
E6: 24 Hour Postural Management: Who, When, How? From Low Tech to Custom

Meredith Miller, NZROT

Learning objectives:

1. Understand the concept of 24hour postural management
2. Understand potential client presentations leading to suitability of lying supports.
3. Utilise low tech solutions to provide simple postural support for at risk client groups
4. Identify 3 clinical presentations when custom solutions may be indicated vs. off-the-shelf products

Session description:

Therapists are frequently involved in assessing for mattresses and specialised beds to address pressure and pain related issues. It is important to consider not only what surfaces people are lying on, but also, how they are positioned, how often they move, and what is contributing to any persistent postures.

Seating To Go assess for and prescribe postural management equipment to clients with a wide range of complex physical disabilities. During this involvement we have become increasingly aware that many persistent postural problems in lying were evident prior to the person becoming a full time wheelchair user

This session will outline the importance of therapists to have an understanding of postural management theory and will include simple educational guidelines for managing 'at risk' postures.

Postural management can impact on the maintenance of existing function, management of posture into the future, and contribute to minimising secondary complications such as orthopedic deformity and pressure injury.

An educational handout will be provided that will assist therapists in helping their clients, and client's caregivers, to understand their bodies and self-manage positioning in bed without the need for

funded equipment. With education, our clients are more empowered to seek assistance as changes occur vs. waiting until serious problems develop.

In addition to our role as seating specialists, we provide a 24hour postural management advisory role to occupational therapists and physiotherapists in the community. In this role we are often providing advice for lying supports for the same client's we have provided custom seating solutions for.

In the same way that these complex clients are unable to manage off the shelf seating; off the shelf lying supports are often unable to adequately accommodate or correct the complex postural presentations of these clients.

For this complex group of clients, upright postures often require a compromise between positioning & functional requirements. Night time positioning provides long periods of stretch/alignment and it is advantageous that this occur to relaxed muscles (during sleep). Further to this, client's sitting or standing tolerance may be compromised due to significant fixed deformity causing pain or pressure issues.

Case studies will be presented that demonstrate the need for complex custom solutions for clients needing lying supports that are 'outside of the box'. We will outline the assessment, prescription and trial process and explore the pro's and cons of this type of solution.

Content references:

1. Mayson T. Surveillance & Management of Hip Displacement & Dislocation in Children with Neuromotor Disorders Including Cerebral Palsy. (2011) www.childdevelopment.ca
2. Porter 2008. Is there a relationship between preferred posture & positioning in early life & the direction of subsequent asymmetrical postural deformity in non-ambulant people with cerebral palsy? *Child: care, health & development*, 35, 5, 635 – 641
3. Koop S. Scoliosis in cerebral palsy. *Developmental Medicine & Child Neurology*. 2009; 51 (Suppl 4): 92-98
4. Pope, P (2007) Night time postural support for People with Multiple Sclerosis. <http://www.mstrust.org.uk/professionals/information/wayahead>

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5. Pope, P (2007). Severe and Complex Neurological Disability – Management of the Physical Condition. *Butterworth, Heinmann*
 6. Robertson J et al, Postural care for people with intellectual disabilities and severely impaired motor function: A Scoping review. *J Appl Res Intellect Disabil* 2016; 1-18

E7: Hip Surveillance – A Local Perspective: How we roll in the Waikato

Karli Joll, PT

Learning objectives:

1. Participants will have an understanding of the purpose of hip surveillance.
2. Participants will know which children to refer for hip surveillance.
3. Participants will have an understanding of how hip surveillance works at a local level.

Session description:

Hip Surveillance is the process of identifying and monitoring the critical early signs of progressive hip displacement in children with cerebral palsy or “cerebral palsy-like” conditions. Early identification is a crucial step in the strategy for prevention of hip displacement and ongoing hip disease. Australian population studies have identified the rate of hip displacement to be around 30% in children with CP, and other studies have identified even higher rates.

This paper presentation will outline what Hip Surveillance is and which children should be included in a hip surveillance programme. It will describe how surveillance works according to the Australasian Hip Surveillance Guidelines which were developed in 2010 and reviewed in 2014. The importance of a child’s Gross Motor Function Classification System (GMFCS) level will be outlined, as the rate of hip displacement is not necessarily related to the movement disorder but is related directly to the child’s level of gross motor function.

The presentation will further explore how this is put into practice at a local level, in particular how the surveillance team attempts to include the child’s wider therapy team in information sharing and decision making. Examples will be given about how this may impact decisions around seating and postural management, and other aspects of a child’s care. Further local perspectives will be shared including how hip surveillance fits in with the child’s orthopaedic care and ongoing follow up. Finally areas

that we have identified for improvement will be discussed, including possible ideas from the audience.

Content references:

1. Wynter M et al (2014) Australian Hip Surveillance Guidelines for Children with Cerebral Palsy. 2014
2. Kentish M et al (2011) Five-year outcome of state-wide surveillance of children and adolescents with cerebral palsy. *J Pediatr Rehabil Med* 4(3): 201-217
3. Palisano RJ et al (2008) Content validity of the expanded and revised Gross Motor Function Classification System. *Dev Med Child Neurol* 50(10): 744-750
4. Wynter M et al (2011) The Consensus Statement on Hip Surveillance for Children with Cerebral Palsy: Australian Standards of Care. *J Pediatr Rehabil Med* 4(3): 183-195

E8: Cultural aspects of Sleep – Implications for 24-hr Postural Management Programmes

Jane Hamer, PT

Learning objectives:

Upon completion of the session, participants will be able to:

1. Describe sleep in children with neurodevelopmental disabilities
2. Identify 4 cultural aspects of sleep
3. Identify clinical considerations of sleep within the context of 24-hr postural management programmes

Session description:

Introduction: An international consensus statement recommends 24-hr postural management programmes (24-hr PMP) for children with complex disabilities to prevent or minimise postural deformities (1). One aspect of 24hr PMP involves positioning equipment for lying, sleeping and night-time use. Assessment of the families' normal night-time routine is important and therapists must consider cultural aspects of sleep when exploring families' normal practises. Use of a standardised "Sleep questionnaire" may assist clinicians in better understanding individual family situations when assessing for and prescribing 24-hr PMP. In preparation for clinical guideline development, a literature review was completed to find evidence in relation to cultural aspects of, and approaches to sleep, within the context of children with complex neurodevelopmental disabilities. To then use this information in developing a paediatric Integrated Care Pathway for Postural Management Programmes within WDHB.

Method: Two literature searches were conducted in 2015 using the keywords *disabled child*, *sleep questionnaires*, and *cultural approaches/ competence/ diversity/values/ safety/ bias*. Databases searched included EBSCOhost and CINAHL using specific search criteria. Articles were appraised using the Critical Appraisal Skills Programme.

Results: Following abstract and full text review 17 articles were selected. No articles addressing all three search terms were sourced. Evidence included six literature reviews, two prospective studies, two cross-sectional surveys, six cohort studies, and one case control study. There was limited high-level evidence sourced in the literature. Findings of the Literature Review will be presented and use of Sleep Questionnaires will be discussed.

Key Practice Points: Clinicians need to consider cultural aspects of sleep when assessing for and implementing 24hr PMP and equipment. Routine use of standardised sleep questionnaires as part of future 24hr PMP Guidelines would assist with this. Use of 'The Chailey Sleep Questionnaire', and Cultural awareness training for all clinicians (through EMS credentialing and service-led training) is recommended.

Content references:

1. Gericke, T. (2006). Postural management for children with cerebral palsy: consensus statement. *Developmental Medicine and Child Neurology*, 48, 244. doi:10.1017/S0012162206000685
2. Angriman, M., Caravale, B., Novelli., Ferri, F., & Bruni, O., Sleep in children with neurodevelopmental disabilities. *Neuropaediatrics*. Doi: 10.1055/s-0035-1550151
3. Gough, M. (2009). Continuous postural management and the prevention of deformity in children with cerebral palsy: an appraisal. *Developmental Medicine and Child Neurology*, 51(2), 105-110. doi:10.1111/j.1469-8749.2008.03160.
4. Gianotti, F., & Cortesi, F. (2009). Family and cultural influences on sleep development. *Child Adolescent Psychiatric Clinical North America*, 18, 849-861. DOI: 10.1016/j.chc.2009.04.003
5. Jenni, O., & Werner, H. (2011). Cultural issues in children's sleep: A model for clinical practice. *Pediatric Clinics of North America*, 58: 755-763. DOI: 10.1016/j.pcl.2011.03.008
6. Jenni, O., O'Connor, B. (2005). Childrens sleep: An interplay between culture and biology. *Pediatrics* 115 (1): 204-216. DOI: 10.1542/peds.2004-0815B

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7. Mindell, J., Sadeh, A., Kwon, R., & Goh, D. (2013). Cross-cultural differences in the sleep of preschool children. *Sleep Medicine* 14, 1283-1289
 8. Romeo, D., Brogna, C. Quintiliani, M., Baranello, G., Pagliano, E., Casalino, T., Sacco, A., Ricci, D., Mallardi, M., Musto, E., Sivo, S., Cota, F., Battaglia, D., Bruni, O., & Mercuri, E. (2014). Sleep disorders in children with cerebral palsy: Neurodevelopmental and behavioural correlates. *Sleep Medicine*. DOI: 10.1016/j.sleep.2013.08.793
 9. Sagheri, D., Wiater, A., Steffen, P., Owens, J. (2010). Applying principles of good practice for translation and cross-cultural adaptation of sleep-screening instruments in children. *Behavioural sleep Medicine*. 8: 151-156. DOI: 10.1080/15402002.2010.487460