabilities

Sophia Bertrand BS, Meaghan Murray BS, Sheikh Iqbal Ahamed PhD, Samuel Nemanich PhD

DP18: Developing Physiologically Appropriate Speech Interventions with the Use of Respiratory Inductive Plethysmography

Meghan Darling-White PhD University of Arizona, Tucson, AZ, USA

DP19: The Developmental Trajectory of Oral Feeding Problems in Preterm Infants

Sandra Fucile PhD, Layne Robinson OT student, Lydia Heng OT student

DP20: Steps Towards Stability: A Pilot Study of Constraintinduced Movement Therapy for the Lower Extremity

Brittany Gurgel DPT, DPT , PCS, Bethany Sloane PT, DPT, PCS

DP21: Multidisciplinary Family and Patient Support Before, During, and After Spica Casting

Robert Wimberly MD, Fabiola Reyes MD, Abbye Gieringer MOT, Whitney Herge PhD, Roni Stern PNP

DP22: Technology Supported Connection for Adults with Cerebral Palsy: A Virtual Support Group

Kathryn Blosser DPT, Christina Withers DPT, Cristin Beazley DPT

DP23: Follow-up on Imaging Requisitions in the Neuromotor Program

Mor Cohen Eilig MD, Ram Mishaal MD, Sandra Chow MBA, Carolyn Chowne MSN

DP24: Video Gaming for Home-based Rehabilitation: Feasibility for Children with Cerebral Palsy Living in Costa Rica

Daniela Chan-Viquez MSc, Sarah Munce PhD, Darcy Fehlings MD, MSc, FRCPC, F Virginia Wright PhD, Elaine Biddiss MASc, PhD

DP25: Advancing Pediatric Power Mobility Outcomes: The Process and Promise of Professional, Caregiver, and Industry Collaboration

teresa plummer PhD, Heather Feldner PT, PhD, Alyson Hendry MS, CCC-SLP, Karin Leire n/a

DP26: Family-centred Intervention Effectiveness on Wellbeing of Caregivers of Children with Cerebral Palsy: Systematic Review Protocol

Deepalaxmi Poojari MPT, Shashikiran Umakanth MBBS,MD,FRCP, Arun Maiya PhD, MPT,BPT, Bhamini Krishna Rao PhD, Marie Brien PT, Msc, Senthil Kumaran D PhD, MPT, Sonia Khurana PhD, Savni Apte MPT

DP27: The Enabling Inclusion Model and App: Family-centred Community-based Rehabilitation in Rural South India

Marie Brien PT, Msc, Dinesh Krishna MD, Navamani Venkatachalapathy MPT, Aravind Bharathwaj MPT, Sankar Sahayraj Muthukaruppan MPT, Sankara Raman Srinivasan CA

DP28: Quantifying the Contribution of in vitro Extracelluar Matrix Stiffness to in vivo Muscle Stiffness

Krsisten Stearns-Reider MSPT, PhD, Andy Vuong MS, Sierra Pinal BS, Eileen Fowler PT, PhD, Rachel Thompson MD

DP29: Multi-modal Longitudinal Assessment of Infant Brain Organization in Perinatal Stroke

Catarina Saiote PhD, Ellen Sutter DPT, Ryan McAdams MD, Doug Dean PhD, Kyle Rudser PhD, Michael Georgieff MD, Raghavendra Rao MD, Bernadette Gillick PhD, MSPT, PT

DP30: Virtual Park and Recreation Tours to Promote Inclusion

Aylin Padir BS, Peyton Sefick BS, Mark Andrews BS, Mary Locastro BS, Christine Pelis DPT, Christina Kim BS, Isaiah Steinberg n/a, Geoff Peppel MS, CTRS, Lynn Anderson CTRS, CPRP, FDRT, FALS, Nienke Dosa MD, MPH

DP31: Building Local/global Spina Bifida Communities with Adaptive Design

Mary Locastro BS, Erin Wentz PT, PhD, PCS, Kit Frank OTR, Connor McGough BA, Christina Kim BS, Zulma Tovar-Spinoza MD, Nienke Dosa MD, MPH

DP32: AT Village: Community Solutions for Adaptive Technologies

Mary Locastro BS, Christine Pelis DPT, Peyton Sefick BS, Michele Lamb RN, BSN, Nienke Dosa MD, MPH

DP33: Effect of Environmental Modifications on Aberrant Behaviour in Children with Autism Spectrum Disorder: Systematic Review

Tanaya Ranadive MPT, Bhamini Krishna Rao PhD, Selvam Ramachandran PhD, Amena Bhinderwala MPT, Sonia Khurana PhD

DP34: Implementing an Adapted Sports Program in a Low and Middle Income Country: Sharing Experiences

Ruby Chin A Fat MSc, Marlies Declerck PhD, Fenna Walhain MSc

DP35: Collagenase Clostridium Histolyticum to Decrease Muscle Fiber Bundle Stiffness in Cerebral Palsy: Determination of Dose-response

Karyn Robinson MS, Stephanie Lee MS, Robert Akins PhD, Wade Shrader MD, Walter Herzog PhD, Jason Howard MD

DP36: DNA Methylation Patterns as Biomarkers for Cerebral Palsy

Karyn Robinson MS, Adam Marsh PhD, Robert Akins PhD

DP37: Early Identification and Intervention of Infants at Risk of Developing Cerebral Palsy in a Poor Resource Setting Hospital

Anderson Mughogho MSc University of Malawi, Blantyre, Blantyre, Malawi

DP38: Managing Patients with Leukodystrophies

Sarah Evans MD

Children's Hospital of Philadelphia, Philadelphia, PA, USA

Scientific Posters

SP01: Incobotulinumtoxina for Upper-/lower-limb Spasticity in Children/adolescents with Cerebral Palsy: Phase 3 Xara Study

Edward Dabrowski MD, Henry Chambers MD, Deborah Gaebler-Spira MD, Marta Banach MD, PhD, Petr Kaňovský MD, PhD, Angelika Hanschmann MS, Michael Althaus MD, Thorin Geister PhD, Florian Heinen MD

SP02: Time to Retreatment Following Abobotulinumtoxina Injections in Children with Upper-limb Spasticity

Nigar Dursun MD, Marcin Bonikowski MD, Jorge Carranza MD, Ann Tilton MD, Benjamin Regnault BS, Simon Page PhD, Mauricio Delgado MD

SP03: Goal Attainment Following Treatment with Abobotulinumtoxina and Intensive Home Therapy in Children with Upper-limb Spasticity

Jorge Carranza MD, Edward Dabrowski MD, Nigar Dursun MD, Ann Tilton MD, Joyce Oleszek MD, Marcin Bonikowski MD, Benjamin Regnault BS, Simon Page PhD, Mauricio Delgado MD

SP04: Evaluation of Pediatric Therapists' Use of Virtual Health Due to the COVID-19 Pandemic

Stacey Miller MRSc, BSc (PT), Jennifer Farr n/a, Ceilidh Matthews BS, Kishore Mulpuri MBBS, MS, MHSc, FRCSC

SP05: Excessive Spinal Motor Neuron Loss in Congenital Hypertonia

Joline Brandenburg MD, Matthew Fogarty BVSc, PhD, Alyssa Brown BS, Gary Sieck PhD

SP06: The Effect of Scoliosis on Audio-visual and Socioemotional Processing in Cerebral Palsy

Amanda Whitaker MD, Stephanie Burkhardt MPH, Kaleigh Hague MA, Lindsay Pietruszewski DPT Nationwide Children's Hospital, Columbus, OH, USA

SP07: Survey of the Cerebral Palsy Research Network on Hip

and Spine Surveillance

Amanda Whitaker MD, Stacey Miller MRSc, BSc (PT), Paul Gross BA, Amy Bailes PhD, Benjamin Shore MD, MPH, Wade Shrader MD

SP08: Short Term Effect of SAFE Early Intervention Approach in Premature Infants in Turkey: A Randomised Controlled Single Blinded Study

Umut Apaydin PhD, Ramazan Yildiz MSc, Ayse Yildiz MSc, Sebnem Soysal Acar PhD, Kivilcim Gucuyener MD, Bulent Elbasan PhD

SP10: Neurological Monitoring Is Safe and Effective for Children with Cerebral Palsy Undergoing Spine Fusion

Wade Shrader MD, Katherine Kenny BS, Suken Shah MD, Kenneth Rogers PhD, Sabina Dicindio DO, Alier Franco PhD, Anthony DiNardo DC, Mary Theroux MD

SP11: Education, Employment, and Independence: an Assessment of Adults with CP After Transition from a Pediatric Health Care System

Wade Shrader MD, Chris Church MPT, Nancy Lennon MS, PT, DPT, Thomas Shields BS, Jason Howard MD, Freeman Miller MD

SP12: The Impact of Perceived Healthcare Provider Attitudes on Planned vs. Unexpected Pregnancies in People with Cerebral Palsy

Hayley Lipworth BS, Susan O'Rinn BA, Asia Van Buuren BS, Anne Berndl MD

SP13: Content Development of the Child Community Health Inclusion Index: Inclusion of Children with Disabilities in the Community

Paul Yoo MSc., OT, Sara Ahmed PT, PhD, Robert Wilton PhD, Annette Majnemer OT, PhD, FCAHS, Keiko Shikako -Thomas BSc., PhD., Post-doc.

SP14: Incidence and Implications of Sleep Related Breathing Disorders in the Spina Bifida Population: A Pilot Study

Laura Hobart-Porter DO, Jambhekar Supriya MD, Ocal Eylem MD Arkansas Children's Hospital, Little Rock, AR, USA

SP15: Absence of Neutralizing Antibodies with Incobotulinumtoxina for Spasticity in Botulinum Toxin-naïve Children with Cerebral Palsy

Henry Chambers MD, Petr Kaňovský MD, PhD, A. Sebastian Schroeder MD, Edward Dabrowski MD, Thorin Geister PhD, Angelika Hanschmann MS, Irena Pulte MD, Michael Althaus MD, Marta Banach MD, PhD, Deborah Gaebler-Spira MD, Florian Heinen MD

SP16: Gross Motor Function Parent Report (GMF-PR): Preliminary Evidence of Validity

Paula Chagas PhD, Hércules Leite PhD, Ana Carolina de Campos PT, PhD, Ana Cristina Camargos PhD, Rosane Morais PhD, F Virginia Wright PhD, Marilyn Wright PT, Lesley Pritchard PhD, Egmar Longo PhD, Rafaela Moreira PhD, Kennea Ayupe PhD, Peter Rosenbaum MD

SP17: Standing Balance Is Superior to Gait Parameters for Motor Impairment Risk Assessment in Preterm and Very-lowbirth-weight Toddlers

Yuko Nomura MS, Haruhiko Sato PhD, Hidenori Kariya MS, Kanami Kamide MA, Mari Ooka PhD, Manabu Kemmochi PhD

SP18: Exercise Load and Activity Intensity Related to Dystonia and Choreoathetosis During Powered Mobility in Dyskinetic Cerebral Palsy

Saranda Bekteshi MSc, Ioana Gabriela Nica PhD, Sotirios Gakopoulos MSc, Marco Konings PhD, Inti Vanmechelen MSc, Jean-Marie Aerts PhD, Hans Hallez PhD, Elegast Monbaliu PhD

SP19: Motor Function Is a Significant Predictor of Parentperceived Happiness for Children with CP

Rachel Bican DPT, Jill Heathcock MPT, PhD The Ohio State University, Columbus, OH, USA

SP20: Prefrontal Cortical Activity During a Progressive Motor Performance Test in Children with Spastic Cerebral Palsy: A Pilot Study

Joel Licea MS, Owais Ahmed Khan PT, Christopher Modlesky PhD, Tarkeshwar Singh PhD

SP21: Disproportionality in Education: Role of School Based Physical Therapists to Promote Racial Justice

Cheryl Kerfeld PhD, Shane Baguyo MA, EdS Seattle Public Schools, Seattle, WA, USA

SP22: Validity and Reliability of an Inexpensive Caliper to Assess Triceps Skinfolds in Children with Cerebral Palsy

Anna Jesus MD, Valentina Intagliata MD, Amy Shadron MPH, RN, Jodi Darring BS, Mark Conaway PhD, Richard Stevenson MD

SP23: Longitudinal Experiences of Children with Cerebral Palsy and Their Families Using Modified Ride-on Cars: A Mixed Methods Case Series

Heather Feldner PT, PhD, Rebecca Barchus n/a, Chelsea Barroero SPT, Sarah Dean BS, Wendy Schnare n/a, Logan Samuel PhD, Kyle Winfree PhD, MS, BS

SP24: Safety of Incobotulinumtoxina for Upper- and Lowerlimb Spasticity in Children/adolescents with Cerebral Palsy: Phase 3 Analysis

Marta Banach MD, PhD, Petr Kaňovský MD, PhD, A. Sebastian Schroeder MD, Henry Chambers MD, Edward Dabrowski MD, Thorin Geister PhD, Angelika Hanschmann MS, Irena Pulte MD, Michael Althaus MD, Deborah Gaebler-Spira MD, Florian Heinen MD

SP25: Pooled Efficacy Analysis of Incobotulinumtoxina for Upper- and Lower-limb Spasticity in Children/adolescents with Cerebral Palsy

Florian Heinen MD, Petr Kaňovský MD, PhD, A. Sebastian Schroeder MD, Henry Chambers MD, Edward Dabrowski MD, Thorin Geister PhD, Angelika Hanschmann MS, Irena Pulte MD, Michael Althaus MD, Marta Banach MD, PhD, Deborah Gaebler-Spira MD

SP26: Fracture Rates in Danish Children with Cerebral Palsy

Jakob Granild-Jensen MD, Alma Pedersen MDsc, PhD, Eskild Kristiansen MS, Bente Langdahl MDSc, PhD, Bjarne Møller-Madsen DMSc, PhD, Charlotte Søndergaard PhD, Stense Farholt PhD, Esben Vestergaard PhD, Gija Rackauskaite PhD

SP27: Somatosensory Deficits and Neural Correlates in Cerebral Palsy Compared to Healthy Individuals: A Systematic Review

Catherine Mercier PhD, Clémentine Brun PhD, Elodie Traverse PhD, Elyse Granger MSc

SP28: A Comparison of Conventional and Minimally-invasive Multilevel Surgery for Children with Diplegic Cerebral Palsy

Tomos Edwards MBChB, Nicky Thompson PhD, Robin Prescott PhD, Julie Stebbins PhD, James Wright PhD, Tim Theologis PhD

SP29: Safety of Incobotulinumtoxin/a Treatment for Children/adolescents with Sialorrhea Associated with Neurological Disorders

Steffen Berweck MD, Marcin Bonikowski MD, Heakyung Kim MD, Angelika Hanschmann MS, Michael Althaus MD, Marta Banach MD, PhD

SP30: Assessment of Brain Activity During Lower Extremity Activities in Individuals with Cerebral Palsy: A Scoping Review

Isabella Sudati BS, Carolina Corsi PhD, Ana Carolina de Campos PhD

SP31: Augmented Feedback for Treatment of Upper Extremity Function in Children with Cerebral Palsy: A Systematic Review

Anam Purewal BS, Yash Shah BS, Kunj Jain BA, Lauren Hutnik BA, Amy Song BS, Vaishali Ravikumar BS, Anugya Mittal BA, Zoe Parrott n/a, JenFu Cheng MD, ALICE CHU MD

SP32: Peach: A Validated Tool to Assess Physical Therapists' Proficiency in Assessing "hips at Risk" in Children with Cerebral Palsy

Jessie Chan BA, JenFu Cheng MD, Michael Armento MD, David Scher MD, Paulo Selber MD, Hannah Shoval MD, Kathleen Murphy PT, DPT, Jennifer Jezequel PT, Bridget Assip DPT, Folorunsho Edobor-Osula MD

SP33: Beware the Transverse Plane: Variability of "normal Gait" in Typically Developing Children

Paramjyot Panesar BA, Vedant Kulkarni MD, Ashok Kulkarni PhD, Anita Bagley PhD, MPH

SP34: Efficacy of Incobotulinumtoxina over Six Injection Cycles for Lower-limb Spasticity in Children/adolescents with Cerebral Palsy

A. Sebastian Schroeder MD, Petr Kaňovský MD, PhD, Henry Chambers MD, Edward Dabrowski MD, Thorin Geister PhD, Angelika Hanschmann MS, Irena Pulte MD, Marta Banach MD, PhD, Deborah Gaebler-Spira MD, Florian Heinen MD

SP35: Psychometrics of Emerging Behaviors Scale Tien Nguyen BS, Stephanie DeLuca PhD

SP36: Perspectives from People with Cerebral Palsy or Their Caregivers on the Goals, Motivators, and Barriers for Research Participation

Alexandra Hruby BS, Vatsala Goyal MS, Kristina Zvolanek BS, Theresa Sukal-Moulton PT, DPT, PhD

SP37: Analysis by Electromyography During the Handling of Neurodevelopmental Treatment in Individuals with Severe Cerebral Palsy

Tatiane Paludo PhD, Franciele Zardo PhD, Brenda Tubelo Pereira de Mattos PhD, Bruna Frata PhD, Chen Chai Ling BS, Fernanda Cechetti PhD

SP38: The Reliability of the Eating and Drinking Ability Classification System (EDACS) for Children with Cerebral Palsy in Taiwan

Hsiu-Ching Chiu PhD, Katherine Buckeridge n/a, Hsiu-Ching Chiu n/a, Diane Sellers n/a

SP39: Running Ability in Children with Cerebral Palsy: What Are the Clinical Differences Between Runners and Walkers?

Annie Pouliot-Laforte PhD, Anne Tabard-Fougère PhD, Alice Bonnefoy-Mazure PhD, Geraldo De Coulon MD, Stéphane Armand PhD

SP40: Dancing Together from Home: A Telehealth Dance Program for Young Individuals with Cerebral Palsy

Annie Pouliot-Laforte PhD, Claire Cherrière PhD, Martin Lemay PhD, Jessica Tallet PhD, Louis-Nicolas Veilleux PhD, Catherine Donskoff MD, Maxime Robert PhD

SP41: Pooled Analysis of Incobotulinumtoxina for Upper-/ lower-limb Spasticity in Children with Severe Cerebral Palsy (GMFCS Level Iv-v)

Petr Kaňovský MD, PhD, Deborah Gaebler-Spira MD, A. Sebastian Schroeder MD, Henry Chambers MD, Edward Dabrowski MD, Thorin Geister PhD, Angelika Hanschmann MS, Irena Pulte MD, Michael Althaus MD, Marta Banach MD, PhD, Florian Heinen MD

SP42: Creation of a Culturally Sensitive Toolbox of Meausres to Operationalize the ICF Core Sets for CP in Argentina

L Johana Escobar Zuluaga BA, Maria de las Mercedes Ruiz Brunner PhD, M Elisabeth Cieri BA, Eduardo Cuestas PhD, Veronica Schiariti PhD

SP43: Impact of COVID-19 on Perceptions Towards Participation in CP Research: Survey Results from Potential Participants

Divya Joshi BS, Shreya Viswanathan n/a, Nayo Hill PT, DPT, PhD, Theresa Sukal-Moulton PT, DPT, PhD

SP44: Risk Factors for Severe Scoliosis in Patients with Cerebral Palsy and Limited Ambulatory Ability

Nicholas Yoo BS, Garey Noritz MD, Brian Arand MS, Amanda Whitaker MD

SP45: Correlation Between Static Radiograph Measurements and Kinematics at Mid Stance in Children with Gait Abnormalities

Joseph Burger BS, Mallory Rowan BS, Amanda Whitaker MD

SP46: Pain in Adolescents with Cerebral Palsy; A Longitudinal Population-based Study

Selma Mujezinovic Larsen MD, Reidun Jahnsen PhD, Kjersti Ramstad PhD

SP47: Long-term Outcomes of Dysphagia and Growth in Children with Severe Cerebral Palsy Using Videofluoroscopic Swallowing Study

Soo Jin Lee MD, Eun Jae Ko PhD, Kyoung Hyo Choi PhD, In Young Sung PhD

SP48: Inter-rater Reliability of Test of Infant Motor Performance Screening Items (TIMPSI) in Preterm Infants

Soo Jin Lee MD, Eun Jae Ko PhD, Su Hwan Bae PhD, In Young Sung PhD

Asan Medical Center, Seoul, Seoul-t'ukpyolsi, Republic of Korea

SP49: Caregiver Burden among Primary Caregivers of Children with Cerebral Palsy Attending a Sri Lankan Tertiary Care Facility

B D Hewawitharana MD, Aruna De Silva MD, Champa Wijesihnge MD

SP50: Posture and Caregiver-provided Learning Opportunities in Typically Developing Infants and Infants with Motor Delay

Kari Kretch PT, DPT, PhD, Emily Marcinowski PhD, Audrey Kane PhD, OTR/L, James Bovaird PhD, Regina Harbourne PhD, Lin-Ya Hsu PhD, Natalie Koziol PhD, Michele Lobo PT, PhD, Sarah McCoy PhD, Stacey Dusing PhD, PT

SP51: Does Posterior Tibialis Split Tendon Transfer Routing Impact Postoperative Ankle Kinematics?

Frances Scheepers n/a, Karen Davies MSc, Timothy Bhatnagar PhD, Diane Wickenheiser BSc, Alec Black MSc, Christine Alvarez MD, FRCSC, MSc, Kishore Mulpuri MBBS, MS, MHSc, FRCSC, Lise Leveille MD

SP52: Group-based Early Intensive Education Program for Parents to Improve Neurodevelopmental Outcomes in Highrisk Preterm Infants

Nam Hyun Lee PT, Eun Jae Ko PhD, In Young Sung MD, Nayoung Heo PT

SP53: Impact of the COVID-19 Pandemic on School-aged Children with Disabilities: Changes in Therapy Service Delivery and Functioning

Kristen Allison PhD, Danielle Levac PhD

SP54: Communication Breakdowns in Children with Cerebral Palsy (CP): Frequency and Impact on Participation

Kristen Allison PhD, Kayla Doherty BS

SP55: The Incidence of Abnormal General Movements in Populations of Moderate - Late Preterm Infants and Infants at High Risk of Cerebral Palsy

Colleen Peyton DPT, Ryan Millman n/a, Sarah Rodriguez MD, MPH, Vanessa Barbosa PhD, OTR/L, Raye-Ann de Regnier MD, Alicia Spittle PhD, Theresa Sukal-Moulton PT, DPT, PhD

SP56: Heterogeneity Among Skeletal Muscle Satellite Cell Subclones in Spastic Cerebral Palsy

Stephanie Lee MS, Robert Akins PhD, Karyn Robinson MS

SP57: Risk Factors for Neurodevelopment in Children with Hypoxic-ischemic Encephalopathy After Therapeutic Hypothermia

Gabriela Neves MSc, Vanessa Lima PhD, Hércules Leite PhD

SP58: Translation and Inter-rater Reliability of the Brazilian Version of the Hammersmith Infant Neurological Examination

Michelle Alexandrina dos Santos Furtado MSc, Kennea Ayupe PhD, Tathiana de Souza PhD, Ayrles Mendonça PhD, Matheus Klettenberg BA, Victor Rodrigues BA, Melina Marques BA, Lisiane Ferreira BA, Tamires Santos BA, Ana Cristina Camargos PhD, Hércules Leite PhD

SP59: The Relationship Between Temporal Variability of Brain Network and IQ in Autism Spectrum Disorder: A Resting-state Fmri Study

Yu Feng n/a, Hai Jia n/a, Tao Zhang PhD, XIAODONG KANG MA

SP60: Accuracy of Hammersmith Infant Neurological Evaluation in Brazilian Infants Exposed to Zika Virus

Tathiana de Souza PhD, Eduardo Bagne n/a, Renata Mizani BS, Ali Rotob n/a, Rosa Gazeta n/a, Cohort Jundiaí PhD, Saulo Passos PhD

SP61: Environmental Factors and Their Relationship to Physical Activity and Sport Among Children with Cerebral Palsy

Sarah Creveling BS, Gavin Colquitt EdD, Mario Keko MPH, BPH, Haresh Rochani DrPH, MPH, MBBS, Christopher Modlesky PhD

SP62: Using Photovoice to Examine School-based Physical Therapists' Perspectives of Functioning

Vevian Grace Lee BS, Ashley Walker PhD, CHES, Heather Lorden PT, DPT, PCS, Sarah Creveling BS, Gavin Colquitt EdD

SP63: Hip Displacement in Hypertonic versus Hypotonic Neuromuscular Diagnoses: Comparison of Cerebral Palsy and Spinal Muscular Atrophy

Armagan Can Ulusaloglu MD, Ali Asma MD, Wade Shrader MD, Kenneth Rogers PhD, Jason Howard MD

SP64: Gait Profile Score of Children with Cerebral Palsy Can Differ Based on Normative Data from Different Institutions

Justine Borchard BS, Wilshaw Stevens Jr BS, Kelly Jeans MS, Kirsten Tulchin-Francis PhD, Robert Wimberly MD

SP65: Child and Maternal Factors Associated with Pain and Quality of Life of Children with Cerebral Palsy

Manel Abid MS, Roseline Galipeau Ph. D. Nursing sciences, Sonia Jemni M. D. in Physical Medicine and Rehabilitation

SP66: Motor Planning in Children with Cerebral Palsy: A Systematic Review

Ophélie Martinie MSc, Catherine Mercier PhD, Maxime Robert PhD

SP67: Hip Dislocation in Children with Congenital Zika Virus Syndrome

Lenamaris Duarte MD, Eliana Borigato MD, Clarissa Olbertz MD, Oton Lima MD, Alvaro Nomura MD, Adriana Silva MD The SARAH Network of Rehabilitation Hospitals, Brasília, Distrito Federal, Brazil

SP68: Changes in Children with CP After Six Months of Hippotherapy: Clinical Trial Applying the Rehabilitation Treatment Taxonomy

Ana Gontijo PhD, Juliana Starling MS, Marisa Mancini PhD, Sergio Fonseca PhD

SP69: Cross-country Validity of the Alberta Infant Motor Scale Using a Brazilian Sample

Ana Gontijo PhD, Juliana Mambrini PhD, Marisa Mancini PhD

SP70: Contributions and Limitations of Lokomat on Gait Rehabilitation of Children with Cerebral Palsy: A Systematic Review

Margaux Hebinck MS, Maxime Robert PhD, Jonathan Bredin PhD³, Laura Wallard PhD

SP71: Environmental Factors and Their Association with Participation Outcomes in Children with Cerebral Palsy

Jet van der Kemp MD, Marjolijn Ketelaar PhD, Jan Willem Gorter MD. PhD

SP72: Reported Effects of the sars-cov2 Pandemic on the Activities of People with Cerebral Palsy in Portugal

Daniel Virella MSc, Ana Cadete MD, Teresa Folha MSc, Joaquim Alvarelhão PhD, Carlos Dias PhD

SP73: A Qualitative Analysis of Therapists Perspectives on the Clinical Implementation of the General Movements Assessment

Madalynn Wendland DPT, Guowei Jian PhD

SP74: Feasibility Study of a Complex Spine Collaboration for the Care of Children with Medical Complexity and Neuromuscular Scoliosis

Jody Lin MD, MS, Mindee Kunkel MSN, APRN, FNP-BC, Nancy Murphy MD

SP75: Leg Length Discrepancy in Children with Hemiplegic Cerebral Palsy and Changes with Growth

Devin Kennedy BS, Supreet Deshpande MD, Mark Gormley Jr MD

SP77: Association of Ankle Proprioception with Falls and 10 M Walk Test in Children with Cerebral Palsy - Preliminary Analysis

Stacy Ngwesse BS, Elizabeth Boyer PhD, Jennifer Nelson DPT

SP78: Lower Limb Muscle Quality Is More Strongly Related to Physical Activity Than Functional Strength in Children with Cerebral Palsy

Junsoo Lee BS, William Batson BS, Sydni Wilhoite MS, Gavin Colquitt EdD², Christopher Modlesky PhD

PLATINUM LEVEL:









SILVER LEVEL:







BRONZE LEVEL:











EXHIBIT ONLY:





Chambers Family









Children's Hospital Foundation

A full-service children's hospital and only Level 1 pediatric trauma center in Virginia, Children's Hospital of Richmond at VCU provides care covering nearly all children's health-related needs - from primary care and emergency medicine to bone marrow transplants and heart surgery. Part of VCU Health, we're committed to ensuring access to care for all children, training future pediatric caregivers and making new discoveries that improve understanding and treatment of childhood diseases.

Gillette

"For more than 124 years the doctors, nurses and employees at Gillette have worked every day to provide the very best care for all children. Gillette specializes in treating children who have complex conditions, rare disorders and traumatic injuries. We provide comprehensive services, highly trained specialists, an integrated team approach, family-centered care and a lifetime of services. With our extensive diagnostic capabilities, expertise in surgical interventions, and proven therapies supported by our unique care model, we deliver high-value care that empowers children to realize their potential and live healthy, productive lives. "

Innomar Strategies

"Chronically Simple is a healthcare app designed to help patients and caregivers manage appointments, interactions with healthcare providers and all the administration that comes with living with a chronic or complex disease. Kristy Dickinson founded Chronically Simple after being diagnosed with a rare disease and based on her own healthcare experiences. In 2019, Chronically Simple became a part of Innomar Strategies, Canada's leading specialty pharmaceuticals service provider and a part of AmerisourceBergen. Patients and caregivers can create a free account at chronicallysimple.com or by downloading the application through the App Store or Google Play."

Mac Keith Press

Mac Keith Press aims to improve the care of children with neurodevelopmental disability by extending the knowledge and understanding of developmental medicine and paediatric neurology. We publish the field-leading journal, Developmental Medicine & Child Neurology, and books and courses in related subject areas. Our publications are of interest to researchers, clinicians, therapists, parents and all involved in the care of children and young people with neurodevelopmental conditions.

Merz Pharmaceutical

"As a global leader in neurosciences, Merz Therapeutics is committed to improving the lives of patients who suffer from movement disorders, spasticity and other neurological conditions. Since 1908, Merz has strived to understand the complex realities that patients, caregivers and physicians face. Our mission is to deliver meaningful treatment options and a better patient experience to meet the unique needs of each person we serve."

OrthoPediatrics

Founded in 2006, OrthoPediatrics is an orthopedic company focused exclusively on advancing the field of pediatric orthopedics. As such it has developed the most comprehensive product offering to the pediatric orthopedic market to improve the lives of children with orthopedic conditions. OrthoPediatrics currently markets 36 surgical systems that serve three of the largest categories within the pediatric orthopedic market. This product offering spans trauma and deformity, scoliosis, and sports medicine/other procedures. OrthoPediatrics' global sales organization is focused exclusively on pediatric orthopedics and distributes its products in the United States and 45 countries outside the United States. For more information, please visit www.orthopediatrics.com.

PTC

TC is a science-driven, global biopharmaceutical company focused on the discovery, development, and commercialization of clinically differentiated medicines that provide benefits to patients with rare disorders. PTC's ability to globally commercialize products is the foundation that drives investment in a robust and diversified pipeline of transformative medicines and our mission to provide access to best-in-class treatments for patients who have an unmet medical need.

Saol Therapeutics

Saol Therapeutics (pronounced "Sail") is a privately-held, specialty biotech pharmaceutical company with operations in both Roswell, GA and Dublin, Ireland. Saol, focused on neuroscience (spasticity) and rare disease, is committed to providing and advancing therapeutic options for patients and the physicians treating these populations. For more information, visit www.saolrx.com.

Weinburg CP Center

We are dedicated to improving the lives of people with cerebral palsy of all ages through comprehensive care, research, and education of medical professional, patients, and caregivers.

- **A** = Consultant/Advisory Board
- **B** = Employment
- **C** = Other Research Support includes receipt of drugs, supplies, equipment or other in-kind support
- **D** = Ownership Interest includes stock, stock options, patent or other intellectual property
- E = Research Grant includes principal investigator, collaborator or consultant and pending grants as well as grants already received
- **F** = Speaker/Honoraria includes speakers bureau, symposia, and expert witness
- **G** = Other Financial or Material Support
- **H** = Other Research Support
- I = Royalties
- **J** = Stock Shareholder (excluding mutual funds)
- **K** = Stockholder/Ownership Interest (excluding diversified mutual funds
- **L** = Nothing to Disclose

General Session

Heaven, B (L), Turk, M (L), Koop, S, Philpot, B (AskBio E; Deerfield E); Pfizer E); Taysha Gene Therapies (E), Gillick, B, Pritchard, L (L), Novacheck, T (L), Lieber, R, Darragh, A (L)

Mini Symposia

MS06 McCormick, A (L), Biddiss, E (L), Gorter, J (L), Scheinberg, A (L), Butchart, J (L), Alazem, H (L)

MS07 Davids, J (OrthoPediatrics, Inc (Individual(s) Involved: Self): Consultant), Miller, S (L), Graham, K (OrthoPediatrics (A, NHMRC CP-Achieve)), Whitaker, A (Cartessa (B)), Kulkarni, V (L)

MS08 Adams, R (L), Murphy, N (L)

MS09 Ounpuu, S (L), Pierz, K (L)

MS10 Gormley Jr, M (Allergan Pharmaceuticals (E, F)Ipsen Pharmaceuticals (E, F)), Feyma, T (PTC Therapeutics (F)), Graupman, P (L)

MS11 Vargus-Adams, J (L), Colvin, C (L), Prather, H (L), Mendoza-Sengco, P (L)

MS12 Fehlings, D (L), Aravamuthan, B (SK Life Science (F)), Kruer, M (PTC Therapeutics (E, F)), Rosenbaum, P (L), Dan, B (L)

MS13 Novacheck, T (L), Stout, J (L), Walt, K (L), Healy, M (L), Georgiadis, A (L)

MS14 Howard, J (L), Hastings-Ison, T (L), Tedroff, K (L), Shrader, W (NIH (Individual(s) Involved: Self): Advisory Board, NAMBRR)

MS15 Akamagwuna, U (L), Norman, J (L), Moreno, A (L), Woodward, J (L)

Mini-Symposia

MS01 Stout, J (L), Boyer, E (L), Thomason, P (L), Walt, K (L), Georgiadis, A (L), Narayanan, U (L)

MS02 Thornton, L (L), Sholas, M (B)), Bosques, G (L), Deon, L (L)

MS03 Fehlings, D (L), Friel, K (L), Majnemer, A (L), Lam-Damji, S (L), Makino, A (L)

MS04 Whitaker, A (Cartessa (B)), Shore, B (L), Davids, J (OrthoPediatrics, Inc (Individual(s) Involved: Self): Consultant)

MS05 Kaelin, V (L), Valizadeh, M (L), Parde, N (L), Khetani, M (L)

On-Demand Mini Symposia

ODMS10 Goodwin, E (L), Sadof, M (L), Huth, K (L), Sarmiento, C (L), Mann, K, Srinivasan, R (L)

ODMS01 Alter, K (Catalyst Medical (F); Demos/Springer Publishing (Individual(s) Involved: Self): I; Paradigm medical communications (F), Kim, H (AiCME (F); Allergan (A); Catalyst Medical Edu LLC (F); Dysport (A); Xeomin (A), Desai, M (L), Nichols, S (Ipsen Biopharmaceuticals (E)), Cancel, D (Ipsen (A))

ODMS02 Harpster, K (L), Schwartz, T (L), Lawrence, L (L)

ODMS03 Harpster, K (L), Mueller, G (L)

ODMS04 Kim, H (AiCME (F); Allergan (A); Catalyst Medical Edu LLC (F); Dysport (A); Xeomin (A), Moskowitz, J (L), Lee, N (L), Labhard, S (L), Davis, C (L), Haughton, A (L), Moomjy, G (L)

ODMS05 Ward, M (L), Graupman, P (L)

ODMS06 Deshpande, S (L), Gormley Jr, M (Allergan Pharmaceuticals (E, F)Ipsen Pharmaceuticals (E, F)), Wilhelmy, J (L), Paulson, A (L)

ODMS07 Romeiser Logan, L (L), Kolaski, K (Piramal (F)), Belthur, M (L)

ODMS08 McCormick, A (L), Alazem, H (L), van Hedel, H (Hocoma (C), Condliffe, E (Trexo Robotics (C)), Rocon, E (L), Bayon, C

ODMS09 Meneses, V (L), Loria, H (L), Cruz, N (L), Conner, E (L)

ODMS11 Millan, F (GeneDx (B)), Kruer, M (PTC Therapeutics (E, F)), Cohen, J (Invitae (A)PTC Therapeutics (F)), Aravamuthan, B (SK Life Science (F))

ODMS12 Krach, L (L), Gettings, J (L), Wilhelmy, J (L), Schwartzhoff, B (L)

ODMS13 Leite, H (L), Rosenbaum, P (L), Jindal, P (L), Abdel Malek, S (L)

ODMS14 Vanmechelen, I (L), Haberfehlner, H (L), Buizer, A (L), Bonouvrié, L (L), Monbaliu, E (L)

ODMS15 Pritchard, L (L), Wright, F (Holland Bloorview Kids Rehabilitation Hospital (B))

ODMS16 Bjornson, K (L), Moreau, N (L), Hurvitz, P (L)

Pre-Conference

PC1 Miller, S (L), Sultan, S, Falck-Ytter, Y

PC2 Papadelis, C (L), Modlesky, C (L), Friel, K (L), Kruer, M (PTC Therapeutics (E, F)), Levac, D (L), Cooley Hidecker, M (L), Nitkin, R (L), Darragh, A (L), Warren, M (L), Gross, P (L)

PC3 Novacheck, T (L), McCarthy, J (L), Kay, R (Johnson & Johnson (D); Medtronic (D); Pfizer (D); Zimmer Biomet (D), Graham, K (OrthoPediatrics (A)), Shrader, W (NIH (A), Narayanan, U (L), Chambers, H (AbbVie (A)OrthoPediatrics (A)),), Pierz, K (L), Rutz, E (L), Shore, B (L), Theologis, T (L), Van Campenhout, A (L), Dreher, T (Nuvasive (A)), Davids, J (OrthoPediatrics, Inc (Individual(s) Involved: Self): Consultant), Shilt, J (L), Rhodes, J (OrthoPediatrics (A)Smith Nephew (E))

PC4 Owens, L (L), Glader, L, Dietz, I, Lorch, N, Mauskar, S, Mann, K, Luthy, S (L), Stiehl, S (L), Sewell-Roberts, C, Salzbrenner Hoopes, M, Goodwin, E (L), Larson, I (L), hauer, j, Sadof, M (L), Morse, B

PC5 Morgan, P, Peterson, M (L), Gannotti, M, Akamagwuna, U (L), Gorter, J (L), Moreno, A (L)

PC6 Bickley, C (L), Tulchin-Francis, K, Boyer, E (L), Dugan, E (L), Nelson, J Schwabe, A

PC7 Ayala, L (L), Duncan, A (L)

PC8 Alter, K (Catalyst Medical (F); Demos/Springer Publishing (F): I; Paradigm medical communications (F), Kim, H (AiCME (F); Allergan (A); Catalyst Medical Edu LLC (F); Dysport (A); Xeomin (A)

Scientific Presentation

A1 van Eyk, C (L), Webber, D (L), Minoche, A (L), Perez-Jurado, L (L), Corbett, M (L), Gardner, A (L), Berry, J (L), Harper, K (L), MacLennan, A (L), Gecz, J (L)

A2 Erickson, S (L), Cotten, M (L), Worley, G (L)

A3 Sun, J (Biosense Webster (F)CryoCell (D)Medtronic (F)Merit Medical (F)SinoCell (D, I)), Case, L (Amicus (E)AskBio (E)AveXis (E)Biogen (E)Biomarin (E)Cytokinetics (E)Eli Lilly (E)Enobia Pharma Inc./Alexion (E)Genzyme (A, E, F)GlaxoSmithKline (E)NS Pharma (E)Pfizer (E)Prosensa (E)PTC Therapeutics (E)Reveragen (E)Roivant Sciences (E)Ultragenyx (E)Valerion (C)), McLaughlin, C (L), Skergan, N (L), Jasien, J (L), Mikati, M (L), Troy, J (AegisCN (A)Britol Meyers Squibb (E)Cohortias International (A)Gamida Cell (A)Seattle Genetics (E)SinoCell (I)Synthetic Biologics (A)The Community Data Roundtable (A)The EMMES Corporation (A)), Kurtzberg, J (CryoCell (D)SinoCell (D, I))

A4 Kitase, Y (L), Madurai, N (L), Chin, E (L), Robinson, S (L), Jantzie, L (L)

A5 Aviram, R (L), kima, i (L), Willigenburg, T (L), Bassan, H (L), Riemer, R (L), Bar Haim, S (L)

A6 O'Regan, E (L), Alriksson-Schmidt, A (L), Ödman, P (L), Stadskleiv, K (L), Knudsen, M (L)

A7 Bekteshi, S (L), Karlsson, P (L), Vanmechelen, I (L), Van Criekinge, T (L), Konings, M (L), Hellin, P (L), Hallez, H (L), Aerts, J (L), Ortibus, E (L), Monbaliu, E (L)

A8 Bekteshi, S (L), Karlsson, P (L), Vanmechelen, I (L), Konings, M (L), Van Criekinge, T (L), Hellin, P (L), Aerts, J (L), Hallez, H (L), Ortibus, E (L), Monbaliu, E (L)

A9 Ogourtsova, T (L)

B1 Paul, T (L), Campbell, W (L)

B2 Juricic, M (L), Miller, S (L), Coates, J (L), Fajardo, N (L), Chapman, C (L), Habib, E (L), Mulpuri, K (Allergan (C) Canadian Orthopaedic Foundation (G) IPSEN (C)Johnson & Johnson (C) Pediatric Orthopaedic Society of North America (G) Pega Medical (C, I))

B3 Asuman, D (L)

B4 Jahan, I (L), Power, R (L), Muhit, M (L), Badawi, N (L), Khandaker, G (L)

B5 Al Imam, M (L), Jahan, I (L), Das, M (L), Muhit, M (L), Smithers-Sheedy, H (L), McIntyre, S (L), Badawi, N (L), Khandaker, G (L)

B6 Påhlman, M (L), Himmelmann, K (L)

B7 Evans, K (Novita (B)), Wright, A (Novita (B)), Bauve, C (Novita (B)), Wright, F (Holland Bloorview Kids Rehabilitation Hospital (B))

B8 Tajik-Parvinchi, D (L), Rosenbaum, P (L), Duku, E (L), Cooley Hidecker, M (L), Zwaigenbaum, L (L), Roncadin, C (L), Georgiades, S (L), Gentles, S (L), Fang, H (L), Di Rezze, B (L)

B9 Boyer, E (L), Krach, L (L)

C1 Linton, G (L), Alriksson-Schmidt, A (L), Hägglund, G (L)

C2 Belshe, W (L), Gajewski, N (L), Thompson, R (L)

C3 Song, A (L), Hutnik, L (L), Shah, Y (L), Jain, K (L), Mittal, A (L), Ravikumar, V (L), Purewal, A (L), Cheng, J (L), CHU, A (L)

C4 Rethlefsen, S (L), Hanson, A (L), Wren, T (L), Kay, R (Johnson & Johnson (D); Medtronic (D); Pfizer (D); Zimmer Biomet (D),C5 DiFazio, R (L), Vessey, J (L), Miller, P (L), Snyder, B (L), Shore, B (L)

C6 Deshpande, S (L), Acharya, R (L), Gormley Jr, M (Allergan Pharmaceuticals (E, F)Ipsen Pharmaceuticals (E, F))

C7 Shrader, W (NIH (Individual(s) Involved: Self): Advisory Board, NAMBRR), Asma, A (L), Ulusaloglu, A (L), Rogers, K (L), Cobanoglu, M (L), Howard, J (L), Shah, S (DePuy Synthes Spine (A, C, F, I))

C8 Xu, A (L), Marrache, M (L), Hardesty, C (Medtronic (A) Orthopediatrics (A)), Groves, M (L), Erickson, M (L), Murphy, R (L), Thompson, G (OrthoPediatrics (A, I, J)Shriners Hospitals for Children - salary as Interin Chief Medical Officer (B)Wolters Kluwer - salary as Executive Editor, Journal of Pediatric Orthopaedics (B)), Sponseller, P (DePuy Synthes spine (C, I) Orthopediatrics (A))

C9 Belthur, M (L), Burns, J (L), Singleton, I (L), Temkit, M (L), Sitzman, T (L)

D1 Alriksson-Schmidt, A (L), Hägglund, G (L), Hollung, S (L), Ahonen, M (L), Andersen, G (L), Eggertsdottir, G (L), Gaston, M (L), Jahnsen, R (L), Jeglinsky Kankainen, I (L), Nordbye-Nielsen, K (L), Tresoldi, I (L)

D2 Berweck, S (Ipsen (A, F)Merz Pharmaceuticals (E)Pharm-Allergan (F)), Kim, H (AiCME (F); Allergan (A); Catalyst Medical Edu LLC (F); Dysport (F); Xeomin (F), Banach, M (Allergan (F) Ipsen (F)Kedrion (F)Merz Pharmaceuticals (A, F)Shire (F)), Hanschmann, A (Merz Pharmaceuticals (B)), Althaus, M (Merz Pharmaceuticals (B)), Bonikowski, M (Allergan (A, E, F)Ipsen (A, E, F)Merz Pharmaceuticals (E)Teva (E))

D3 Kim, J (L), Jang, D (L)

D4 Yang, D (L), Hurd, C (L), Lorenzetti, D (L), Yang, J (L), Condliffe, E (Trexo Robotics (C))

D5 Kolaski, K (Piramal (F)), Romeiser Logan, L (L), Butler, C (L)

D6 Bania, T (L), Taylor, N (L), Chiu, H (L), Charitaki, G (L), Billis, E (L)

D7 Chiu, H (L)

D8 Quartermaine, J (L), Johnston, L (L), Rose, T (L), Auld, M (L)

D9 Arbour-Nicitopoulos, K (L), Wright, F (Holland Bloorview Kids Rehabilitation Hospital (B)), Bremer, E (L), Leo, J (L)

- E1 te Velde, A (L), Morgan, C (L), Tantsis, E (L), Golland, P (L), Berry, J (L), Korkalainen, J (L), McMurdo, R (L), Shehata, R (L), Badawi, N (L), Novak, I (L)
- E2 Aravamuthan, B (SK Life Science (F)), Shusterman, M (L), Snyder, L (L), Lemmon, M (L), Bain, J (L), Gross, P (L)
- E3 Sobush, K (L), Casey, T (Missouri Foundation for Health (E)), Salzman, N (Missouri Foundation for Health (E))
- E4 Mehrotra, K (L), Jantzie, L (L), Hoon, A (L), Robinson, S (L), Chin, E (L)
- E5 Sukal-Moulton, T (L), Yang, X (L), Coons, D (L), Krefman, A (L), Allen, N (L), Gaebler-Spira, D (L)
- E6 Miller, S (L), Juricic, M (L), Coates, J (L), O'Donnell, M (L), Mulpuri, K (Allergan (C)Canadian Orthopaedic Foundation (G) IPSEN (C)Johnson & Johnson (C)Pediatric Orthopaedic Society of North America (Other Financial or Material Support)Pega Medical (C, I))
- E7 Sobotka, S (L), Lynch, E (L), Graham, R (L), Msall, M (L)
- E8 DiFazio, R (L), Berry, J (L), Melvin, P (L), Shore, B (L)
- E9 Hulst, R (L), Gorter, J (L), Voorman, J (L), Kolk, E (L), van der Vossen, S (L), Visser-Meily, A (L), Ketelaar, M (L), Pillen, S (L), Verschuren, O (L)
- F1 K (OrthoPediatrics (A)), Shrader, W (NIH (A), Narayanan, U (L), Chambers, H (AbbVie (A)OrthoPediatrics (A)), McCarthy, J (L), Graham, K (OrthoPediatrics (A)), Narayanan, U (L), Davids, J (OrthoPediatrics, Inc (A), Pierz, K (L), Van Campenhout, A (L), Rhodes, J (OrthoPediatrics (A)Smith Nephew (E)), Shore, B (L), Chambers, H (AbbVie (A)OrthoPediatrics (A)), Novacheck, T (L), Dreher, T (Nuvasive (A))
- F2 Kay, R (Johnson & Johnson (D); Medtronic (D); Pfizer (D); Zimmer Biomet (D), mcCarthy, J (L), Graham, K (OrthoPediatrics (A)), Narayanan, U (L), Pierz, K (L), Novacheck, T (L), Dreher, T (Nuvasive (A)), Veerkamp, M (L), Shrader, W (NIH (A), Rutz, E (L), Theologis, T (L), Shilt, J (L)
- F3 Shore, B (L), Graham, K (OrthoPediatrics (A)), Narayanan, U (L), Davids, J (OrthoPediatrics, Inc (A), Pierz, K (L), Van Campenhout, A (L), Shrader, W (NIH (A), Theologis, T (L), Veerkamp, M (L), Dreher, T (Nuvasive (A)), Kay, R (Johnson & Johnson (D); Medtronic (D); Pfizer (D); Zimmer Biomet (D), McCarthy, J (L)
- F4 Santini, C (L), Neto, L (L), Brodt, G (L), Comparsi, E (L)
- F5 Santini, C (L), Neto, L (L), Brodt, G (L), Comparsi, E (L)
- F6 Bonnefoy-Mazure, A (L), De Coulon, G (L), Armand, S (L)
- F7 Cai, H (L), Shen, M (L), Wang, Z (L), Jin, S (L), Xu, C (L), Chen, C (L), Lu, Y (L)
- F8 Lennon, N (L), Bourantas, C (L), Beaman, J (L), Niiler, T (L), Owens, L (L), Shrader, W (NIH (Individual(s) Involved: Self): Advisory Board, NAMBRR)
- F9 Church, C (L), Biermann, I (L), Lennon, N (L), Henley, J (L), Butler, S (L), Niiler, T (L), Shrader, W (NIH (Individual(s) Involved: Self): Advisory Board, NAMBRR), Miller, F (L), Howard, J (L)
- G1 Miller, S (L), Juricic, M (L), Farr, J (L), Mulpuri, K (Allergan (C)Canadian Orthopaedic Foundation (G)IPSEN (C)Johnson &

- Johnson (C)Pediatric Orthopaedic Society of North America (G) Pega Medical (C, I))
- G2 Stott, S (L), Narayanan, U (L), Fehlings, D (L), Graham, K (OrthoPediatrics (A)), Willoughby, K (L), Mulpuri, K (Allergan (C)Canadian Orthopaedic Foundation (G)IPSEN (C)Johnson & Johnson (C)Pediatric Orthopaedic Society of North America (G) Pega Medical (C, I)), Shore, B (L), Theologis, T (L), Park, M (L)
- G3 Mifsud, M (L), Narayanan, U (L), Mulpuri, K (Allergan (C) Canadian Orthopaedic Foundation (G)IPSEN (C,)Johnson & Johnson (C)Pediatric Orthopaedic Society of North America (G) Pega Medical (C, I)), Shore, B (L), Shrader, W (NIH (A), Theologis, T (L), Stott, S (L), Rhodes, J (OrthoPediatrics (A)Smith Nephew (E)), Kulkarni, V (L), Jozwiak, M (L), Givon, U (L), Ponten, E (L)
- G4 Kanashvili, B (L), Rogers, K (L), Miller, F (L), Shrader, W (NIH (A), Howard, J (L)
- G5 Cho, K (L), Shah, A (L), Sheppard, E (L), Tabaie, S (L)
- G6 Oladeji, A (L), Landau, A (L), Gordon, J (Orthopediatrics (A, I)), Hosseinzadeh, P (L)
- G7 Shah, A (L), Cho, K (L), Sheppard, E (L), Tabaie, S (L)
- G8 Shrader, W (NIH (Individual(s) Involved: Self): Advisory Board, NAMBRR), Imerci, A (L), Rogers, K (L), Howard, J (L), Miller, F (L)
- G9 Moore, H (L), Gardezi, M (L), Burroughs, P (L), Rubin, L (3D Surgical, Inc. (J)American Academy of Hip and Knee Surgeons (A)American Academy of Orthopedic Surgeons (A) DePuy Synthes (A)Johns Hopkins University Press (G)SLACK, Inc. (I)Thompson Surgical Instruments (A)), Frumberg, D (Orthopediatrics (A)), Grauer, J (L)
- H1 Garvey, S (L), Curran, P (L), Shore, B (L), Vuillermin, C (L)
- H2 Rolin, O (L), Lynn, J (L), Wolf, A (L)
- H3 Bourgeois, A (L), Kirton, A (L), Metzler, M (L), Giuffre, A (L), Hollis, A (L), Zewdie, E (L)
- H4 Ebner-Karestinos, D (L), Araneda, R (L), Thonnard, J (L), Bleyenheuft, Y (L)
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