PRESSURE RELIEF GUIDELINES

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When working with clients who use wheelchair seating and mobility, it is critical to consider the latest pressure research and guidelines. This information directs the assessment team in understanding any past or current pressure injuries, determining pressure injury risk, matching these factors to correct product selection, and designing a client-specific weight shift program.

The National Pressure Ulcer Advisory Panel (NPUAP) is the primary source of current pressure injury terminology and definitions. The definition of pressure injuries was redefined during the NPUAP 2016 Staging Consensus Conference in Chicago. The terms "pressure sore" and "pressure ulcer" have been replaced by "pressure injury."

DEFINITION:

"A pressure injury is localized damage to the skin and underlying soft tissue usually over a bony prominence or related to a medical or other device. The injury can present as intact skin or an open ulcer and may be painful. The injury occurs as a result of intense and/or prolonged pressure or pressure in combination with shear. The tolerance of soft tissue for pressure and shear may also be affected by microclimate, nutrition, perfusion, co-morbidities and condition of the soft tissue (NPUAP, 2016)."

STAGING:

The following are the current pressure injury staging definitions. More detailed information is available at NPUAP.org.

- Stage 1: Non-blanchable erythema of intact skin
- Stage 2: Partial-thickness skin loss with exposed dermis
- Stage 3: Full-thickness skin loss
- Stage 4: Full-thickness skin and tissue loss
- Unstageable Pressure Injury: Obscured full-thickness skin and tissue loss
- Deep Tissue Pressure Injury: Persistent non-blanchable, deep red, maroon or purple discoloration

RISK ASSESSMENT:

Part of the Wheelchair Seating Assessment includes pressure injury risk assessment. A variety of factors increase pressure injury risk, including immobility, fragile skin, existing or past pressure injuries, impaired circulation, and pain in body areas exposed to pressure. Contributing factors include pressure, shear, hygiene, incontinence, heat, moisture, nutrition and repositioning.

PRESSURE REDISTRIBUTION GUIDELINES:

Once a risk assessment is complete and appropriate seating surfaces are selected, the assessment team must design a pressure relief/redistribution program specific to the individual. A primary resource is "Pressure Ulcer Prevention and Treatment Following Spinal Cord Injury: a clinical practice guideline for Health-Care Professionals, Second Edition, Consortium for Spinal Cord Medicine Clinical Practice Guidelines." These guidelines are specific to clients with spinal cord injuries and so must be modified by the team to meet not only individual needs, but also the needs of clients with other diagnoses.

The current guidelines (2014) recommend a weight shift every 15 to 30 minutes for approximately two minutes. This may be achieved manually or by using a mechanical or power tilt and/or recline system. Standing systems can also be used to provide weight shifts. A tilt of more than 45 degrees is required to provide any measurable pressure relief. Optimal pressure relief is achieved using a combination of 25-35 degrees of tilt in combination with 120 degrees of recline, which is sometimes used as justification for a combination tilt and recline system (Jan, et al., 2013).

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RESOURCES:

1. NATIONAL PRESSURE ULCER ADVISORY PANEL, WWW.NPUAP.ORG
2. PRESSURE ULCER PREVENTION AND TREATMENT FOLLOWING SPINAL CORD INJURY: A CLINICAL PRACTICE GUIDELINE FOR HEALTH-CARE PROFESSIONALS, 2ND ED., CONSORTIUM FOR SPINAL CORD MEDICINE CLINICAL PRACTICE GUIDELINES, 2014.
3. JAN, Y. K., CRANE, B. A., LIAO, F., WOODS, J. A., & ENNIS, W. J. (2013). COMPARISON OF MUSCLE AND SKIN PERFUSION OVER THE ISCHIAL TUBEROSITIES IN RESPONSE TO WHEELCHAIR TILT-IN-SPACE AND RECLINE ANGLES IN PEOPLE WITH SPINAL CORD INJURY. ARCHIVES OF PHYSICAL MEDICINE AND REHABILITATION, 94(10), 1990-1996.