AIMPaediatric Spasticity and Orthopaedic Management for Children with Physical and Neuro-disability

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Aims: Objective measures used to assess spasticity and need for medical or orthopaedic management/intervention is not standardised between paediatricians, orthopaedic surgeons, physiotherapists and community network teams working with children with physical and neuro-disability. Standardised measurement improves decision-making. Since 2012 the HSE South physiotherapy services in Enable Ireland have been rolling out a simple, effective but life-changing care pathway for children with neuromuscular conditions. One of these conditions is Cerebral Palsy which affects 2.5 per 1000 births in Ireland and is a group of permanent movement disorders that appear in early childhood.

Methods: In Cork a multidisciplinary team are working together in a community setting to prevent one of the most painful and debilitating outcomes of Cerebral Palsy; hip dislocation. The specific need for hip surveillance and management is associated with each child’s abnormal muscle tone and challenges with mobility which causes asymmetry of posture and subsequent hip displacement. The negative impact of hip dislocation on quality of life is felt not only by the child but also by the care giver who is unable to provide adequate care without causing discomfort. This highlights the necessity for the orthopaedic care pathway for hip surveillance.

The team in Cork are now striving to meet the HSE guidelines on specialist supports for children with disabilities, published in 2015. They recognised the lack of standardised intervention and management in assessing the need for specialist services and decided to address it. Standardisation is understood to improve decision-making and in turn results in a structured, integrated management pathway. The orthopaedic care pathway practiced by the team has four steps and focuses on early intervention and timely, effective service provision, without which, surveillance serves little purpose.

Step one is referral for a physical assessment completed jointly with community physiotherapists which is based on the current international guidelines, then x-rays are taken for analysis, third, an individualised service plan is developed and finally the whole team make decisions based on the outcomes of the assessment. A key element of its success is the multidisciplinary team who are engaged in the process and take part in thorough clinical discussions. This team includes Enable Ireland Physiotherapists radiologists, orthopaedic
surgeons and paediatricians with special interest in neurodisability working with community teams.

**Conclusion:** Since its initiation, 600 children have accessed the care pathway which has enabled timely detections and management of possible secondary musculo-skeletal complications. Additionally, the creation of a database in the Cork and Kerry regions has aided in better provision of care as well as ensuring progress can be tracked. Perhaps most interestingly, this initiative is cost-neutral because it doesn’t require extra staffing. Instead, it utilises the current health care professionals in the region and promotes the standardisation of the care pathway through continual engagement, training of community-based team members and educating families.

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