A Balance Act: Physiotherapy as a Prerequisite to Orientation and Mobility Services

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The School of Physiotherapy, Faculty of Health Sciences, University of Sydney, Australia initiated a community practicum for fourth year physiotherapy students. The goal was to broaden student’s perspectives about how allied health areas such as Orientation & Mobility (O&M) services are movement based similar to that of physiotherapy services. The authors participated in a five-week practicum at an organisation that provides O&M services to clients with vision impairment. It was observed that some of the O&M programs would have benefited from physiotherapy input that would have assured the long term success of O&M programs.

What is physiotherapy?

Physiotherapy is a therapeutic health profession concerned with enhancing mobility and quality of life using clinical reasoning to deliver the most suitable drug-free treatment for movement-based injury or condition. Treatment includes joint mobilisation and manipulation, therapeutic exercise and stretches, electro physical agents (such as hot packs, ice and ultrasound) and breathing exercise. Services are available to the community in varied settings as private practice, sports facilities, hospitals, schools, universities, public health organisations, community centres, aged care facilities and workplaces.

Practicum observation

During the practicum, the authors observed O&M instructors working with a range of clients with vision impairment; travelled under blindfold with a guide, presented movement-based workshops to people with multidisabilities and conducted fall prevention workshops to mature age people with vision impairment. From observation, it seems essential for people with vision impairment to have sensorimotor skills, such as proprioception, balance, vestibular functions and, at times, to use a mobility aid to assist independent travel. However it was observed that some clients lacked some of these core body characteristics and consequently found independent travel very challenging. Remarkably, in the state of NSW there is only one organisation that provides O&M services that also employs physiotherapists to specifically work alongside O&M instructors to directly compliment their O&M programs.

The importance of physiotherapy as a prerequisite to orientation & mobility programs

Throughout the practicum it was observed that there was a difference in terms of motor development between children that
had received physiotherapy services compared with those that had not. Children that received services had developed superior motor skills such as the ability to roll, crawl, prop themselves up and walk. Without physiotherapy intervention it is likely that children with low vision or blindness might be exposed to predictable developmental risks. These risks include decreased postural tone, inability to balance, decreased incidental learning through play and observation, and decreased levels of motivation for the child to move. These movement issues will improve only slightly or not at all unless addressed by thorough assessment and intervention by a movement based professional such as a physiotherapist.

Physiotherapy intervention can improve muscle tone and postural upper and lower limb strength, balance, body awareness and movement stimulation. Intervention is achieved through a variety of games and tasks as tug of war, weights, stepping under and over objects and balance games all of which can be presented in a way to captivate the child’s attention and motivation. Without such intervention, as was observed, low muscle tone, reduced proprioception and imbalance result all of which negatively reduce the effectiveness of O&M training.

It was also observed that some elderly clients with vision impairment were at risk of falls as a result of imbalance, postural and gait issues, reduced strength, reduced motivation to engage in mobility training, weight issues and decreased cardiovascular fitness. Physiotherapy intervention, however, could have improved the conditions for these clients. Geriatric physiotherapy provides a range of services to meet the unique requirements of the maturing individual. Mobility can be restored through exercises to strengthen muscles, balance training to ease transfers and walking, and recommendations of such assistive devices as walkers and canes can be made.

The process of achieving adequate levels of orientation, mobility and independence requires the correction of movement and health issues. For example, the goal of reaching a destination with the use of a long cane cannot be achieved without the strength to hold the cane correctly, strength and flexibility in the leg, arm and wrist muscles to control the cane movement and the efficiency to mobilise without muscle fatigue. Clients must have postural muscle tone to maintain posture while using the cane, and excellent shoulder stabiliser muscles, in order to stabilise the shoulder so that the wrist can also control the cane. In addition a person must have effective proprioception skills to be aware of their body position, thus increasing their safety when mobilising. Physiotherapy is integral in developing these skills, and is a prerequisite to the long term effectiveness O&M programs.

At present, there appear no consistent guidelines or processes in the state of NSW for the referral between professionals in vision impairment and physiotherapy. Guidelines need to be devised and networks created so that full assessment and intervention can be recommended and delivered. This link between physiotherapy and O&M services would create a more holistic intervention for the client with the result of achieving increasingly effective long term O&M outcomes.

O&M service providers could consider the integration of practising physiotherapists, paediatric and geriatric physiotherapists into their existing client service departments.
This would ensure greater opportunities to provide physiotherapy services to a wider range of clients with the result of increasing referral numbers, the effectiveness of O&M programs and the number of programs able to be delivered successfully.

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