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### **Optimizing lower limbs orthotic management in cerebral palsy**

To provide effective orthotic intervention for children with Cerebral Palsy (CP) it is important to clearly identify the functional abilities of each child in order to establish the aims of orthotic intervention. Although more than half of children with bilateral spastic CP walk independently with or without an assistive device, most have gait-related problems, such as reduced speed and/or an increased energy cost of walking. A multidisciplinary team including an orthotist, physical therapist and orthopedic surgeon can promote a continuum of care throughout development of a child with CP. According to the International Society of Prosthetics and Orthotics (ISPO), goals of lower limb orthotic management of cerebral palsy are to correct and/or prevent deformity; to provide a base of support; to facilitate training in skills and to improve the efficiency of gait. Other goals include increasing range of motion, maintaining or improving levels of function and stability; maintaining muscle length as the bones grow and preventing or overcoming some of secondary effects of the disability leading into adulthood. The type and design of orthosis is decided according to patient's functional limitations (GMFCS) and can be changed periodically depending on the improvement of the patient condition. When an orthotic device is implemented successfully it will lead the child to achieve better joint motion and muscle function. Orthotics can provide a stable base of movement, improving gait pattern, reducing impact of spasticity on lower limbs and creating a better environment in which a child can function. As well as reducing excessive energy used to move, reducing muscular imbalance and potential risk of fall. Orthotics is commonly prescribed to improve mobility in children with CP. However, clear concepts for orthotics management are missing in literature. Therefore, this workshop will describe our decision-making process of orthotics' prescription in our practice, which is based on current best available evidence and our experience.

### **Biography**

Simone has completed his Post Graduation in Federal University of São Paulo in 2016. She has done Specialization Training in Scientific Research in Surgery in Federal University of Sao Paulo / Brazil in 2011. Sofyan Tebbi, certified prosthetist orthoptist graduated at Kerschensteiner University of Technology, Stuttgart – Germany. Sofyan has 19 years of clinical experience in different fields of orthotics and prosthetics management for children and adults. Currently working at MOBILIS in Dubai offering a custom on-demand manufacturer service with superior quality and leading-edged orthotics and prosthetics products. Sofyan has relocated to Dubai in 2018 from Saudi Arabia, where he worked as Prosthetic and Orthotic Supervisor and Educator since 2009. Previously working as supervisor and workshop leader of the Orthotic and Prosthetic Department of Nonnengaesser & Tebbi in Donzdorf, Germany (from 2003 to 2009).

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