**Keynote Speakers SPS9**

**Professor Peter O’Sullivan,** Professor of Musculoskeletal Physiotherapy, School of Physiotherapy and Exercise Science, Curtin University, Australia

Professor O’Sullivan and his team have an international reputation for clinical research investigating the development, underlying mechanisms and targeted management approach for disabling low back pain – called ‘cognitive functional therapy’. Professor O’Sullivan’s expertise is linking of clinical research to the clinical setting.

***Keynote Address 1:* Myths and facts about LBP**

***Abstract:*** Back pain is commonly thought to be caused by an injury, resulting in damage to the spine. This belief has driven exponential increases in radiological imaging to identify ‘pathological structures’, injections and to treat ‘painful structures’ and in some cases surgery directed to these structures. Physiotherapy practice has responded to this problem with a various manual treatments and exercise interventions with a view to correct ‘biomechanical faults’ presumed to be underlying the problem. These approaches together have not arrested the escalating cost and disability burden of back pain in our community.

In contrast to these beliefs, contemporary research suggests that back pain often develops in adolescence and sets a trajectory for later life. It presents more like a chronic disease than an injury and findings on MRI scan correlate poorly with the back pain experience. Furthermore biomechanical faults are not strongly causally linked to back pain and people with disabling back pain present with excessive trunk muscle co-contraction rather than a lack of ‘core stability’. There is growing evidence that disabling back pain is associated with vicious cycle of unhelpful cognitions that drive fear, distress, protective guarding, avoidance and sensitization. Current clinical practice is often discordant with the guidelines and reinforces and exacerbates this process.

This evidence challenges current clinical practice to reframe our understanding, communication and management of back pain disorders.

***Keynote Address 2:* What does high value care for LBP look like?**

***Abstract:*** Low back pain is the leading cause of disability in the world. In spite of a huge increase in investment to treat LBP, the disability burden is increasing. Many treatments for LBP are considered low value care – as they are expensive, risky and or have limited efficacy.

In contrast high value care is relatively inexpensive, low risk and efficacious. Guidelines for LBP suggest that high value care (after triage for red flags), should screen for biopsychosocial barriers for recovery, be person-centred, address both the psychological and physical barriers for recovery and coach people towards self-management.

Cognitive functional therapy provides an individualised approach that fulfills these criteria. It aims to coach people towards self-management by: 1. to providing people with a biopsychosocial understanding of back pain, 2. build their confidence to return to painful, feared and avoided valued activities with pain control and 3. Encourages healthy lifestyle behaviors. There is growing evidence that this approach results in long-term benefits over traditional approaches.

**Professor Susan Whitney,** School of Health and Rehabilitation Sciences, University of Pittsburgh, USA

Professor Whitney’s research interests relate to persons with mild head injury, vestibular disorders and falls. She is particularly interested in clinically useful tools that can prognosticate or record change over time in persons with vestibular disorders plus the development of new interventions to improve people's lives who are living with inner ear problems. Currently, she is a professor in physical therapy in the School of Health and Rehabilitation Sciences and in the Department of Otolaryngology in the School of Medicine, University of Pittsburgh. She works at the Centres for Rehab Services (CRS) Vestibular Rehabilitation practice at the Eye and Ear Building within the University of Pittsburgh Medical Centre. She has published over 140 papers that are referenced on Medline and has written over 35 book chapters, primarily in the area of functional balance assessment and vestibular rehabilitation. Professor Whitney is past President of the Neurology Section of the American Physical Therapy Association and was a member of the first BPPV guideline task for of the American Academy of Otolaryngology, Head and Neck Surgery.

***Keynote address 1:*** Updates in vestibular rehabilitation or vestibular rehab 2019 and beyond

***Abstract:*** New evidence and innovations related to vestibular rehabilitation will be provided.  Virtual reality, new goggle technology, clinical practice guidelines and systematic reviews will be included to provide up-to-date evidence for persons who treat people with balance and vestibular disorders.

***Keynote address 2:*** An update on mild head injury (concussion): The most recent evidence

***Abstract:*** The Centers for Disease Control (CDC) in the United States is now calling “concussion” mild traumatic head injury.  Mild head injury occurs across the lifespan.   Recent evidence about predictive factors that affect recovery, ongoing mild traumatic head injury research in both children and adults, and recent evidence from the CDC will be shared.  Typical eye movements often seen in persons who do not recover quickly after a mild head injury will be described and illustrated.

**Professor Ewa Roos,** Department of Sports Science and Clinical Biomechanics, University of Southern Denmark

****Professor Roos is an internationally leading researcher and change agent in the field of musculoskeletal health. She has been able to both produce high-impact clinical research and translate that research into clinical tools that are easily and effectively implemented in hospitals, primary care clinics and even community settings in municipalities.

One of the principal outcomes from her research has been **the development of the Good Life with osteoArthritis in Denmark (GLA:D®) project** for people with knee and hip pain. The GLA:D® project is an outstanding example of how to successfully implement evidence-based clinical guidelines in primary health care practice and municipalities. Its underlying principles focus on patient education, patient empowerment, exercises and self-management. Since 2013, more than 1100 clinicians nationwide have been trained in delivering GLA:D® care to 40,000+ patients, who report remarkable improvements in health in terms of less pain, less disability, consumption of less pain medication, increase in physical activity, reduced sick leave and return to work***.*** The GLA:D® project now serves as a template for establishing similar initiatives in other countries including Canada (2015), Australia (2016) China (2017) and Switzerland (2019).

In 2014, her contribution to public health was recognised when she won **the OARSI (Osteoarthritis Research Society International) Clinical Research Award** for her “outstanding work in exercise as prevention and treatment of joint pain, joint injury and osteoarthritis”.

Professor Roos is the **author of 225 peer-reviewed publications.** She has published in high impact journals such as the New England Journal of Medicine, the British Medical Journal and The Lancet. Her work has been cited in total 13336 times and her h-index is 57 (Web of Science, January 2019).

***Keynote address 1:*** Considering surgery for your knee problem? Exercise may work just as well!

***Abstract:*** Knee surgery is common. Young adults have their anterior cruciate ligament reconstructed after tearing it when playing sports. Middle-aged people have parts of their meniscus trimmed when they have pain and limited knee mobility. And older people have their knees replaced by metal and plastic when their cartilage has worn out. The idea that there is something mechanically wrong that needs to be fixed with orthopaedic surgery is a compelling idea – but is it right?

This presentation focuses on the results from studies where patients have been randomly assigned to receive surgery or non-surgical treatments, most often exercise therapy, for their knee conditions including acute ACL injury, meniscal injury and moderate to severe knee osteoarthritis.

***Keynote address 2:*** GLA:D – effective treatment for knee and hip osteoarthritis

Among researchers it is well established that exercise therapy relieves pain and improves function in people with osteoarthritis. Despite the convincing evidence, and exercise therapy being recommended universally in osteoarthritis treatment guidelines, exercise therapy is underutilized as osteoarthritis treatment. Good Life with osteoarthritis in Denmark (GLA:D®) was started in 2013 to facilitate the use of exercise therapy in clinical practice. Since then, more than 1200 clinicians have been trained and more than 40.000 patients have had the program and contributed with patient-reported data, in Denmark alone. The program is currently available in Canada, Australia, China and Switzerland with New Zealand joining late 2019. The outcomes are good and sustained at one year after the program; patients report on average a 25% pain relief, have improved function and walking speed, take less pain killers and the number of days on sick leave has decreased since the year prior to taking the GLA:D® program.

**Tania Clifton-Smith,** Physiotherapist, Dip Physiotherapy, MNZP, NZMTA ITEC (Lon), Co-founder of the Bradcliff Breathing Method and Director of Breathing Works Ltd

Tania Clifton-Smith physiotherapist has 30 years’ experience in the field of breathing dysfunction, breathing pattern disorders and hyperventilation syndrome and physiotherapy. She co-foundered **Breathing Works clinics 1998:** the clinics have treated over 30,000 individuals with breathing dysfunction. Tania established the **BradCliff Breathing Method** in 2008 a physiotherapy treatment programme for breathing dysfunction.

**Published works on breathing dysfunction include:**

Books

* Breathe to Succeed (Penguin NZ 1999)
* [Dynamic Breathing – managing your asthma](https://www.bradcliff.com/about-us/our-books.cfm). (Random NZ 2008)
* [Breathe Stretch & Move](https://www.bradcliff.com/about-us/our-books.cfm). (Random NZ 2002)
* [Breathing Matters](https://www.bradcliff.com/about-us/our-books.cfm) (Random NZ 2006).

Paper:

* Clifton-Smith T, Rowley, J. (2011). “Breathing pattern disorders and physiotherapy: inspiration for our profession”, Physical Therapy Reviews, 16 (1) p75-86

Chapter:

* Recognizing and Treating Breathing Disorders A Multidisciplinary Approach by Leon Chaitow, Christopher Gilbert, Dinah Morrison United Kingdom, 2013 Chapter 7.6 Breathing Pattern Disorders and the Athlete

Guidelines:

Severe Asthma Toolkit Australia

* Co-authored the Dysfunctional Breathing section

***Keynote address 1:*** Breathing Dysfunction/Breathing Pattern Disorders. How to recognise and what to do

***Abstract:***There is great public and increasing professional interest in non-drug treatments in the health sector. The evidence base for the effectiveness of breathing training is improving with patient-reported outcomes such as symptoms, quality of life and psychological impact.

Physiotherapists have worked with breathing dysfunction since the early 1950’s assisting clients with breathing pattern education as well as advice in how to manage symptoms, in particular in the field of respiratory medicine with management coughing, shortness of breath, wheezing and excess mucus.

Many people attend our clinics and are referred for help with their breathing dysfunction, education and management. This session introduces you to the key factors when identifying a breathing pattern disorder.

***Keynote address 2:*** Breathing well is the first step to optimum health, movement and well-being

***Abstract:*** This session is for you the physiotherapist. Are you breathing properly?  Did you know that poor breathing patterns affect not only your lungs but also your sleep, stress levels, mood, digestion, heart, nervous system, and brain?

This session will introduce you to concepts beyond the lung and will include practical tools and techniques that you will be able to integrate into your busy working day to assist with energy conservation.

**Dr Lou Atkins,** Centre for Behaviour Change, University College London

Dr Lou Atkins is a researcher, trainer and consultant in behaviour change intervention design and evaluation. She is Senior Teaching Fellow and Australasian Hub Lead at the Centre for Behaviour Change, University College London. Based in Auckland, Lou is involved in a number of projects to change health professional behaviour, prevent and manage illness and improve the translation of behavioural science into policy and practice. She co-authored the book ‘The Behaviour Change Wheel – A Guide to Designing Interventions’ ([www.behaviourchangewheel.com](http://www.behaviourchangewheel.com)).

***Keynote address 1:*** Changing behaviour: Tools for thought and action

**Abstract:** Changing behaviour can be hard.  We are bundles of associations between past events, thoughts, emotions and behaviours that can drive our behaviour in opposition to our goals, intentions and plans.  We are creatures of habit, of routines, of desires, urges and impulses.  We need to find ways of helping people develop methods for overcoming or changing these when they get in the way of what they want to achieve such as healthy behaviours or the delivery of health care services. We need to help them increase motivation, capability and opportunities for behaviour change.

Behaviour change is increasingly recognised as central to human wellbeing, social cohesion and sustainability. Changing behaviour is a challenging and complex process, requiring theories, methods and evidence from many academic disciplines. This talk covers how theoretical tools developed in behavioural science have been applied to change behaviours.

***Keynote address 2: Applying behavioural science in physiotherapy***

**Abstract:** This talk builds on Lou’s first keynote address covering how behavioural science tools have been applied to understand and change behaviours relevant to physiotherapy.