





# To sit or not to sit?- that is the question

Heidi Sandoz, Independent Tissue Viability Consultant Nicky Phillips, Clinical Specialist Occupational Therapist



### **Aims and learning objectives**

In this session we will explore the critical clinical reasoning process around whether you can sit out of bed with a pressure area. To celebrate OT week and Stop the pressure week, we wish to recognise the importance of collaborative working.

The learning objectives are as follows:

- Understand 24-hour posture and positioning
- Practical advice we can pass onto clients about managing pressure and preventing further damage
- Recommendations for alternative positions and equipment
- A review of current evidence





Image from Wounds UK (2018)



Accora

Image from Wounds UK (2018)







Accora

Image from Wounds UK (2018)

















#### But not like this.....





#### What do the guidelines tell us?

Consider the seating needs of adults who have a pressure ulcer who are sitting for prolonged periods.

Consider a high-specification foam or equivalent pressure redistributing cushion for adults who use a wheelchair or sit for prolonged periods and who have a pressure ulcer.

Encourage adults who have been assessed as being at risk of developing a pressure ulcer to change their position frequently and at least every 6 hours.

Encourage adults who have been assessed as being at high risk of developing a pressure ulcer to change their position frequently and at least every 4 hours.



(NICE, 2014)

#### What do the guidelines tell us?

- Investigate alternatives to sitting in bed (e.g., sitting out of bed for some duration or during meals or gastric feeds)
- Limit time spent sitting out of bed for individuals at high risk of pressure ulcers
- If sitting in a chair or wheelchair is necessary for an individual with pressure ulcers on the sacrum, coccyx or ischia, limit sitting sessions to three times a day for durations of 60 minutes or less (Expert opinion).
- Avoid slouched positions that can increase pressure and shear on the sacrum and coccyx
- Avoid seating an individual with an ischial pressure ulcer in a fully erect posture in bed. (A minimum tilt of 30° is needed to achieve a clinically significant reduction in pressure at the ischial tuberosities.)

But.....



(EPUAP,NPIAP,PPPIA 2019)

#### Consider the individuals.....

- preferences
- medical condition
- lifestyle
- work
- psychosocial needs

(EPUAP,NPIAP,PPPIA 2019)



### Accora

- Avoid seating an individual directly on a pressure ulcer
- Consider periods of bed rest to promote healing of ischial and sacral pressure injuries
- Modify sitting time schedules and re-evaluate the seating surface and the individual's posture if the pressure ulcer worsens or fails to improve





30<sup>0</sup> tilt



(EPUAP, NPIAP, PPPIA 2019)





### Lying: pros and cons

- Benefits:
- Restful position
- Larger surface area to spread load
- Easier for care tasks to be completed
- Essential if acutely unwell.

- Disadvantages
- Not functional
- Deconditioning
- Low mood and depression
- Irregular sleep pattern
- Loss of muscle mass
- Reduced bone density
- Reduced blood flow.
- Increased risk of contractures
- (Convertine et al, 1997)

### Seating: pros and cons

- Benefits:
- Aids digestion
- Improves communication/ social interaction
- Functional position for activities
- Improves respiration
- Access to wider community

(Osborne et al, 2023)

- Disadvantages
- Smaller surface area to spread pressure compared to lying
- Not suitable for sleeping
- Fatigue
- Access to carers for transfer.
- In correct seating can cause injury (WHO, 2023)

### Considerations for seating for pressure care



#### Correct seating should.....

- 1. Allow us to function!!!!!!!
- 2. Be the appropriate size (seat dimensions and backrest considerations)
- 3. Be able to promote reposition (correct height armrests/ tilt)
- 4. Load the full base of support (don't forget full pelvis, feet and arms)
- 5. Not bottoming out, check the cushion (get a slide glove).
- 6. Have the appropriate surface (air/gel/foam).
- 7. Time in the chair, how long is too long?



Image from AWTVNF, PUPIS. All Wales Best Practice Guidelines: Seating and Pressure Ulcers. London: Wounds UK, 2019.

It is estimated that typically 75% of the body's weight is taken through the pelvis when an individual is sitting (Collins, 2001). The main contact between the pelvis and the seat surface is via the small, rounded ischial tuberosities (sitting bones of the pelvis)

#### At a 90 degree upright angle.

### Off load gravity by using tilt in space



- Increase base of support
- Increase loading
- Decrease pressure
- Reduce / eliminate shear
- Allow for clients' hip range
- Consider function in both positions, where is line of sight?

### Seating and time- the importance of 24-hour positioning



Those at risk of developing a pressure ulcer to change their position frequently and at least every 6 hours.

Those at high risk of developing a pressure ulcer to change their position frequently and at least every 4 hours. (NICE, 2014)



# What can we do...

**Case study**: Grade 1 or 2 pressure areas on sacrum-Independently mobile with 4ww but doesn't like to leave the home.



- Avoid seating an individual directly on a pressure ulcer
- Consider periods of bed rest to promote healing of ischial and sacral pressure injuries
- Modify sitting time schedules and re-evaluate the seating surface and the individual's
  posture if the pressure ulcer worsens or fails to improve

(EPUAP,NPIAP,PPPIA 2019)

#### What will that look like in a care plan?

Evidence	Implemented	
Avoid seating an individual directly on a pressure ulcer	Establish where the location is. Look. What is realistic?	
Consider periods of bed rest to promote healing of ischial and sacral pressure injuries	Off load, implement a schedule. Consider 24 hour management.	
Modify sitting time schedules and re-evaluate the seating surface and the individual's posture if the pressure ulcer worsens or fails to improve	Monitor and educate. Consider up-grading the cushion (remember to consider downgrading).	
If sitting in a chair or wheelchair is necessary for an individual with pressure ulcers on the	Where are they going to spend the rest of the time?	
sacrum, coccyx or ischia, <b>limit sitting sessions</b> <b>to three times a day for durations of 60 minutes</b> <b>or less</b> (Expert opinion).	21 hours in bed. What is their bed position like?	

(EPUAP,NPIAP,PPPIA 2019)



Step	Activity	Duration	Seating Day
1	Sitting on the edge of bed	10 minutes twice daily	1 to 3
2	Sitting in wheelchair with a pressure redistribution cushion	5 to 10 minutes twice daily, increasing by 5 minutes each day	4 to 7
3	Sitting in wheelchair with a pressure redistribution cushion	30 minutes twice daily, increasing by 10 minutes each day to a maximum of 60 minutes twice daily	8 to 10
4	Sitting in wheelchair with a pressure redistribution cushion	Increasing by 15 minutes each day to a maximum of 4 hours twice daily	from day 11

Example of a progressive seating protocol EPUAP, NPIAP, PPPIA, 2019 pg 134



### **Pelvic tilt**



Posterior pelvic tilt puts additional pressure on the lower back and sacrum.

Common causes from seating

- Seat depth is too long leaving a gap at the back
- Clients hamstring range is reduced, and footrest is raised (also at risk of sheer), review your initial assessment.
- Hip flexion is reduced, and back angle of the chair is too small. May need to open the back angle (recline).

Grade 2 pressure area on left IT, client full time wheelchair user and works in county council office.



- Review location of pressure area with nursing colleagues (recommendations need to compliment not contradict). Make changes as needed.
- Education!
- Avoid seating an individual with an ischial pressure ulcer in a fully erect posture in bed. (A minimum tilt of 30° is needed to achieve a clinically significant reduction in pressure at the ischial tuberosities.) (EPUAP, NPIAP, PPPIA, 2019)
- Implement offloading techniques as able.
- Note that tilt and recline features provide the most pressure relief when used in combination. (RESNA, 2008)
- Study compared techniques and found Dynamic option effective rather than physically off loading (Makhsous et al., 2007)

#### Ride Java Cushion for wheelch



1











Risk of new or

worsening

pressure

ulcers

Backed up by clinical and user experience

Work from an evidence-based practice perspective

(Convertino, (1999) EPUAP, NPIAP, PPPIA, (2019))

### References

AWTVNF, PUPIS. (2019) All Wales Best Practice Guidelines: Seating and Pressure Ulcers. London: Wounds UK

Casey, J., Rosenblad, A., Rodby-Bousquet, A. (2020). Postural asymmetries, pain, and ability to change position of children with cerebral palsy in sitting and supine: a cross-sectional study. *Disability and Rehabilitation*. 44(11), 2363-2371.

Convertino VA, Bloomfield SA, Greenleaf JE. An overview of the issues: physiological effects of bed rest and restricted physical activity. Med Sci Sports Exerc. 1997 Feb;29(2):187-90. doi: 10.1097/0005768-199702000-00004. PMID: 9044221

Desmond, D., Layton, N., Bentley, J., Boot, F. H., Borg, J., Dhungana, B. M., Gallagher, P., Gitlow, L., Gowran, R. J., Groce, N., Mavrou, K., Mackeogh, T., McDonald, R., Pettersson, C., & Scherer, M. J. (2018). Assistive technology and people: a position paper from the first global research, innovation and education on assistive technology (GREAT) summit. *Disability and rehabilitation. Assistive technology*, *13*(5), 437–444.

Eggers, S.L., Myaskovsky, L., Burkitt, K.H., Tolerico, M., Switzer, G.E., Fine, M.J., Boninger, M.L., (2009). A preliminary model of wheelchair service delivery. Arch Physical Medical Rehabilitation.90(6):1030-8.

European Pressure Ulcer Advisory Panel, National Pressure Injury Advisory Panel and Pan Pacific Pressure Injury Alliance (2019). Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline. The International Guideline. Emily Haesler (Ed.). EPUAP/NPIAP/PPIA

Gowran, R., McCabe, M., Murphy, N. (2012) Wheelchair and seating service provision: exploring users' perspectives. Irish journal of Occupational Therapy, 39: 3-14.

Gowran, R., Mckay, E., O'Regan, B. (2014). Sustainable Solutions for Wheelchair and Seating Assistive Technology Provision: Presenting a Cosmopolitan Narrative with Rich Pictures. *Technology and Disability*. 26.

Gowran, R.J., Bray, N., Goldberg, M., Rushton, P., Barhouche Abou Saab, M., Constantine, D., Ghosh, R., Pearlman, J.(2021) Understanding the Global Challenges to Accessing Appropriate Wheelchairs: Position Paper. Int J Environ Res Public Health. 24;18(7):3338.

Gowran, R., Clifford, A., Gallagher, A., McKee, J., O'Regan, B., McKay, E. A. (2022) Wheelchair and seating assistive technology provision: a gateway to freedom. *Disabil Rehabil*. 44(3):370-381.

### **References Cont.**

International Society of Wheelchair professionals. (2023) International Society of Wheelchair professionals. Accessed 15th Februray, 2024. https://wheelchairnetwork.org/about-win/

Kenny, S., Gowran, R.J. (2014) Outcome Measures for Wheelchair and Seating Provision: A Critical Appraisal. British Journal of Occupational Therapy. 77(2):67-77.

MacLachlan, M., Scherer, M.J. (2018). Systems thinking for assistive technology: a commentary on the GREAT summit. Disability and Rehabilitation: Assistive Technology, 13(5), pp.492-496.

NICE (2014) Pressure ulcers: prevention and management Clinical guideline [CG179] London: NICE

Osborne, L., Gowran, R, & Casey, J. (2023). Evidence for 24 hour posture management A scoping review BJOT. British Journal of Occupational Therapy. 86. DOI 10.1177/03080226221148414. Resna Position on the Application of Tilt, Recline and Elevating Legrests, Rehabilitation Engineering & Assistive Technology Society of North America. Arlington, VA. April 2008

Rodby-Bousquet, E., Paleg, G., Casey, J., Wizert, A. and Livingstone, R., 2016. Physical risk factors influencing wheeled mobility in children with cerebral palsy: a cross-sectional study. BMC pediatrics, 16, pp.1-8.

Tebbutt, E., Brodmann, R., Borg, J. Maclachlan, M. (2016). Assistive products and the Sustainable Development Goals (SDGs). Global Health 12, 79.

Thyberg, M. et al. (2001) 'Wheelchair seating intervention. Results from a client-centred approach', Disability and Rehabilitation, 23(15), pp. 677–682. doi: 10.1080/09638280110049900.

World Health Organisation (2001), International Classification of Functioning, Disability and Health, accessed 15th February 2024,

https://iris.who.int/bitstream/handle/10665/42407/9241545429.pdf?sequence=1,

Wounds UK. (2018) Best Practice Statement: Improving holistic assessment of chronic wounds. London: Wounds UK



#### Member of RCOT **Jenny Rolfe**

Occupational Therapist jenny.rolfe@accora.care

Jenny is a senior OT, who has been practising since 1997, and completed her MSc in Neuro-Rehabilitation in 2007. Her expertise lies in postural management and assessment.



#### Member of RCOT **Jayne Brewer**

**Occupational Therapist** jayne.brewer@accora.care

Jayne qualified as an OT in 1996 and has a wide range of clinical experience in acute and community settings. Her recent experience has been in community equipment stores providing training and support to prescribers and commissioners.





#### Debra Dunitz **Occupational Therapist** debra.dunitz@accora.care

Debra qualified as an OT in 2006, and uses her wide range of clinical knowledge and experience to inform product development, and to provide clinical training on our product range.



Mary Snow **Occupational Therapist** mary.snow@accora.care

Mary qualified in 2006 and has held a seating/postural lead role in the county for several years, completing the 24 hr postural management course at Specialist Disability Service Oxfordshire in 2009 and 2016. Mary continues to work part-time for Oxfordshire services and is also a registered private practitioner.



Nicky Phillips **Occupational Therapist** nicky.phillips@accora.care

CORU

Nicky is a dedicated Occupational Therapist, specialising in disability, posture and seating. Her 16+ years of experience spans both inpatient and community settings, enriching her professional skills and broadening her perspective in the field.



Sarah Thompson **RN, BA Hons, Tissue** Viability Nurse Specialist sarah.thompson@accora.care



**Tissue Viability Consultant** 

Heidi has been practising as a Tissue Viability Nurse since 2002. She has experience in both acute and community care, and her passions centre around education, improving services for patients and team development.

Sarah has been a Tissue Viability Nurse since 2010, gaining a vast amount of experience within wound care from the primary, secondary, and private sector. She prides herself in positive patient outcomes by utilising a patient-centred approach to their care.

## Accora

Thank you for your attention

Contact info@accora.care for a joint visit.

**NPO** Need to add the rest of the clinical team to this. We are missing Mary Snow and Nicky Phillips Natalie Phillips | Accora, 2024-08-16T08:28:07.485