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Seating and postural management

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Aim: to provide an overview of the impact of sitting for extended periods and the development of pressure ulcers in adults.



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Objectives:

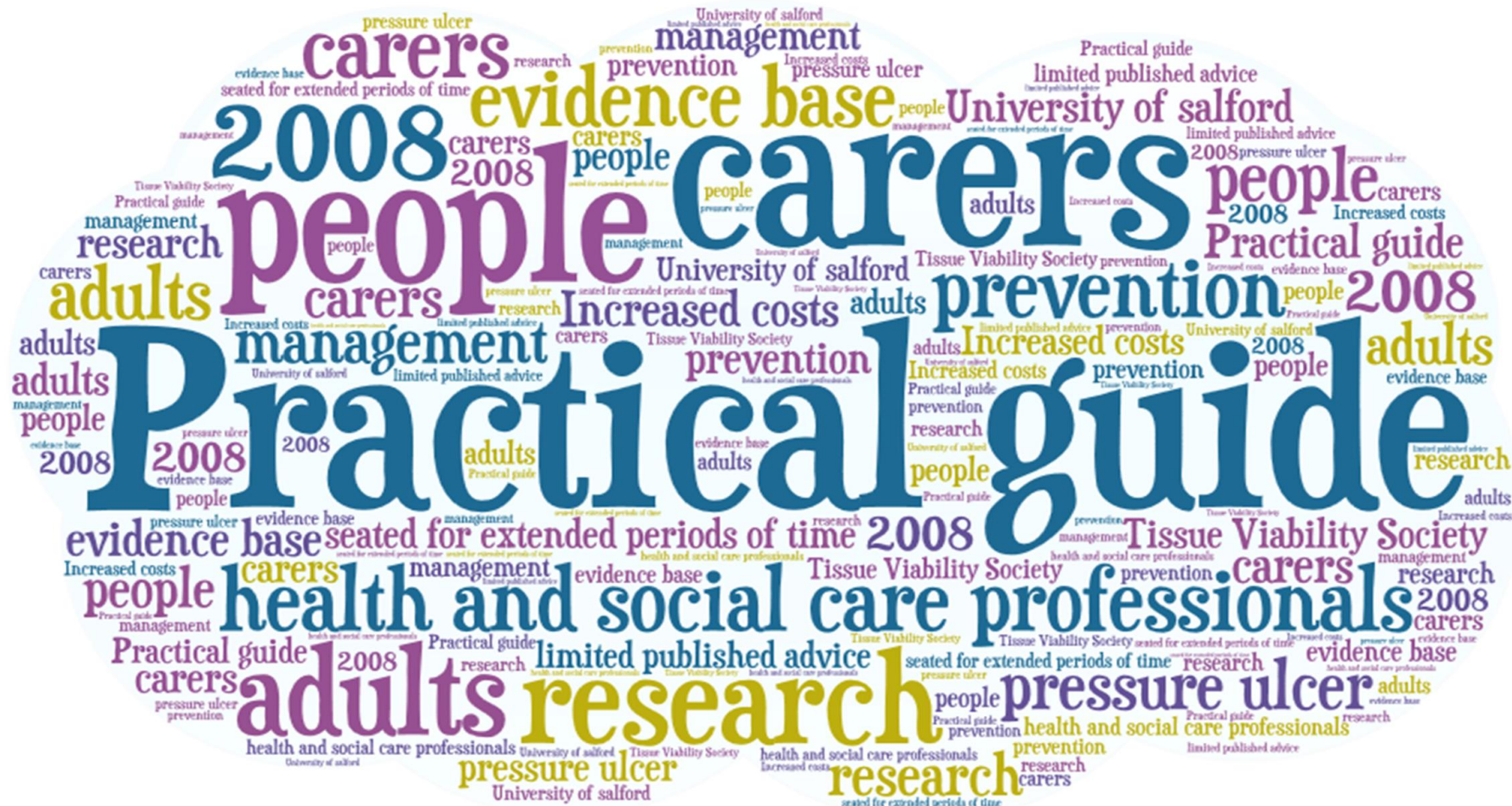
After attending this session, delegates will be able to understand:

- The epidemiology and aetiology of pressure ulcers for adults who remain seated for extended periods of time.
- The role of holistic seating assessment.
- The types of equipment available.
- The members of the interprofessional team who can support in equipment selection and prescription.

Epidemiology of pressure ulcers



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Definition



A pressure ulcer is
‘localised injury to the
skin and/or underlying
tissue usually over a bony
prominence, as a result
of pressure, or pressure in
combination with shear’
(NPUAP/EPUAP/PPPIA,
2018)

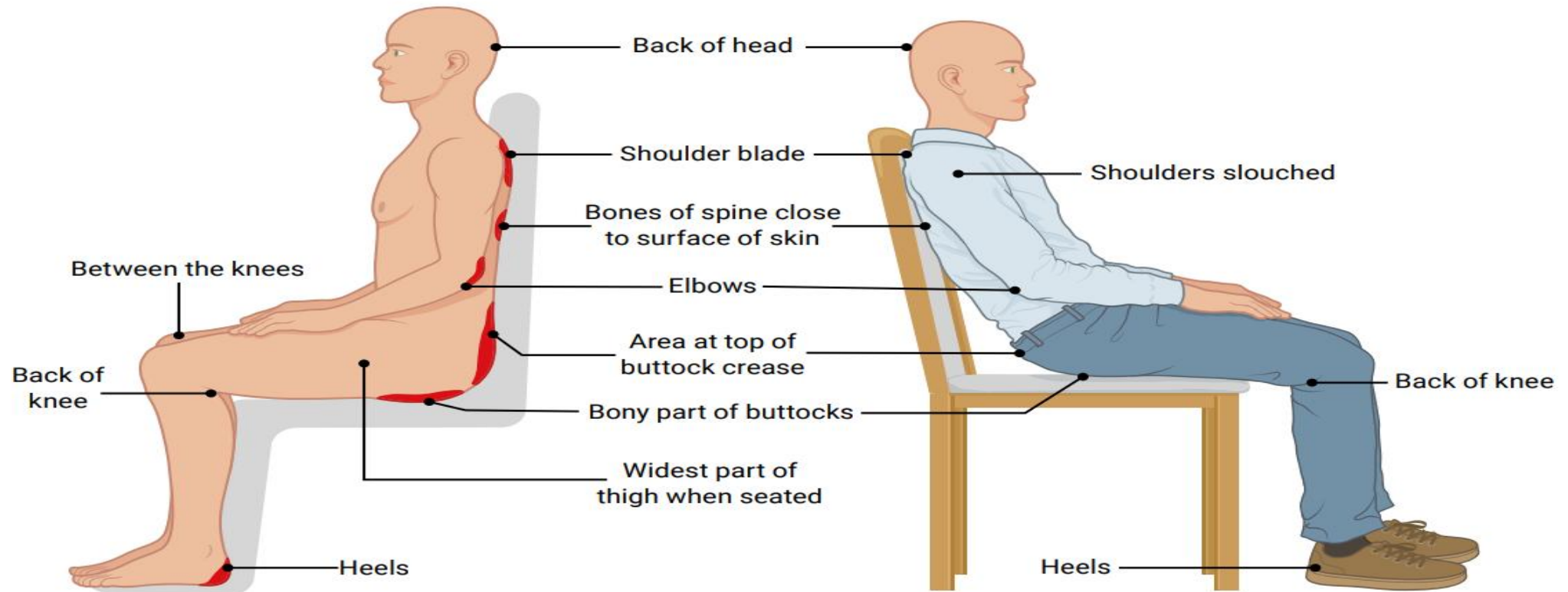


Aetiology of pressure ulcers from sitting for extended periods

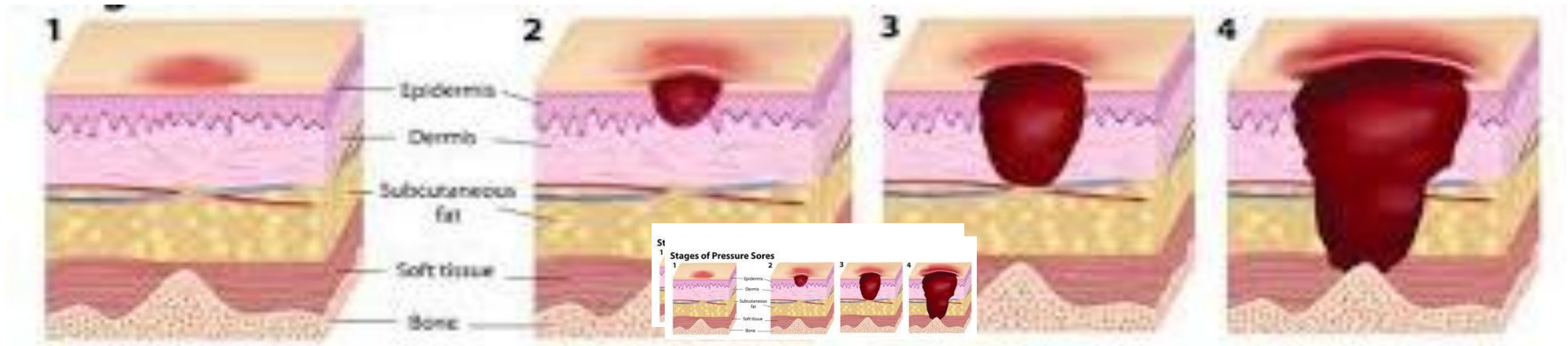


Where do pressure ulcers develop when seated?

Figs. 7 and 8. Areas at risk of pressure ulcer damage when seated and areas at risk of pressure ulcer damage when seated slouched in the chair.



Categories of pressure ulcers



NB:

- Previous unstageable pressure ulcers should now be identified as Category 3 and recategorised when slough or necrosis is removed.
- Deep tissue injuries (DTIs) should not be reported as pressure ulcers unless they result in broken skin
- or they fail to resolve and it is evident on palpation that there is deep tissue damage present, at which
- point, they should immediately be categorised and reported (NWCSP, 2023).

Risk Factors



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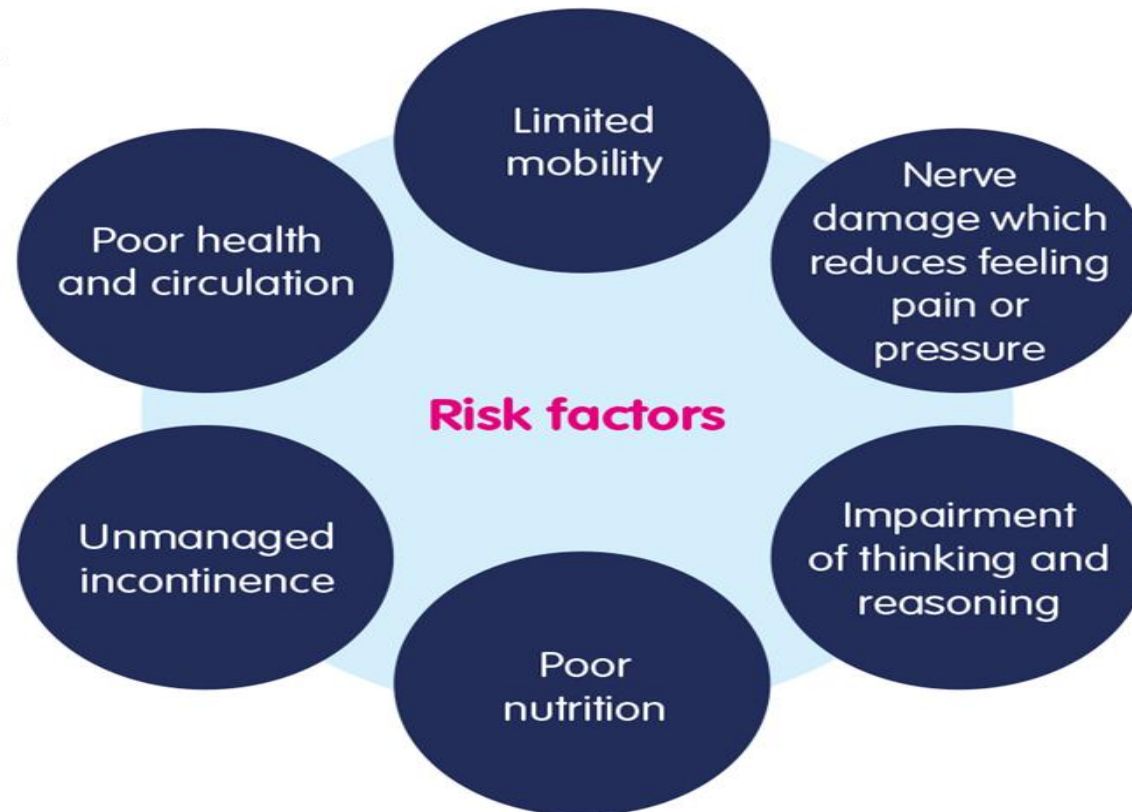


Figure 9 Risk Factors

Optimal seated position



- ✓ Chair seat width
- ✓ Chair seat height
- ✓ Chair seat depth
- ✓ Chair back rest
- ✓ Chair seat to back angle
- ✓ Chair arm rests
- ✓ Chair leg rests/foot support
- ✓ Head support

Figure 10: Seated position too high and low

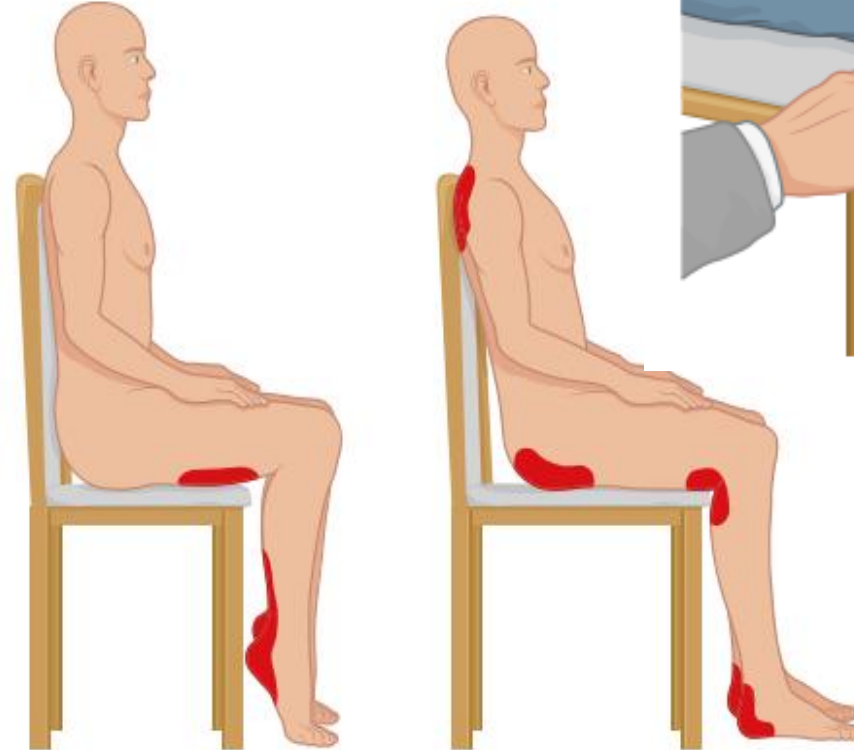


Figure 11: Seat depth clearance



Seating assessment



The person

- Past medical history
- Current health status (physical & mental)
- Pressure ulcer history/risk assessment
- Body size and proportions
- Ability to transfer/mobilise/pressure relieve
- Level of independence
- Nutrition
- Medication
- Continence
- Opinions, life style and preferences

The chair/cushion

- Type
- Size
- Hours to be spent in the chair
- Temperature and humidity when seated
- Interface Pressure Mapping
- Function of the chair
- Additional supports
- Material
- Durability

Carer

- Adjustability of the chair
- Manoeuvrability
- Easy to maintain and clean
- Ability to position person in the chair
- Opinion

Other

- Risk assessment: environment, person and carer
- What is the chair to be used for?
- Environmental aspects: size of the room, doorway width, room temperature
- Motivation to use the chair
- Occupations
- Aesthetics (look of the chair)
- Cost

Equipment Selection



There are many different types of pressure redistributing seating equipment available to help prevent and manage pressure ulcers such as:

- A single cushion to use on the chair
- An integrated cushion into a seating system
- A custom-made cushion
- Made of foam, gel, air filled, dynamic, watercell, or spacer fabric.
- Attention paid to reducing the pressure exerted on the areas at risk, adaptation to the user's body shape, managing temperature and humidity at the buttocks, and comfort
- May also include tilt in space, recline and elevating leg rests, standing frames and standing wheelchair devices.



Self care



A ssessment of risk
S kin inspection and care
S upport surface selection and use
K eep your patient moving
I ncontinence and moisture care
N utrition and hydration management
G iving information

S Sickness



Figure 15. Skin tone tool (adapted from Ho and Robinson, 2015)⁶⁵



Figure 16: Sideways lean
www.youtube.com/watch?v=FMudH2gyJi8



Figure 17: Tilt forward and Full Frontward Lean <https://www.youtube.com/watch?v=BdzcYil-16g>



Differences in opinion of the priority of necessary features of chairs and cushions



Feature and priority	Adults who remain seated for long periods of time	Health and care professionals
Most important feature	Comfort	Provision of postural support and function
Second important feature	Aesthetics and how the chair looks e.g. fabric	Comfort
Third important feature	Function of the chair	Ease of transfers on and off the cushion/ chair and ease of use
Fourth important feature	Cost	Professional opinion of the cushion or chair

Equipment abandonment



Why people abandon assistive technologies found six main reasons or themes:

1. Design and function of the assistive technology lacked end user and clinician input in the design process and this meant the assistive technology was not easy to use, was too cumbersome or could not be used in certain environments
2. Information and awareness, in particular lack of it for the end user who would be using the equipment
3. Service Provision, that is the end user not being involved in choosing the equipment
4. Psychological barriers such as the assistive technologies are awkward, annoying or not appropriate for use
5. Support networks or family and friends are not encouraging, in the use of the assistive technology and provide only negative views.
6. Societal barriers from others which creates a stigma about using the assistive technology for the end user

Key Outcomes



- ✓ Comfort and postural stability
- ✓ Pressure redistribution
- ✓ Physiological abilities e.g. breathing, swallowing, digestion
- ✓ Participation in occupations and activities such as hobbies and daily living tasks
- ✓ Impact on the person's quality of life
- ✓ Communication
- ✓ Review



Conclusion



- A personalised and collaborative approach to seating can support adult's health and wellbeing.
- Members of the interprofessional team include Occupational Therapy, Physiotherapy and Tissue Viability.
- Education of staff, older adults and their significant others/carers in seating and pressure ulcer prevention/management is essential.

Stephens, M., Bartley, C.A, Chester Bessell, D.S, Greenwood, C., Marshall, A., Neill, S., Rooney, S., Rose, S., Scattergood, S A., Worsley, P.R. (2025). Understanding the association between pressure ulcers and sitting in adults: What does it mean for all of us? Seating guidelines for people, carers, health and social care professionals. Society of Tissue Viability, UK. Retrieved from <https://doi.org/10.1016/j.jtv.2025.100937>

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