Notes for both Active and Reactive Surfaces:

- Support surfaces do not substitute for turning schedules.
- Check weight limits of the surfaces prior to use.
- Follow the manufacturer's directions regarding cleaning and infection control.
- Manage heels independently from the surface (i.e. suspend the heels above the surface or use heel booties).

Summary

The selection of a therapeutic support surface is an integral part of the pressure prevention and management plan of clients, but does not replace good client care. Turning and repositioning are still required despite having a therapeutic support surface. Support surfaces can help to reduce the forces of pressure, friction and shear against the client. With the multitude of surfaces available, all with different costs, it is important to choose the support surface with the features which best match the client's individual needs, that does not restrict their mobility and is easy for caregivers to use. The support surface selection tool presented in here facilitates the linkage of client and clinician needs with specific therapeutic support surface features.

Appendix M: Seating Assessment

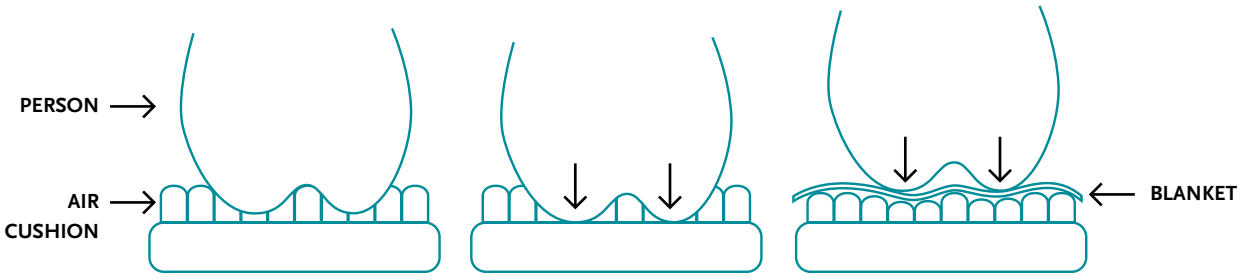
A seating and mobility assessment requires a specialized expertise. As a result, all clients at risk of developing pressure ulcers, or who have pressure ulcers and sit in a wheelchair or other chairs should be referred to an occupational or physical therapist with an expertise in seating and mobility. These individuals are often familiar with various funding sources both governmental and non-governmental which may be able to assist the client with the purchase of any needed equipment. A seating assessment should occur every two to three years, whenever the client has status changes, or where there is a risk of pressure ulcer development.

There are other activities that members of the health-care team can do to maximize the reduction in pressure, friction and shear when sitting. These include:

- **If the client uses a wheelchair, ensure that the wheelchair and seat cushion have been prescribed for that client and it is the latest prescription.** Clients may have been given a wheelchair that was prescribed for another relative, or purchased without a therapist's involvement. In these situations, the fit of the chair may not be ideal. In other cases, the client may have a newer piece of equipment that they are not using. Encouraging the use of the most recently prescribed equipment may help to minimize friction and shearing forces.
- **Check that there are no foreign objects in the wheelchair.**
- **Encourage clients to engage in weight shifting behavior.** Depending on the abilities of the client this may include shifting from side to side, leaning forward or using the tilt feature on their chair.
- **Assist clients to reposition themselves in the wheelchair at least every 2 hours.**
- **Always use a specialty wheelchair cushion, which has been prescribed by an occupational or physical therapist. Ensure this cushion is correctly placed in the wheelchair.** Many cushions have contours on the top of the cushion. The contour in the middle on one side of the cushion is called a pummel. The pummel should be positioned on the top at the front of the wheelchair, as it is designed to help align the legs. Provide education for the client and/or family on cushion use.
- **Check to ensure that the wheelchair is properly maintained and is not worn or bottoming out.** As foam cushions near the end of their life span, they may not return to their original shape when the client's weight is removed; alternatively they may collapse under the client and not distribute the pressure under the client. Some gel cushions may leak. Bottoming out or leaking are indicators that the client requires a new pressure management cushion. Air cushions should be checked to ensure they are properly inflated weekly. The only way to check the inflation of an air cushion is to put your hand between the client and cushion when the client is sitting normally on the chair (Note: wear gloves during this procedure. A low friction sleeve or sheet over the glove will make this process easier). There should be approximately one inch of air between the client's lowest bony prominence, and the bottom of the cushion (see diagram below).

Infaltion of Air Cushions

Concept: The persone should be "floating" in the cushion not sitting "on top of" the sushion.



RIGHT: The cushion forms around the shape of the buttocks

WRONG: Not enough air. The person is not "floating" in the cushion

WRONG: Anything placed between the person and the cushion decreases it's effectiveness. The person is weight bearing on the bony prominences because they can not sink down into the cushion.

OTHER TIPS:

- The best way to check the inflation is to put your hand between the person's bony prominence (ischial tuberosity) and the cushion and "feel" how much air is in the cushion.
- When the person gets out of the cushion it may look as though there is not enough air
- Remember to check the cushion regularly to ensure that it has the correct amount of air

Appendix N: Nutrition/Hydration-related Blood Work

Albumin and Prealbumin	Albumin and prealbumin are hepatic proteins that are often cited in the literature as markers of protein and nutrition status. There is much discussion among clinicians and authors, with many disputing the value of albumin and prealbumin as nutritional markers, especially in critical care and acute care settings. Low values reflect severity of illness and/or injury regardless of protein status and are "red flags" for the potential of a patient to develop malnutrition or to become more malnourished (Barnes et al., 2007; Fuhrman, Charney & Mueller, 2004).
Anemia	If a patient presents with anemia it is imperative that the type of anemia be identified. Both iron deficiency anemia and anemia of chronic disease (ACD) result in a decreased hemoglobin level, which is a barrier to healing. A chronic non-healing pressure ulcer itself is an inflammatory process that may lead to ACD (Holcomb, 2001; Keast & Fraser, 2004).
Glycemic Control	The physical signs and symptoms of diabetes do not always accompany hyperglycemia that is identified by blood tests (Fraser, 2007). It is recommended that both fasting blood glucose and Hemoglobin A1C be screened in all individuals with pressure ulcers, as an individual may present with normal fasting levels but have impaired glucose tolerance. Screening an individual who has no known history of diabetes mellitus may uncover previously unidentified hyperglycemia that is negatively impacting his or her wound management. Preventing and treating ulcers are more effective when screening and management measures are implemented to address underlying factors such as hyperglycemia that impede successful outcomes. Hemoglobin A1C levels greater than 7.0 per cent (0.070) are associated with significantly increased risk for both microvascular and macrovascular complications (Canadian Diabetes Association Expert Committee, 2003). Individuals with diabetes exhibit significantly impaired wound healing and increased complication rates (Arnold & Barbul, 2006; Collins, 2003; Lioupis, 2005). Controlling serum glucose levels to promote wound healing and prevention cannot be overemphasized (Marston, 2006).