



Facilitating empowered selection of 24hr Posture Positioning & [wheelchair]-Seating (PP&w-S) intervention & assistive technology

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RESEARCH GOAL: Evidence-based '24 hour Positioning (including Seating & Wheeled Mobility) Practice Guide for Occupational Therapists & Physiotherapists who support People with Disability' (Coyle, 2016)

- therapeutic & assistive technology intervention analysis
- comprehensive evidence-based person & family-centred day & night (24/7) postural practice guide: during [wheelchair] seating, [supported] standing & in lying positioning, posture & pressure care (Schmidt, 2015)
- a lifestyle PP&w-S regime to improve function, health systems, oral/communication & cognitive skills and to reduce pressure ulcer risk (NHS Purchasing & Supply Agency, 2008)

METHOD: Critical evidence based (EBP) annotated literature analysis (2015) & grading according to Evidence Alert Traffic Light system (Novak et al., 2013).

Databases: EBSCOHOST databases; Google Scholar; OT Seeker & Google (grey literature).

Keywords: e.g. ICF body structure & function; activities & participation; posture, pressure care/ulcers, seating, wheelchair*; pediatric*, child*, adult*, elder*, care/intervention; spinal cord injury, cerebral palsy, muscular dystrophy, muscular sclerosis, disability; occupational therapy, physiotherapy, orthotists; assistive technology (AT), supported standing; night-time lying/positioning management.

Ethics: None sought, no human participant involvement. Conflict of interest declared: Author employed by Department of Family & Community Services (FACS) for data research & practice guide compilation.

References:

Coyle, D. (2016). 24 hour Positioning (including Seating and Wheeled Mobility) Practice Guide for Occupational Therapists and Physiotherapists who Support People with Disability V.1. Retrieved electronically from: https://www.adhc.nsw.gov.au/_data/assets/file/0009/348894/24_hour_Positioning_Practice_Guide.pdf

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NHS Health Education England. (2014). Developing people for health and healthcare: Moving & Handling Policy. In NHS Health Education (Ed.), (Version 2.0 ed.). England: NHS.

Novak, I., McIntyre, S., Morgan, C., Campbell, L., Dark, L., Morton, L., . . . Goldsmith, S. (2013). A systematic review of interventions for children with cerebral palsy: state of the evidence. *Developmental Medicine & Child Neurology*, 55(10), 885-910. doi: 10.1111/dmcn.12246

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FINDINGS:

24hr PP&w-S evidence-based interventions effectiveness (informed by Novak et al., 2013).

Traffic light Green evidence based support	<ul style="list-style-type: none"> • Multi-layered/multi-agency person-centred (P-C) intervention approach • Proactive knowledge exchange → empowering P-C decision making ownership • Competent prescriber knowledge: linked to quality education access • Multi-modal assistive technology (AT) integration coordinated health & postural care/repositioning regimes & pressure care management → Quality of Life
Yellow emerging supportive evidence	<ul style="list-style-type: none"> • Standardised measurement: early intervention postural deformity monitoring (e.g. Goldsmith Indices® of body Symmetry, 2013) pressure ulcer risk assessment (e.g. Norton, Braden ect.) • Competent plinth-based team assessment (collaborative 'MAT eval' info exchange) • Person-directed service/team approach to knowledge sharing informed person-centred decision making • Comprehensive application of positioning assistive technology (AT) family-centred 24hr coordinated assistive technology & practice regime • Wellbeing & Quality of Lifestyle: regime coordination with wheelchair seating systems → enhanced comfortable, supportive mobility performance for participation in meaningful roles/activity • Empowering person/family-centred AT choices aligned to collaborative personal/carer support outcomes: enhanced postural performance & participation at home & in their community • Family wellbeing linked to positive night-time positioning programmes, enhanced comfort, sleep & postural management & to reduce pressure ulcer development & deformity risk • Person/family-centred 24hr PP&w-S positioning routine approach: Ongoing P-C team support for family-centred lifestyle practice change & regime maintenance
Red denouncing evidence	<ul style="list-style-type: none"> • Systems control Vs. needs base demand: an emergent evidential denouncement of centralised agency control of essential resources → empower person-centred ownership of 'family-friendly' PP&w-S regime and timely, appropriate assistive technology choices, as and when required

CONCLUSION: Proactive multi-modal/disciplinary person-centred collaborative TEAM approach for empowering family-owned PP&w-S regime: enhance personal health/postures & family wellbeing → meaningful participation across all life domains, reduce postural care-service reliance & relieve carer burden.

