Complex posture management: a person-centred postural care approach for an individual with hip flexion limitations and considerations for wheelchair seating

Bridget Churchill, Life for Living Ltd & Spex Ltd

Summary
Complex posture management in sitting needs to be biomechanically appropriate and person-centred. This case-study highlights a solution for hip flexion asymmetry and additional considerations regarding wheelchair adjustability and total postural support options for users with complex postures and progressive conditions during the COVID-19 pandemic.

Aims and Objectives
- Reflect on person-centred postural care for vulnerable adults with progressive conditions and complex postural needs within the context of the COVID-19 pandemic.
- Identify key considerations when implementing the Spex Flex cushion as an off-the-shelf solution for hip flexion asymmetry.

Background
A stable seating base is required to optimise posture in the upper body and influences distal function of the head and arms. Pelvic position in seating can be affected by hip flexion asymmetry and failure to respond to this can contribute further to pelvic obliquity, trunk asymmetry, scoliosis (Ágústsson, et al., 2017). Accurate assessment and prescription is required to ensure seating solutions respond to pelvic position to avoid worsening overall posture.

When a wheelchair user with a progressive condition was assessed with the Spex Flex cushion, this was found to be clinically appropriate and responsive to hip flexion asymmetry, pelvic obliquity, severe scoliosis and instability; however limited in utilisation due to lack of adjustability within the existing powered wheelchair seating configuration.

Further assessment identified Spex modular seating technology as an effective alternative to the existing system and allow for future adjustability and responsiveness. Although some restoration of body shape in the trunk was possible, this adversely affected breathing; compromise was required to maintain vital functions.

The COVID-19 pandemic contributed in delays to the full seating system provision and review of lying support. Lying support is integral to 24-hour posture care management in clients unable to adjust their position and, with increased time in bed and ongoing challenges to comfort and positioning in bed, progression of body shape distortions are likely, which can further be compounded in sitting (Pope, 2007, p. 105; Agustsson, et al., 2018) and reduce sitting tolerance.

With the introduction of regulations relating to COVID-19 (Public Health England, 2020) affecting service coordination, access and hand-over of the seating system, this raises questions as to how to successfully maintain a person-centred approach for this cohort both now and in the future.

Discussion
Hip flexion limitations can affect pelvic position on the seat. This, together with postural asymmetry, affects function. This case study, of a wheelchair user with progressive condition, will show the Spex Flex cushion to be an ‘off-the-shelf,’ adjustable cushion for hip flexion limitations and pelvic asymmetry.

Due to challenges with the existing wheelchair seating adjustability, additional considerations were needed in regard to “total postural support options” (Lange & Minkel, 2018) for complex and progressive postures in response to compromised respiration and chronic, significant pain.

This case study, of a wheelchair user with a progressive condition, will also address how the person-centred postural care has been adversely affected by the COVID-19 pandemic regarding care delivery and coordination. It raises some considerations for person-centred care and complex posture management in the future for this client cohort.

Conflict of Interest declaration:
Bridget Churchill (author) is an independent Occupational Therapist, but is contracted as Clinical Educator to Spex Ltd. who manufacture the Spex seating technology.

References
Ágústsson, A., Sveinsson, Þ. & Rodby-Bousquet, E., 2017. The effect of asymmetrical limited hip flexion on seating posture, scoliosis and windswept hip distortion. Research in Developmental Disabilities, Volume 17, pp. 18-23.

Agustsson, A., Sveinsson, T., Pope, P. & Rodby-Bousquet, E., 2018. Preferred posture in lying and its association with scoliosis and windswept hips in adults with cerebral palsy. Disability and Rehabilitation, Jul.pp. 1-5.

Lange, M. L. & Minkel, J., 2018. Seating and wheeled mobility: a clinical resource guide. Thorofare: Slack Incorporated.

Pope, P., 2007. Severe and Complex Neurological Disability. Philadelphia: Elsevier Ltd.

Public Health England, 2020. Guidance: COVID-19: guidance on shielding and protecting people defined on medical grounds as extremely vulnerable. [Online]
Available at: https://www.gov.uk/government/publications/guidance-on-shielding-and-protecting-extremely-vulnerable-persons-from-covid-19
[Accessed 21 March 2020].

Email: bridget.churchill@lifeforliving.org; bridget.churchill@spexseating.com