

COMMON SEATING CHALLENGES; HOW TO ASSESS FOR THEM AND OPTIONS FOR ADDRESSING THEM

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Wheelchair and seating assessment and intervention is a complex process primarily due to the unique needs of each client (1). One of the many challenges in wheelchair and seating intervention is that the anticipated outcomes are often not realized in one assessment simulation (trial) or fitting appointment and understanding why the outcome was different than anticipated can be difficult. Standard process guidelines have been developed to support this complex process such as that from the World Health Organization (2). This guideline outlines an 8 stage of service delivery process with the associated actions for each stage to assist therapists in ensuring all aspects of the service are delivered. In addition to using this type of standard process, using a systematic critical thinking approach can complement the service delivery process in the assessment, prescription and fitting stages. This systematic critical thinking approach includes: key areas to assess/reassess; establishment of seating goals with the client; analysis of assessment information; formulating a rationale for the change you want to make, together with the anticipated outcomes and; identification of the equipment specifications for assessment simulation (trial). Using a service delivery guideline to support a standard practice process in combination with a systematic critical thinking approach to wheelchairs and seating practice can optimize client outcomes as well as streamline and structured intervention to enable therapists to advance their own learning (3).

No clinical work is a linear process; there is work and rework at various stages, including the potential need to loop back to a previous stage or start over in the process. Often there is a great deal of information gathered through assessment and observation, which can be overwhelming and challenging to manage effectively. A critical thinking approach provides a framework for thinking or approaching the assimilation of all the data gathered in the assessment. This is the starting point to address common and not-as-common seating challenges.

A full assessment is essential to address seating challenges as it identifies the physical, environmental and lifestyle needs of the person. The assessment is the foundation of the wheelchair and seating service delivery process, providing all the information needed to guide the process. Common seating challenges are a blend of the physical, environmental and lifestyle needs, typically with one need being more prominent but impacted by the others. This is where the development of client goals as part of the plan is important, as sometimes the needs across all parameters cannot be achieved.

To move forward from the assessment information to selecting the equipment in the assessment simulation (trial) and fitting stages, critically analyzing how the findings and goals translate to the parameters of the equipment selected and how the equipment set up can impact the goals and anticipated outcomes is essential. Translation is achieved by developing a rationale or hypothesis for the proposed changes based on a cause-effect relationship. The effect is the problem/issue and the cause is one of many potential causes of the problem that has been discerned from the information or data gathered through the assessment. For example, the client has identified sliding forward on the cushion as a problem (effect) they want addressed. The information gathered from the assessment suggests potential causes as foot propulsion which is the current means of mobility, tight hamstrings bilaterally, and/or hammocking wheelchair upholstery. The rationale or hypothesis is a statement of the outcome you are expecting from a change in the cause-effect relationship. The hypothesis for this example may be: If the slung seat upholstery is replaced with a moderately contoured cushion secured to a firm base (a change in the cause) the patient's sliding will be reduced (the effect). An additional or alternate hypothesis, depending on the client's goals and priorities, may be: If the client is provided with an alternative means of independent mobility to eliminate the need for foot propulsion (altering the cause), the sliding will be reduced (the effect). The analysis will be different for each person depending on their goals and needs but following the same process each time will give you a

means to track and reflect on what worked but equally important, why it worked. There is very rarely one hypothesis because there is rarely only one problem or effect and often more than one way to address it. The rationale for change or the hypothesis guides the equipment selection and is tested during the equipment trials to determine the effectiveness of the change; was the hypothesis correct, or incorrect; more than likely it was partially correct.

Over time, the use of a systematic critical thinking approach to wheelchair and seating intervention supports the development of therapists' knowledge related to the identification of the multiple potential causes for common seating problems, such as sliding, coccyx pressure, low back discomfort, and linking them to the potential causes such as tight hamstrings, hip flexion limitations, function, or care provider needs which can then be applied to equipment selection and set-up. Linking the assessment data of common seating problems, with potential causes to guide the equipment selection can involve modifications to existing equipment, changing components of existing equipment or an entirely new system. A mix of commercially available products, custom modifications to commercially available equipment or custom equipment components may be used to address one or several of the cause-effect relationships to achieve the desired outcomes.

Using a systematic critical thinking approach to compliment a standard practice guideline can result in better outcomes for the client, better learning through reflection and critical thinking for the therapist (4) as well as advance the development of their skills abilities and knowledge in the wheelchair and seating field.

References:

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Speaker Bio:

Susan Moir and Laura Titus are both occupational therapists with over 25 years experience in the field of wheelchairs and seating. For the past 17 years they have worked at the Parkwood Institute Adult Wheelchair and Seating Program in London, ON.