

AFTER THE ASSESSMENT: WHEELCHAIR & SEATING SET UP IN THE HOME: MAKING IT FUNCTIONAL

SHEILA BUCK, B.SC.(OT), REG.(ONT), ATP
Therapy NOW! Inc.

Wheelchair Set-up to Decrease Repositioning Needs

Common Problem Areas

Seat belt use

Tray use

Armrest height/arm pads for support (especially in power)

Seat height

Footrest height/method to put foot on footplate

Cushion placement – forward/back, side to side, reversed, upside down

Slings, pads and other things!

SEATING SYSTEM SET-UP

Mounting the seating system in the chair is just as critical as the product being applied.

- Height- back support in relation to PSIS and lower back hardware
- Angle- back, seat, canes
- Portability – multiple use, hardware slippage
- Affect on chair depth, seat depth, leg angle, centre of gravity, back cane interference, R.O.M. of arms

LANDMARKS FOR PROPER POSITIONING

- Space behind knee to edge of cushion
- Space under knee to top of cushion
- Height of headrest in relation to the head
- Space behind buttocks and back edge of cushion
- Space from seat cushion up to initial contact of the lower back on the back support
- Orientation of the ASIS
- Space between pelvic positioning belt and ASIS

CENTER OF GRAVITY

- Refers to the “Balance Point” of an individual in relation to the wheelchair
- Forward C.O.G. improves responsiveness of the wheelchair and allows easier propulsion
- Rearward C.O.G. improves stability of the wheelchair for “First Time” users
- Affected by Axle position, Caster placement, and Caster orientation

SEATING CONSIDERATIONS FOR WHEELCHAIR SET UP

- Centre of gravity changes for kyphotic postures or changes in hip/pelvic angles, weight changes
- Centre of body over axis or rear wheel to maximize mobility and stability
- Too forward – hard to push, hard to tip
- Too far back – chair tippy backwards, difficult to steer, may sit in kyphosis to stabilize self

SHOULDER/CHEST SUPPORTS, HEADRESTS, TRAYS, ELBOW SUPPORTS, ANTERIOR PELVIC SUPPORTS, FOOT SUPPORTS

- What is your goal and that of the client? Three points of positioning/forces
- If everything needs to be tied down, then the relationship of the pelvis to the trunk may not be correct

TRANSFER TECHNIQUES FOR MAXIMAL WHEELCHAIR POSITIONING

Anyone will slide out of a chair to achieve a more comfortable position. Therefore, prior to seating the client, ensure the cushion is correctly aligned, additional extra sheets and covers are removed, and footrests and arm rests are set to comfortable levels. Most importantly ensure that the chair and cushion are those assigned to that client. Custom seating for one person may create pressure ulcers for another. It is critical that all lift slings are removed after transfers to avoid pressure points and shearing.

Mechanical Lift to Wheelchair Positioning

- position client in full upright seated position in slings - shorter strap on top and short to medium on bottom
- position client over center of wheelchair (if wheelchair tilts, place in tilt position) and lower slowly
- clients buttocks may touch and lightly slide down back of wheelchair - if chair does not tilt, this may cause the wheelchair to slightly tip backwards...this is okay as the client is still in the sling and it promotes the buttocks to move to the rear of the chair
- remove sling by lifting legs straps out first to each side, and tuck to back of wheelchair, lean client forward and remove sling from behind back
- check pelvic area for alignment
- position seat belt and adjust firmly across thigh or anterior pelvic area.
- check footrests, back/bottom of seat cushion/back support for contact, headrest position, arm rest position
- if client has tight hamstrings gently move feet sideways onto foot platform – other wise they will be pulled into posterior pelvic bit and begin sliding out of the chair immediately
- if repositioning is required, lean client forward into a jack knifed position and reposition buttocks back first and then sit client back into an upright position – do not pull up on the shoulder areas, this only creates dislocated shoulders and does not move the pelvic area. Tighten seat belt by maintaining client position from the front by using a knee on knee position.

If the client completes a pivot transfer, ensure that pelvis has contacted the cushion with a good pelvic position both lateral and front to back.

Speaker Bio

Sheila is an Occupational Therapist from Milton, Ontario and has been actively working in the field of seating and mobility for over 20 years. Sheila is the owner of Therapy NOW! Inc. – an Occupational Therapy Company providing consultation, assessment and treatment in the area of accessibility, ergonomics, seating and mobility. She can be reached at therapynow@cogeco.ca .