IC1

CLINICAL PRACTICE POINTS FOR THERAPISTS: INFANTS AND TODDLERS WITH MOTOR DISABILITIES

Authors: Melissa Tally, PT MPT ATP; Linda Wnek, MA; Claire Morress, MEd OTR/L ATP

Level: Intermediate

Purpose: This instructional course is one of a group of instructional courses designed to provide an update of current practice to occupational therapists and physical therapists working in pediatrics. Each course addresses issues specific to a stage of the lifespan continuum (infant, preschool, school age and youth/young adult) and provides practical therapy suggestions. In addition, the theoretical/philosophical frameworks guiding the practice suggestions are introduced and the state of the evidence about the therapy approach is reviewed. This instructional course addresses intervention for infants and toddlers who have cerebral palsy or other motor disabilities.

Target Audience: Occupational therapists and physical therapists

Course Summary: This course presents key concepts, evidence and therapeutic interventions that support outcomes that matter for infants and toddlers with cerebral palsy. Early intervention requires a holistic approach and development of a ‘first program’ that focuses on active exploration and participation within the context of environments that are meaningful for infants and toddlers across all GMFCS levels. The course will focus on activity-based therapy strategies for maximizing child-environment interactions, including providing extrinsic supports, tapping into child factors (such as motivation and mastery), and optimizing sensory-motor function. Specific emphasis will be placed on the primary role of the parent and developing the parent-therapist partnership. Participants will learn how to integrate assistive technology for early mobility, positioning, access, and communication. Discussion of key frameworks and interventions will be enhanced by case examples and demonstrations.

Learning Objective 1: Understand the characteristics that define the birth to 3 population and how these guide a holistic approach to therapy.

Learning Objective 2: Understand what outcomes matter for the infant and toddler and what therapists can do to create an effective ‘first program’.

Learning Objective 3: Understand the role of the parent in the early therapeutic environment and learn strategies for promoting understanding, competence and partnerships.

Learning Objective 4: Know strategies for maximizing active participation and motor functioning through activity-based therapy, parent education and integration of assistive technology/equipment.

IC2

CLINICAL PRACTICE POINTS FOR THERAPISTS: WORKING WITH SCHOOL AGED CHILDREN USING COGNITIVE MODELS OF INTERVENTION

Authors: Deb Cameron, PhD MEd BScOT; Lisa Rivard, MSc

Level: Intermediate

Purpose: Introduction: This instructional course is one of a group of instructional courses designed to provide an update of current practice to occupational therapists and physical therapists working in pediatrics. Each course addresses issues specific to a stage of the lifespan continuum (infant, preschool, school age and youth/young adult) and provides practical therapy suggestions. In addition, the theoretical/philosophical frameworks guiding the practice suggestions are introduced and the state of the evidence about the therapy approach is reviewed. Purpose: This instructional course describes the use of cognitive models of intervention for school aged children using cerebral palsy (CP) and developmental coordination disorder (DCD) as two population examples.

Target Audience: Occupational therapists, and physiotherapists, speech language pathologists, physicians, special educators

Course Summary: This course will describe cognitive intervention approaches which can be used with school aged children with a variety of diagnoses including CP and DCD. The session will outline what cognitive approaches are, how they were developed, when they should be used, specific client prerequisites that are required, and evidence for their effectiveness. Examples of specific cognitive approaches including Cognitive Orientation to Daily Occupational Performance (CO-OP) will be provided along with evidence from the research literature. Knowledge will be applied to several different populations.

Learning Objective 1: To understand the principles underlying the use of cognitive approaches with school aged children.

Learning Objective 2: To be exposed to the current evidence regarding the use of cognitive approaches with school aged children.

Learning Objective 3: To be introduced to a current cognitive intervention – Cognitive Orientation to Daily Occupational Performance (CO-OP).

Learning Objective 4: To understand when to consider a cognitive approach.
IC3

ORTHOPAEDIC PROBLEMS IN CHILDREN WITH CEREBRAL PALSY: EVALUATION AND TREATMENT

Authors: Robert M. Kay, MD; Susan A. Rethlefsen, PT; Nina Lightdale, MD

Level: Basic
Purpose: To educate attendees in evaluation and treatment of children with cerebral palsy (CP) with common extremity problems
Target Audience: Physicians, physical therapists, occupational therapists and educators
Course Summary: Faculty will discuss state-of-the-art evaluation and treatment of lower and upper extremity problems in children with CP. Discussion will focus on common challenges encountered in various anatomic areas (hip, knee, long bones, foot/ankle, elbow and hand), appropriate surgical/non-surgical treatment, and methods to avoid common errors in problem identification and treatment recommendations. Content will be based both on the presenters’ clinical expertise and evidence in the literature. Gait data, videos, photographs and x-rays from sample cases will be used and handouts will be given to participants. Group discussion of difficult cases and clinical problems will be encouraged
Learning Objective 1: Accurately identify and evaluate common orthopaedic upper and lower extremity problems in CP.
Learning Objective 2: Gain awareness of common pitfalls in problem identification and treatment planning in CP.
Learning Objective 3: Outline a treatment plan for a child with CP with multiple lower and upper extremity problems.
Learning Objective 4: Gain perspective on the complexity of evaluation and treatment planning for children with CP.

IC4

ULTRASOUND GUIDANCE FOR NEUROTOXIN INJECTIONS, LOWER EXTREMITY AND TRUNK MUSCLES

Authors: Katharine Alter, MD; Florian Heinen, MD; Sebastian Schroeder, MD

Level: Intermediate
Purpose: Improve clinician familiarity with ultrasound for neurotoxin procedures/nerve blocks for lower extremity and trunk muscles. Review Ultrasound technology, interactive hands on session for participants to increase proficiency in applying ultrasound scanning techniques to guide neurotoxin injections/nerve blocks.
Target Audience: Developmental pediatricians, neurologists, physiatrists, orthopedic surgeons, physiotherapists, occupational therapists
Course Summary: Ultrasound is increasingly used by clinicians to improve the accuracy of injections for neurotoxin procedures/nerve blocks. This course will include a brief didactic lecture, review of commonly targeted muscles. The majority of the course will focused on small group sessions providing hands on experience with scanning. These interactive small group sessions will provide hands on training for key muscles/structures in the lower extremities and trunk.
Learning Objective 1: Increase clinicians familiarity/understanding of ultrasound technology.
Learning Objective 2: Improved clinical evaluation of patients using muscle visualization techniques.
Learning Objective 3: Identify ultrasound anatomy of key muscles and nerves in the lower extremities and trunk frequently targeted for injection with Neurotoxins.
Learning Objective 4: Identify ultrasound anatomy of key muscles and nerves in the lower extremities and trunk frequently targeted for injection with Neurotoxins.
Space is limited for this hands-on course. Volunteers are needed. Contact meetings@aacpdm.org for additional information.
IC5

TECHNICAL TROUBLE-SHOOTING: MANAGING COMMON COMPLICATIONS IN CHILDREN WHO ARE TECHNOLOGY ASSISTED

Authors: Eyal Cohen, MD; Trey Coffey, MD; Joanna Soscia, MN (NP)

Level: Intermediate

Purpose: To familiarize participants with common devices used to assist children with medical complexity and how to trouble-shoot through their potential complications

Target Audience: Physicians, nurses, therapists, educators

Course Summary: This workshop will focus on approaches to treating common clinical problems in children with complex health needs who are technology assisted. The goal of this interactive workshop is to familiarize participants practicing in a variety of settings with common presenting problems in these children including hands-on simulation with three technological devices (gastrostomy, tracheostomy, central lines). The format proposed will combine an interactive didactic approach highlighting the indications for insertion of various technological devices as well as hands-on experience as participants rotate through three stations with mannequins and a variety of technological devices to work through real-world clinical vignettes.

Learning Objective 1: To familiarize participants with indications for and alternatives for the insertion of technological devices used in children with medical complexity such as gastrostomy tubes, tracheostomy tubes, and central lines.
Learning Objective 2: To improve knowledge in the care of these technological devices and common complications in their use.
Learning Objective 3: To develop an organized and evidence-based approach for diagnosing and managing common acute problems in children with technology dependence.
Learning Objective 4: To rapidly trouble-shoot malfunctions in different technological devices.

IC6

THE GROSS MOTOR FUNCTION MEASURE (GMFM-88 AND GMFM-66): WHAT’S NEW AND WHAT SHOULD I DO?

Authors: Dianne J. Russell, PhD; Eva Nordmark, PhD PT; Marilyn Wright, MSc PT; Peter L. Rosenbaum, MD

Level: Basic

Purpose: The purposes of this workshop are (i) to bring participants up to date on new research related to the Gross Motor Function Measure (GMFM) and (ii) to discuss the opportunities and challenges to using the different versions of the GMFM for both clinical practice and research.

Target Audience: This course should be of interest to service providers and researchers who are currently using or are interested in using the GMFM.

Course Summary: The Gross Motor Function Measure was validated (and first published in 1989) to measure change in gross motor function in children with cerebral palsy. The shorter GMFM-66 was validated and shown to be as responsive to change as the GMFM-88. Recently two approaches have been created to further reduce the number of items needed to be administered to obtain a GMFM-66 score (Item Sets and the Basal & Ceiling approaches). This workshop will review the different versions of the GMFM and use case examples to demonstrate the new version of the scoring software (GMAE-2) for the GMFM-66.

Learning Objective 1: To provide background information on the development and validation of the different methods of obtaining a GMFM-88 score and GMFM-66 scores using the complete GMFM-66, the Item Sets, and the Basal & Ceiling approaches.
Learning Objective 2: To demonstrate, using case examples, the different methods of administering the GMFM-66 (GMFM-66, Item Sets and Basal & Ceiling approaches) to get a GMFM-66 score.
Learning Objective 3: To demonstrate the new version of the software (GMAE-2) using case examples to highlight different features of the program including plotting scores on the percentile curves.
Learning Objective 4: To discuss the pros and cons of the different versions for clinical practice, registries and research.
HELP! MY CHILD DOESN'T SLEEP. A MULTI-DISCIPLINARY APPROACH TO SLEEP DISTURBANCES IN CHILDREN WITH CEREBRAL PALSY AND OTHER NEUROMUSCULAR DISORDERS

Authors: Laurie Glader, MD; Dennis Rosen, MD

Level: Basic
Purpose: To review the broad range of etiologies underlying sleep disturbances in children with cerebral palsy and other neuromuscular disorders and to develop a rational approach to their evaluation and treatment.
Target Audience: Physicians, physical and occupational therapists, nurse practitioners, any practitioner who works with children who have neuromuscular disorders.

Course Summary: Sleep disturbances are present in 30% of the general pediatric population, and the prevalence is much higher in children with underlying medical conditions. Treatment of sleep disturbances in children with cerebral palsy and/or other neuromuscular disorders requires an understanding of the basic processes underlying normal sleep and of the ways in which those processes can be disrupted. This course will explore the differential diagnosis of sleep disturbances in this population and provide a rational approach to their evaluation and management, recognizing that this will often involve a multidisciplinary approach spanning a number of medical sub-specialties. Participants will become familiar with the information that can be obtained with a sleep study, and how a sleep study can assist with diagnosis and management. Circadian phase disorders will be discussed, as will the ways in which various factors such as medications, underlying lung disease and GE reflux can combine to cause sleep disordered breathing. Behavioral, medical, surgical and technologically assisted treatment options will be presented, and the ethical aspects of these interventions explored. Throughout, case-based discussion with audience participation will illustrate the concepts being addressed.

Learning Objective 1: To be able to identify the main causes of sleep disturbances in this population and undertake a step-wise evaluation.
Learning Objective 2: To recognize the information a sleep study can provide and how some of the pathophysiological processes which can result in disturbed sleep will manifest on a sleep study.
Learning Objective 3: To be able to apply the information gleaned from a sleep study to practical interventions.
Learning Objective 4: To recognize some of the ethical issues surrounding the treatment of sleep disordered breathing.

SPECIAL NEEDS APPS FOR CHILDREN AND ADULTS

Authors: Aloysia Schwabe, MD; Rochelle Dy, MD; Judy Lariviere, OTR/L; Hannah Fleming, SLP

Level: Basic
Purpose: Use of iPad and iPod “apps” by the disabled population has increased dramatically over the past few years. Our presentation serves to review an example of an interdisciplinary collaboration involving parents, therapists, educators, physicians and social workers that utilizes a web-based resource to assist with categorizing and reviewing apps for their appropriateness for use by children and adults with intellectual and physical disabilities. Techniques and strategies to enhance access and maximize therapeutic benefit will also be explained including compatibility of specific apps with switches and optimal positioning considerations.
Target Audience: Speech language pathologists, occupational therapists, physical therapists, physicians and educators

Course Summary: Growth of the program from its inception to its current scope will be described including contributions from specialists of differing backgrounds. Advantages and limitations of this form of assistive technology will be discussed. The apps’ review process will be explained and potential for IEP inclusion will be discussed. Funding resources for devices will also be briefly reviewed.

Learning Objective 1: Increase knowledge about how this form of AT can be utilized as a therapeutic intervention both in the home and school setting.
Learning Objective 2: Review access and positioning considerations to improve successful use of this technology.
Learning Objective 3: Review the wide range of patients that could benefit from this technology.
Learning Objective 4: Increase the practitioner’s knowledge about how to review an app for its potential therapeutic benefit.
IC9

ASSÉSSEMENT & INTERVENTION FOR CORTICAL VISUAL IMPAIRMENT

Authors: Christine A. Roman, PhD; Alan Lantzy, MD

Level: Intermediate

Purpose: This session will provide a standardized method to assess cortical visual impairment (CVI) in children who have cerebral palsy and/or additional developmental delays or disabilities. This session will also offer information about methods used to improve functional vision in individuals who have CVI.

Target Audience: Health care, physical therapists, occupational therapists, speech language pathologists, developmentalists

Course Summary: Participants of this session will be provided with information designed to identify infants and children who have CVI. CVI is the leading cause of visual impairment in the North America, however, there is no established protocol in place to identify children with CVI. Children with CVI have a variety of etiologies and may have significant additional disabilities. Children with CVI may be misdiagnosed or diagnosed well beyond the occurrence of the incident that caused CVI. Some of the behaviors of children with CVI have been incorrectly identified as autism, attentional difficulties, or even profound cognitive impairment (lack of attention to faces, attraction to shiny material, delayed play, delayed communication, delayed social skill development). Children with CVI may demonstrate similar behaviors but for reasons that are clearly explained by their visual impairment. This inconsistency and misinterpretation of the behaviors may result in children missing opportunities for early intervention that could facilitate improved use of functional vision. Misdiagnosis may also result in the child receiving an intervention/treatment that is ineffective. The CVI Range (Roman Lantzy, 2007) is a reliable and valid instrument (Newcomb, 2010) used to identify and evaluate the extent of affect of CVI and can be used with infants through 21 year-old individuals. The CVI Range methodologies include information derived through interview, observation, and direct evaluation of the child in order to derive a score on a zero-10 continuum. The CVI Range can be conducted in a home, office, school, or therapy environment.

Learning Objective 1: The participant will increase understanding regarding the causes of CVI.
Learning Objective 2: The participants will demonstrate the ability to conduct the components of The CVI Range.
Learning Objective 3: The participants will increase understanding of a design for habilitation or rehabilitation of functional vision in individuals who have CVI.
Learning Objective 4: The participants will increase understanding of the differentiation between CVI and other neurodevelopmental disorders.

IC 10

AN OVERVIEW OF INTRATHecal BACLOFEN MANAGEMENT AND TROUBLESHOOTING

Authors: Linda Krach, MD; Michael Partington, MD; Jean Stansbury RN, CPNP, MSN

Level: Intermediate

Purpose: To summarize common ITB management practices and strategies for troubleshooting, and to summarize Gillette Children’s experience with ITB complications and the literature on ITB complications.

Target Audience: Health care professionals involved in the management of intrathecal baclofen pumps

Course Summary: A multi-disciplinary team from Gillette Children’s Specialty Healthcare will summarize their experience with ITB management and their algorithm for troubleshooting. The course will include case-studies to demonstrate the management, observed complications, and troubleshooting principles. Presenters will elicit participant opinions and their own case examples/questions throughout the course.

Learning Objective 1: Describe the typical course when beginning management with an ITB pump and understand the reasoning behind initial dosing and deciding when work-up of system integrity is indicated.
Learning Objective 2: Understand the rationale for various techniques to evaluate the system hardware.
Learning Objective 3: Understand the existing literature about ITB complications.
Learning Objective 4: Understand the indications for surgical intervention.
IC11

IMAGING OF THE PEDIATRIC BRAIN, SPINAL CORD AND MUSCLE: TOOLS AND APPLICATIONS

Authors: Andrea Poretti, MD; Alec Hoon, MD

Level: Intermediate

Purpose: To provide an in depth understanding of the principles and applications of the wide spectrum of conventional and advanced imaging techniques available in the evaluation of etiology and prognosis in children with neurodevelopmental disabilities (NDD).

Target Audience: Clinicians involved in the evaluation of children with NDD.

Course Summary: Imaging plays a key role in the evaluation of children with NDD. The spectrum of modalities available may provide a specific diagnosis or guide further etiological testing. Conventional imaging techniques such as computed tomography, T1- and T2-weighted as well as FLAIR magnetic resonance (MR) images with and without contrast, and MR angiography allow the study of anatomical structures. Advanced MR techniques such as diffusion weighted, diffusion tensor, perfusion weighted and susceptibility weighted imaging as well as 1H-MR spectroscopy allow additional non-invasive evaluation of the various biological processes and functions of the nervous system. Both conventional and advanced imaging techniques may be applied to investigate children with NDD due to disorders of the brain, spinal cord and/or muscles. Given the wide spectrum of imaging modalities available as well as the variability in diagnostic yield and costs, it is critical for clinicians to understand what each modality can offer. After a short technical introduction, we will interactively discuss indications; “non-indications” (when the modality is unlikely to be beneficial); and advantages vs. disadvantages of these imaging tools based on selected, illustrative clinical situations.

Learning Objective 1: The participant will understand the principles of the various imaging modalities available to clinicians.

Learning Objective 2: The participant will recognize clinical settings when specific imaging tools are indicated.

Learning Objective 3: The participant will recognize clinical and research applications of the imaging techniques.

Learning Objective 4: The participant will consider the use of these techniques in his/her clinical practice and research.

IC12

CREATING CONNECTIONS IN ADULT CARE THROUGH SELF MANAGEMENT AND SYSTEM NAVIGATION SKILLS DEVELOPMENT

Authors: Joanne Maxwell, MSc BScOT BSc; Andrea Lauzon, BScN

Level: Intermediate

Purpose: There has been a great deal of work in recent years aimed at preparing youth and their caregivers for the transition to adult care. While this preparation is critical, it is important to recognize that transition skills continue to develop following transition. This course will provide an overview of programming developed to address the ongoing need for skills development and capacity building following transition to adult services.

Target Audience: Health professionals, educators, administrators and researchers interested in successful transition.

Course Summary: LIFEspan is a cross-organizational outpatient program linking pediatric and adult rehab hospitals. Though our pediatric team focuses on preparation, few young people arrive in adult health care fully capable of navigating the complex adult system, nor with the skills to manage their care or fully participate in adult life. The health care system must recognize the need for continued development in these areas. Current strategies for developing connections across the health system and on self management education will be discussed. Group programming to address the ongoing need for skills development with our young adult clients will also be presented.

Learning Objective 1: To gain an understanding of the evidence for the need for continued self-management skills development following transition.

Learning Objective 2: To learn about curricula development in healthcare navigation skills, independent living skills and chronic pain for young adults with disabilities.

Learning Objective 3: To generate ideas around preparing clients to independently manage in adult care.

Learning Objective 4: To discuss strategies for engaging adult providers in continuing work in skills development.