President’s Message

Barbara H. Connolly PT, DPT, EdD, FAPTA USA

Hello IOPTP member countries,

The past year has been one of much activity for the IOPTP! We continue to listen to our membership about their concerns for the practice of paediatric physical therapy and to their needs for research to support services for children with special needs. The IOPTP has been able to reach out to many of our members through multiple methods such as our Website at the WCPT and increasingly through our Facebook page. We also have had the opportunity to talk personally with many of you.

The IOPTP believes that a review of the activities from the past year is in order for our members to become more aware of how the IOPTP is fulfilling the goals and objectives of our subgroup. The work of the IOPTP is predominately performed by emails and SKYPE calls so I am always amazed at what can be accomplished. I will review the major activities that have been accomplished and ones that are ongoing.

*Newsletters were published in February and in July. Both are available on the IOPTP website. These newsletters have provided information to the membership on clinical questions such as evaluation and treatment of torticollis and on activities of the IOPTP.

* Information about Guidelines and Fact sheets gathered from our member countries was published on the IOPTP website in January 2013. The document that we have published provides information on the name of the individual document, the language(s) used in the document, cost, and website where the document is available. This project
was undertaken in 2012 by the Committees on Education, Practice and Research and represents a coordinated effort by these committees. The Guidelines and Fact sheet document will be updated annually by these committees and provided to our membership through the website.

* The IOPTP Facebook page has been extensively accessed by physical therapists in pediatrics across the world. Information on published articles, conferences and clinical topics is regularly posted by the IOPTP Practice committee. Information about the activities of the WCPT is also posted regularly on this page.

* Changes in the IOPTP constitution were approved by the member countries. A major change addressed the ability of the IOPTP to have mail votes on issues between the IOPTP business meetings which are held at the WCPT meeting every 4 years. We are currently working on changes in the constitution which will clarify election of officers and the use of a nominating committee.

* The IOPTP submitted testimony to the WHO Committee on the Rights of Persons with Disabilities for a session on women and girls with disabilities in February 2013. The IOPTP was asked by the WCPT to prepare this testimony on their behalf. This document can be viewed on both the WCPT and the IOPTP websites.

* The IOPTP represented the WCPT at the UNICEF meeting on A World Fit for Children: The way forward for the full realization of the Rights of the Child in October 2013. At the request of the WCPT, the IOPTP will continue to represent the WCPT at WHO or UNICEF meetings when issues of Paediatrics are addressed.

* The IOPTP president presented a session at the Section on Pediatrics / American Physical Therapy Association Meeting in February and at the IOPTP/APTA meeting in November on the function of the IOPTP. The IOPTP worked throughout the year with the APTA in the planning of the combined IOPTP/APTA meeting.

* The IOPTP president and the treasurer of the IOPTP met with other WCPT subgroup presidents at WCPT headquarters in London for a 2 day meeting in March 2013. This meeting provided guidance to the subgroups on a multiple of areas such as increased interactions between the subgroups, management of subgroups, interactions between the subgroups and WCPT and on fulfilling the goals and objectives of the subgroups.

* The IOPTP/APTA Section on Pediatrics conference was held in Anaheim, CA in November 2013. Over 600 physical therapists attended the meeting. Grace O’Malley (Ireland) representing the IOPTP presented a 1 day preconference session on Obesity. Additionally, international speakers from Canada, the Netherlands, Norway, and Sweden were on the program representing the IOPTP. International attendees included individuals from Canada, Ireland, Italy, Netherlands, New Zealand, Norway, Sweden, Syria, and Taiwan.

* Korea and Nigeria were approved as member elects in July 2013. Both of these countries will be voted upon as full members in 2015. Additionally, the IOPTP has been working with other
countries in organizing pediatric special interest groups or organizations within the WCPT member countries. We recently have had contact with a number of pediatric organizations (Austria, Belgium, Finland, Japan, Spain, Syria, and Turkey) and are assisting these groups with applications. We anticipate at least 5 more member elects prior to the WCPT meeting in Singapore.

* The Committee on Research completed and analyzed the survey that was sent to our member countries in 2012. This information will be used to identify resources and methods for supporting international research. This committee is also developing topics for the 2015 WCPT Congress in Singapore. Another goal of the committee is to develop a website where researchers from member committees can provide current information related to their research program along with contact information. The Chair of the Committee on Research is currently serving on the International Science Review Committee of the WCPT whose function is to select presentations for the 2015 meeting.

* The Committee on Education has started work on identifying basic competencies in paediatrics needed by physical therapists. This committee will continue working on this project for the coming year. Input will be requested from all member countries by the committee during this activity. Several of our member countries have suggested that these competencies can be used to assist them in changing educational programs or in identifying individuals with advanced competencies in paediatrics.

* The Committee on Programs is working with other subgroups in the development of programming for the WCPT conference in 2015. The topics that are being investigated are: obesity, asymmetries (scoliosis, torticollis), management of pain in children, and management of individuals with life long conditions across the life span (musculoskeletal, pulmonary, and developmental). Suggestions for speakers will be requested from our member countries once the exact topics are selected.

This committee has also suggested topics for 90 minute sessions at the WCPT meeting which will present pros/cons on selected topics.

I hope that this summary of activities will be shared with your membership so that they can become even more aware of the function of the IOPTP. As we continue to grow, we hope that we can address the needs of our members but we need your input! We look forward to seeing many of you in person in Singapore in 2015 but encourage you to interact with the IOPTP through our committees and through our Facebook pages.

Best Wishes to all of you!

Barbara H. Connolly DPT, EdD, FAPTA

President, IOPTP
The IOPTP FACEBOOK page is a great resource for upcoming events and information on the IOPTP and the WCPT Congress. It is also a great resource for information on pediatric physical therapy with an international prospective on research, practice and advocacy.

IOPTP Committee Reports
The Secretary’s Report:

IOPTP joins the APTA’s Section on Pediatrics Annual Conference (SoPAC) 2013 for its mid-term conference

[Image of a group of people in a conference setting]
SoPAC was held at the Disneyland resort in Anaheim, CA, Oct 22-25, 2013. 23 international participants were among the 527 participants, learning and having fun together. Pre-con courses focused on FES, NDT, clinical instruction, childhood obesity, clinical reasoning in school settings and building power wheels race cars. Conference programming included 5 general sessions, 49 concurrent sessions, team-based learning round tables using case studies across the lifespan, and 8 round tables with special interest group topics. International speakers represented Sweden, Norway, Netherlands, Ireland and Canada. The opening session and the Founders’ Reception celebrated the past, present and future of pediatric physical therapy in honor of the Section on Pediatrics’ 40th anniversary. Posters and various products and resources were presented in the exhibit hall.

IOPTP officers and committee chairs met during the week and an IOPTP open meeting was attended by 40 individuals from around the world.

The 5th SoPAC conference will be held in St Louis, MO, Oct 21-24, 2014 with the theme: Innovation and Inspiration: Gateway to the Best. Pre-conference topics will include pediatric pelvic floor dysfunction, private practice, clinical instruction, the Harris Infant Neuromotor Test, and life-span development of individuals with cerebral palsy. The main conference schedule includes 6 plenary sessions, 43 concurrent sessions, team-based learning roundtables and regional roundtables. Posters, exhibits and a practice fair will be available in the exhibit hall. Participants are encouraged to participate in the Rock & Roll marathon, half marathon, relay and fun runs.

For further information on SoPAC2014, go to: www.sopac.us

Respectfully submitted,

Sheree York, PT,DPT,PCS
Clinical Spotlight: CYSTIC FIBROSIS- CF

CF care and follow up regarding to chest physiotherapy treatment and management at the

Department of Pediatrics, Haukeland University Hospital, Bergen, Norway

Vibeke Dreyer, Physioterapist PCS and

Stian Hammer, Physioterapist, MSc.

Contents:
1) What is CF; clinical manifestations
2) CF care at our center and overall treatment and management
3) Chest physiotherapy
4) Hypertonic saline as nebulize therapy
5) Reflection
1) Cystic fibrosis – What is CF; clinical manifestations?

CF is the most common lethal genetic disease in white populations, caused by mutation in the CF transmembrane conductance regulator chloride channel (CFTR – «CF gene»). CF is a chronic progressive disease. The CFTR dysfunction is expressed in epithelial cells and blood cells, affecting lungs, pancreas, intestinal and reproduction organs. There have been identified 1900 CFTR mutations which give great variation in disease expression (O'Sullivan and Freedman 2009).

We are 5 million people living in Norway and the incidence of CF is 1:4500 newborn.

We have Newborn screening; and have annual 10 new patients. In Bergen there are 1-2 newborn CF patients annually.

Today we follow up 76 CF-patients and of them 27 children (age 10 months – 16 years) at Haukeland University Hospital.

Cystic fibrosis and life expectancy
Life expectancy (LE) have increased dramatically through the last decades; in 1960's newborn LE was 5 years. Children born after 1990 have LE more than 25 years and children born today are expected to live more than 50 years! The reasons for this are both treatment and specialized CF center care (multidisciplinary follow-up). However, it is a high treatment burden for persons with CF because of daily and time-consuming treatment (O’Sullivan & Freedman 2009).

Chest physiotherapy is one of the cornerstones in CF treatment (Kerem et al. 2005).

Cystic fibrosis and gastrointestinal symptoms

Due to pancreas insufficiency, the patients is unable to benefit and absorb fat-soluble vitamins, carbohydrates and fat. Thickened intestinal secretions, malabsorption and decreased

(O’Sullivan & Freedman 2009)
In CF lungs, CFTR Dysfunction leads to

1) Increases mucus layer

2) Decreased percilia layer (fluid)

3) Reduced or impaired mucus cilia transport.

**Consequences;**

*Increased airway inflammation caused by infections (Homophiles influenza, Staph.aureus, pseudomonas aeruginosa, Burkholderia ceph, MRSA).*

*Chronic airway infection, chronic obstructive disease, progression of bronchiectasis, end stage with fibrosis, hypercapnia, and cor pulmonale is leading cause of death among 80 % of the CF patients (O’Sullivan & Freedman 2009).*

**Treatment goals with CF**

- Lung infection control
- Sustain or improve lung function
- Secure optimal nutrition

*......And try to live as normal as possible with family and friends!*  
(Cohen-Cymerknoh et al. 2011)
2) **CF follow up at Haukeland University Hospital according to CF guideline**

The 27 children get regular follow-up at our outpatient clinic from multidisciplinary CF team:

- Hospital controls every 6-8 weeks (Medical doctor, CF-Nurse, lung function, lung bacteria).
- Physiotherapy session 2 – 6 times each year including multiple breath washout test on regular basis to monitor lung function together with earlier mentioned spirometry assessment.
- Annual controls also including psychologist, social worker, dietician, x-ray.
- Extended control every 3rd year (HRCT, Aerobe work capacity testing, extended pulmonary tests, intestinal assessments and bone density).

*Treatment by us, follow up at home and by the primary health care physiotherapist*

We develop an individual chest physiotherapy treatment program for each patient due to age, individual situation/need, disease severity, motivation and self-managing. We teach the children, their parents, primary health care PT and the children’s personal assistants airway clearance techniques due to their individual program (described later). For all our patients it contains the following: breathing/- and coughing techniques integrated with inhalation therapy, physical activity, pep-devices and exercises for mobility, flexibility and strength. Most of our CF-children do treatment as described 1-2 times (1-2 hours) every day. They do their treatment in kinder garden or at school with primary health care PT once a day, 1-2 days each week and. The rest of the weekdays they get help from a personal assistant. The child do the evening treatment at home every day and both treatments daily in the weekend together with their parents. Most of the children have a separate room at school for inhalation therapy and they can use the gym for the physical activity combined with the inhalation. Based on experience it is important that the CF patient is followed up by both the PT in hospital and the primary health care PT to secure the very best treatment. The physiotherapist are professional and can give the optimal quality according to chest physiotherapy and know how to follow and evaluate the CF patient's state at any time. The physiotherapist can teach, practice, evaluate and adjust the techniques such as breathing/ and coughing, exercises and adjust the physical activity. We also have a main job in supporting and motivate both the patients and their parents. It is important for us in the CF-team to have regularly contact with the patients primary health care PT to be able to monitor the patient’s general health, mucus situation and presence of lung infection. If the child has exacerbations it needs to come to the hospital. Further we want to follow the child’s motivation for daily treatment. If the patient has lung infection and increased mucus or if they lack the motivation for daily treatment the primary healthcare PT might increase their participation with treatment 3-4 days a week for a period.

*Parts of CF-team participate at meetings in the local community*

Medical doctor, physiotherapist and social worker travels to the local community where the patients’ lives. Here we participate in meetings with the local primary health professionals at “milestones” for each individual patient. This “milestone” is when a CF-child starts in kinder garden and at school. We then highlight information about CF, medical treatment, chest physiotherapy and treatment burden for the family, together with
prognosis. We emphasize the seriousness of the illness and the importance of the daily treatment with chest physiotherapy, nutrition and the importance of using enzymes before every meal if pancreas insufficiency is present. The participants on these meetings are parents, grandparents and other relatives, the local doctor, physiotherapist and personal assistants, the head of the kinder garden and the child’s pedagogue. If the child is starting at school we invite the headmaster and teachers as well. After these meetings we experience that the kinder garden and school are helpful and in greater extent offer the child and families both treatment facilities room and gyms for physical activity. The cooperation with the local community therefore can be excellent due to our “out of hospital” contact.

3) Daily airway clearance treatment- Chest physiotherapy integrated with inhalation therapy

The principles of chest physiotherapy is to release/unstuck mucus, improve/support mucus cilia transport and remove the mucus (Gursli 2005).

![Diagram of mucus removal and transport](image)

**Actions that release/unstuck mucus are:**

- **Inhalation therapy IT.** The patients inhale Ventolin through chamber and then hypertonic saline (1mmol/ml NaCl) through nebulizer with volume from 2-6 ml in each treatment depended on age. IT is combined with breathing technique with slow tidal breathing and with deep inspirations with 3.sec. endinspiratory hold in a sequence 5 :1 and efficient to unstuck mucus. See effect of hypertonic saline with CF later and drawing with breathing technique under.

Inhalation therapy in both sidelying and upright position is recommended to alter regional ventilation during inhalation therapy.

Breathing patterns during inhalation therapy to optimize deposition of aerosol.
- **Physical activity.** Due to deep inspirations and increasing lung volume FRC (functional respiratory capacity), the mucus releases. To increase the lung volume the CF-patient need to get slightly sweat and breathless during the physical activity (Gursli 2005). For small children the physical activity is made like “playing” and we use various kinds of activity like throwing ball, play soccer, “floorball”, and jump on trampoline. Both children and youths can choose what physical activity they prefer. We also combine physical activity with long expirations and coughing to stimulate the movement of mucus during breaks alongside the chosen activity (see below). When we use physical activity for releasing mucus it is important that the child stop and remove/cough up the mucus that loosen during the activity. We use physical activity for 2 purposes with CF-patients 1) with the goal of release/unstuck mucus as described here or for 2) the goal of physical endurance, fitness training after normal principles.

**Physical activity for releasing / unstuck mucus.** Interval with 10-15 min. x 2 during a 60 min. treatment on children.

**Physical activity for endurance**

**Physical activity for strength, coordination and flexibility by stretching.**

**Actions that improve/support mucus cilia transport is:**
- Slow long expirations.
  
  Slow and long expirations with open airways will increase the cilia transportation and mucus (Fink 2007).

Techniques for teaching this is: To make “fog on a mirror” and then draw in the fog, to draw together with breathing, use blow toys, to sing, make soap bubbles and use “bubble-pep”. We combine this with physical activity.

- “Positive expiratory pressure devices” such as pep-mask. (Gursli 2005)
Practice treatment skills!!

“Fog on mirror”. Long exhalations, to improve mucocilia transport 😊

Positiv expiratory pressure device –PEP mask

Actions that remove the mucus are:

- **Cough techniques**
  We teach the children cough techniques initiated on high and long lungvolumes. When the child cough initiated on low lung volumes they will reach and remove the mucus from the peripheral small airways. This is called “cough technique”. They make a mute O-sound with open airways during a slow expiration, they initiate a gentle cough almost at end of this expiration before they inspire and then cough initiated at a high lung volume. This “cough technique” is very efficient in combination with inhalation therapy and physical activity as described earlier (Gursli 2005).

- **“Huff” techniques /FET- forced expiration technique** (developed by J.Prior)
  We have experienced that “cough technique” is very efficient and the majority of our patients prefer to use that before FET but some use both.

4) Hypertonic saline as nebulize therapy
Hypertonic saline is defined as concentrations above 3 %. Suggested treatment mechanism:

- Breaking of the ionic bonds within the mucus gel
- Dissociate of DNA from mucus protein
- Induction of osmotic flow of water into the mucosa layer
- Stimulation of cilia beats
- Absorption of water from mucosa and sub mucosa
- Reduction of edema
- Sputum induction and increased cough  (Elkins and Bye 2006)
5) Reflections.
Working with chest physiotherapy to CF–patients in the nineties we used psychical activity, passive percussions, positioning, pep-mask and FET. We did not integrate inhalation therapy in the chest physiotherapy with emphasizing on breathing pattern during inhalation. The children did not cough initiated on a low lung volume, but used mostly FET and coughing on a high lung volume. Our patients did not inhale hypertonic saline, but small volumes of Ventolin/Mucomust and only in sitting position. The patients were often hospitalized for treatment with antibiotics at our hospital.

New knowledge after visiting colleague Louise Lannefors in Lund, Sweden made us change our practice in the beginning of the 2000`s. We then started to integrate inhalation therapy into chest physiotherapy with focus on the quality of breathing and positioning during inhalation. We increased the focus on “removing” the mucus during treatment. We also introduced the “cough technique” combined with earlier mentioned airway clearance techniques to our patients after learning it from our colleague Sandra Gursli in Oslo, Norway. In 2009 our patients started to inhale hypertonic saline integrated with tidal breathing, deep inspirations and “cough technique” during inhalation. We still emphasis the use of physical activity in our treatment, but we now have a greater focus compared to earlier that the children must remove mucus during the whole airway.
clearance treatment session. As mentioned earlier we also cooperate well with the local community (primary health care, school assistant) where our patients live.

Now our patients are much healthier than earlier. They are almost never hospitalized for treatment, the patients and their parents find the treatment efficient, the majority has normal spirometry, slow progression of lung damage (HRCT-thorax) and only one of 27 patients have chronic pseudomonas infection. The patients also get excellent medical treatment at our unit combined with the chest physiotherapy. Stian Hammer has leaded a research project on CF-patients at our unit and he will soon write an article for publishing his results.

References


Member Spotlight: My work with FOCOS

This past August (2013) I had the great pleasure of joining FOCOS, the Foundation of Orthopedic and Complex Spine, on a medical mission trip to Accra, Ghana. FOCOS is a non-Profit organization that was founded in 1998 by Dr. Oheneba Boachie-Adjei. The mission of this foundation is to provide high quality, cutting edge orthopedic care to improve the quality of life of people in Ghana and other West African countries. Their long-term vision is to develop a sustainable infrastructure for state of the art orthopedic care and education in sub-Saharan Africa.

In 2012, FOCOS opened its own hospital in Accra. It is a 50-bed Orthopedic Hospital that provides comprehensive care as well as diagnostics such as radiology, CT scan, echocardiography and full laboratory services. They provide outpatient consultation, pharmacy services, surgery, and physiotherapy. Since 1998, FOCOS has performed over 1,000 surgeries and has had over 27,000 outpatient visits related to complex spine surgery, joint replacements, club foot procedures, shoulder surgery, research and education. Four to six times per year, FOCOS brings surgeons, nurses, and physical therapists from all over the world together to perform surgery and provide rehabilitation for children and adults from Ghana, Ethiopia, and Sierra Leone.

I learned of this amazing foundation from my daughter, Leigh-Ann Plack, PT, DPT, a physical therapist at the Hospital for Special Surgery in New York City where Dr. Boachie practices. Dr. Boachie’s personal story, his mission, impressive vision and its focus (no pun intended!) on pediatric physical therapy all intrigued me but, the real reason I went was because my daughter had gone two-years ago and could not stop talking about “the kids”, the amazing kids. So we decided it would be fun to go together on one of the upcoming trips.
We went for 10 days where I met some of the most incredible children, adults, and volunteers. The children ranged in age from about 3 to 18, some spoke English, most did not, but all spoke the language of physical therapy and fun! I was able to follow these children from their pre-operative antics through surgery, recovery, and rehabilitation. What amazed me most was the resilience I saw in these children. I clearly knew they were in pain because I saw first hand the major surgeries they endured. Just hours out of surgery, I remember seeing 7-year-old Kidist at her bedside and I said “are you in pain”, she just looked at me and through a single tear drop said “no pain”! Kidist just wanted to get up and out of bed so she could walk down the hall to visit her friends. This scenario was repeated over and over with 8-year-old Behalu (aka “the mayor”), 10-year-old Habte, 11-year-old Medina, 18 year olds Ibrahim and David and so many others.

Eighteen-year-old Ybeckel stands out for me because he had a particularly severe kyphoscoliosis [(169° kyphosis and 171° scoliosis with compensatory curves of 119° and 50° (no, the numbers are not a typo!)]. He also required multiple rib resections so I knew he was in particularly bad pain. One day I walked in and Ybeckel just looked at me and meekly said, “No, I can’t”. I could tell he was in incredible pain, so I made him comfortable and told him to rest and I would come back later. I then went to see Rosa, Ybeckel’s friend who was 1-day post op. Rosa was Ybeckel’s “buddy”, and her room was 3 doors down from him. I got Rosa out of bed and was prepared to take it slow, but she had other ideas! She pointed down the hallway and I realized she wanted to see Ybeckel, so off we went, walker in hand. We got to Ybeckel’s room, peaked in, and Ybeckel grinned from ear to ear. Next thing I hear is “I walk”. It was Ybeckel who a moment ago was in excruciating pain, but, it did not matter, he saw Rosa and wanted to be with his friends. I brought Rosa back to her room, went and got Ybeckel out of bed, and of we went down the hall to visit his friends. As I left the unit about 20 minutes late, I saw Rosa, Ybeckel, and about 8 other little ones just chatting away as if they were at a tea party; that is community! Each time a child returned
from surgery, his/her friends would come by – some were awaiting surgery, others already had their surgery – and they would care for each other. Whether that meant, just sitting nearby for comfort, moving blankets or fixing pillows, they helped each other. They truly became a family, the family that each of them left behind so they could get their surgeries.

Our trip included visits to the Volta region of Ghana as well as Cape Coast, where I learned a great deal about the history and culture of the Ghanaian people. Each trip was better than the next, they were very thought provoking and I learned a lot, but I will say, nothing compares to what I learned at the FOCOS Hospital working with children who need so much but ask so little. Being a pediatric physical therapist for over 30 years, I have always loved working with children because they never cease to amaze me. I have learned to “never say never” but seeing these children progress from having multilevel complex spinal therapy to joining us for our afternoon “physio dance parties” in less than 10 days truly left me in awe and reminded me once again why I so LOVE what I do!

If you would like to learn more about the work of Dr. Boachie and the volunteers of FOCOS visit http://www.orthofocos.org or like us on Facebook.

Margaret Plack, PT, DPT, EdD (USA)
The World Confederation for Physical Therapy has announced a list of prominent international speakers for the world’s largest and most important physical therapy gathering, to be held in Singapore 1st – 4th May 2015.

The programme for the WCPT Congress 2015 will include 25 focused symposia featuring speakers from across WCPT’s five regions. Focused symposia are core congress sessions providing a forum where cutting edge research and practice perspectives can be explored and debated. Each focused symposium is organised by a convenor, who leads an international group of speakers through linked research-focused presentations. The symposium ends with key take-home messages for practice, research, education, management and policy.

“We’ve had more proposals for focused symposia than ever before, which means we have been able to select topics with high calibre speakers that physical therapists all over the world will be excited to hear from," said Aimée Stewart, Chair of WCPT’s International Scientific Committee, which has responsibility for putting together the programme for the WCPT Congress. “Focused symposia are a very popular feature of our congresses, drawing large audiences. They provide the opportunity not just to hear from world authorities, but to engage with them in discussion.”

The paediatric focused symposium subjects and speakers are:

- **(In)activity and health in childhood onset disability across the lifespan**
  Janke de Groot (Netherlands), Tim Takken (Netherlands), Olaf Verschuren (Netherlands), Carol Maher (Australia), Lesley Wiart (Canada)

- **Emerging use of interactive technology in rehabilitation for young people**
  Hilda Mulligan (New Zealand), Jennifer L Rowland (United States of America), Marlene Sandlund (Sweden), Joanne Potterton (South Africa), Parimala Kanagasabai (New Zealand)

- **Go baby go!: solutions for maximizing augmented mobility for children**
  Ginny Paleg (United States of America), Cole Galloway (United States of America), Elisabet Rodby- Bousquet (Sweden), Hsiang-Han Huang (Taiwan)

- **Muscle strength in cerebral palsy treatment: current issues and developments**
  Annet J. Dallmeijer (Netherlands), Karen J. Dodd (Australia), Diane L. Damiano (United States of America), Desiree B. Maltais (Canada), Nicholas F. Taylor (Australia)
Further details about the symposia and the programme for WCPT Congress 2015 can be found at: [www.wcpt.org/congress/fs](http://www.wcpt.org/congress/fs)

Please contact Tracy Bury if you have specific queries: [bury@wcpt.org](mailto:bury@wcpt.org).

We are seeking submissions for the next newsletter. The next newsletter will focus on assistive technology and devices.

*Submissions are due by [July 15, 2014](http://www.wcpt.org/congress/fs).*

Please send submissions to Erin Wentzell at ewentzell@gmail.com