The Clinician Checklist:

Wheelchair Seating and Mobility Equipment Provision Process

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Clinician Task Force

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The Clinician Task Force (CTF) is comprised of more than 80 physical and occupational therapists across the United States who are recognized as leaders in the field of complex rehabilitation technology (CRT). Our organization advocates for best practice, evidence-based methods in the service delivery of wheelchairs, seating and accessories; and access to appropriate wheeled mobility and seating for non-ambulatory consumers to promote positive outcomes. The physical and occupational therapy professional code of ethics guide an approach to wheeled mobility service delivery from dual best-practice and client-centered perspectives. We inform and guide policy and education through research and expert clinical experience.

The Clinical Coverage workgroup aims at addressing clinical gaps that occur when providing seating and mobility services. Guidelines for the service of wheelchairs are produced by the World Health Organization and the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA). However, the Clinical Coverage workgroup members identified a need for accessible knowledge about comprehensive wheelchair seating services to guide the match between the person and the most appropriate equipment for all practice settings.

The following document aims to guide clinicians to provide quality seating and mobility services. It was written by expert clinicians and serves to educate and advocate for practice in this area for all levels of experience.

Respectfully,

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I. The Checklist

*This checklist sequence is flexible and does not have to be completed in the order it is listed. However, each item is recommended to be fulfilled to ensure **clinical best practice**.*

	Prepare Review chart, referral, medical records, and demographics and understand funding requirements prior to the evaluation.
	Introduce In coordination with the CRT supplier (defined in the full document), introduce all team members and their roles, including family and caregivers. Review the evaluation to delivery process time frame.
	Establish Identify client goals and priorities, and identify the need for equipment.
	Review and/or Observe Performance Examine level of assistance to complete ADL's & IADL's , and complete a functional assessment.
	Review Roles, Routines and Responsibilities Assess home, community, and school or work accessibility, in addition to client's living situation, daily routine, participation, transportation (private, medical), leisure interests.
	Review Body Structures, Functions & Limitations Such As: Cognition, strength, ROM, balance, coordination, mobility, posture, skin integrity and/or history of pressure injuries or wounds, pain, endurance, cardiovascular status Complete the mat assessment & measurements, and review client's current equipment and use.
	Perform Outcome Measures and Review Activities Such as: **Patient Reported Outcomes:* FMA, COPM, ATOM, WST-Q, PSFS, Barthel Index, WUSPI, Modified Fatigue Efficacy Scale, CHART, WheelCon, Lawton IADL scale, WhOM **Observer Reported Outcomes:* PMTT, WPT, WST, FIST, Barthel Index, TUG, 5 Times Sit to Stand, 10 Meter Walk, FRT, BBS. **Please see supplementary document for full assessment titles. **Some assessments may be utilized to demonstrate need for the wheelchair base, while others should be considered for pre-post use (during evaluation & after equipment delivery). Not all clients are appropriate for standardized outcome measures.*
	Perform Device Trials Trial appropriate devices and complete pressure mapping (if appropriate and available). Assess the lowest level of intervention/equipment for the client's functional need. Discuss funding options, insurance coverage and any out-of-pocket costs with the CRT supplier. **Trial location and length must be feasible for client, clinician and supplier. Length of trial must be customized to client's needs, and often occurs adequately within a clinical session.*
	Document Review client goals and justification of your treatment plan in addition to the objective findings in collaboration with the CRT supplier. Describe why the equipment is necessary for the client's specific functions. Include the wheelchair base, all accessories, parts, and seating components. Submit the Evaluation/Letter of Medical Necessity and respond to funding source requests.
	Participate in Delivery, Fitting and Training In-person of via telehealth, review client's safety, fit within, and functional use of delivered equipment. Identify needs for continued intervention to maximize use of wheeled mobility equipment. Complete delivery in coordination with the CRT supplier, if possible.

II. Supplementary material

Background:

Physical and occupational therapists have the key role of assisting individuals with disabilities in obtaining appropriate wheelchairs, seating, and mobility equipment through a multi-faceted evaluation process. To complete the equipment procurement process effectively, multiple steps are required. These steps do not need to be completed in the sequential order listed; however, they should all be fulfilled to maximize the client's goals and clinical outcomes. It should be noted that the information collected is no different than any other therapy evaluation or plan of care, as the process must be client-centered and goal focused; although, the complexity of the recommended equipment needed may impact the team members needed and documentation requirements. Physical and occupational therapists are uniquely qualified to lead the evaluation process, although the input of the entire team is necessary, especially the important role played by the complex rehabilitation technology (CRT) Supplier. A CRT supplier is a durable medical equipment supplier with an Assistive Technology Professional (ATP) certification. CRT suppliers are uniquely qualified to provide wheelchairs of all complexities.

Checklist

Prepare:

Completing a thorough chart review is necessary prior to the evaluation. The referral for the evaluation should be from a physician/provider who is willing to assist with all necessary documentation to complete the equipment funding and provision process. It is important to ensure clarifications of the medical diagnoses as this often affects qualification criteria for mobility equipment. It is helpful for the clinician to be able to look up wheelchair and accessory healthcare policies to understand funding rules and requirements, and to know what is expected for documentation prior to the evaluation. Typically, the supplier is aware of these rules and is to be utilized as a resource.

Introduce:

It is important to introduce and identify all persons who are part of the team, including the client, their family, and/or caregivers. A client may choose an CRT Supplier based on their prior history of working with them, because of funding options or limitations (certain suppliers may be preferred providers with their insurance), or they may need assistance from the clinician to choose one with whom to work. Review the typical time frame for the entire mobility equipment provision process to help the team understand expectations. If there are multiple clinical sessions required during the process, summarizing previous sessions can build trust with the client as well as encourage accountability and communication for the team.

Establish:

The client's goals should always be kept at the center of the mobility equipment process. The team should consider what is necessary to keep the client healthy and functionally mobile and prioritize the activities in which they want to participate. Listening to the client is key. Ensure that the items that are being recommended will support the client in achieving their goals. Additionally, considering components for the client that assist the client with posture, skin integrity, comfort and other medical needs should be identified and will be discussed below.

Review and/or Observe Performance:

Clinicians should assess the level of assistance needed to perform basic and instrumental activities of daily living (ADLs and IADLs) and their other daily occupations or activities. Clinicians should objectively document how much assistance the client requires to safely and efficiently complete activities such as dressing, toileting, bathing/showering, grooming, feeding/meal preparation, transfers, and mobility. Assistance needed with IADLs such as attending medical appointments, banking, housekeeping and managing medications should also be documented. This can be done verbally, through observation, or a combination as deemed necessary by the clinician. It is important to note if the client already uses a mobility device to accomplish their daily tasks. It is also important to explain how the recommended mobility device will change or maintain independence, efficiency, and/or safety within their routine of living.

Review Roles, Routines and Responsibilities:

The clinician must describe all environments in which the client will use the mobility equipment, such as inside their home (house, apartment, group home, etc.), work and/or school, and other commonly encountered places. If they are required to navigate thresholds, curbs, stairs, ramps, or elevators to access these areas, this should be documented and discussed. Transportation can be a barrier for many clients who use a mobility device. Ramps, accessible vehicles, and public transportation may facilitate independence, although the client may require education or training on how the local options and how to access. For example, medical rides are often wheelchair accessible, but may require additional resources to set up and/or training for the client to schedule. The client's leisure interests also affect their mobility equipment use, as they may have goals to return to a previously enjoyed hobby or want to continue to participate in adaptive activities that improve their quality of life. It should be noted that funding sources may not acknowledge these needs as medically necessary; however, these are still important facets to clients' lives and should be considered when making decisions regarding mobility equipment.

Review Body Structures, Functions & Limitations:

Every therapy evaluation requires assessing applicable body systems of the client, and wheelchair seating and positioning is no different. However, when assessing body systems for seating and mobility equipment, the therapist must be able to document the client's deviations that impair mobility and/or necessitate use of certain equipment. For example, describe to the funding source why a manual wheelchair will not meet a client's needs or why a power wheelchair is required for independent repositioning. Also, describe why specific accessories are needed to meet unique client needs (such as a custom cushion). For this reason, the body systems assessment should be carried out thoroughly and the results should be documented well.

When considering what body systems to assess, it is helpful to consider the World Health Organization's International Classification of Functioning, Disability, and Health (ICF) model. "The ICF conceptualizes a person's level of functioning as a dynamic interaction between her or his health conditions, environmental factors, and personal factors. It is a biopsychosocial model of disability, based on an integration of the social and medical models of disability. Disability is multidimensional and interactive. All components of disability are important and anyone may interact with another. Environmental factors must be taken into consideration as they affect everything and may need to be changed." (1)

All ICF domains should be considered during a wheelchair seating and positioning evaluation; however, it is not feasible to assess each area in depth. Therefore, the clinician must prioritize the areas and methods used during the assessment. Many times, body functions and structures, and activity and participation are assessed concurrently in a seating and positioning evaluation. The client's body function and activity characteristics' impact their participation in roles, routines, and responsibilities. Therefore, the below table is organized to display this coordination. Most commonly, the following areas are assessed for each client:

ICF Body Function Characteristics	ICF Activity Characteristics
Neuromusculoskeletal and movement-related functions	Mobility
Mobility of joint functions (AROM, PROM of upper and lower extremities) Mobility of bone functions (scapula and pelvis assessment which is best examined by a Mat Assessment) Muscle power functions (strength assessment of all extremities such as Manual Muscle Strength) Sensations related to muscles and movement functions (muscle stiffness or tightness, muscle spasms; tone assessment such as the Modified Ashworth Scale) Muscle endurance functions (endurance of isolated muscles or all muscles of the body) Movement functions (motor reflex functions, control of voluntary movement such as coordination of upper and lower extremities, gait pattern)	Changing basic body position (sitting, standing, bending, lying down, rolling over) Maintaining a body position (lying, sitting, standing, and head position) Transferring oneself (while sitting, while lying)
	Carrying, moving, and handling objects
	Lifting and carrying objects (lifting, carrying in the hands, arms, putting down objects) Moving objects with lower extremities (pushing with lower extremities) Fine hand use (picking up, grasping, manipulating, releasing) Hand and arm use (pulling, pushing, reaching)
	Walking and moving
	Walking (short distances, long distances, different surfaces, around obstacles)
Sensory functions & pain	
Touch function (bilateral upper extremities and lower extremities) Proprioceptive function Vestibular function Pain (location, quality and frequency)	
Functions of the skin and related structures	
Protective and repair functions of the skin (observe overall skin integrity)	
Mental functions	
Orientation to time, place, person, space Energy and drive functions (impulse control) Attention and memory functions Higher-level cognitive functions (insight, judgment, & problem solving)	

Neuromusculoskeletal and movement-related functions are assessed to examine the client's baseline strength, range of motion, balance, and coordination from the seated posture – components which the client needs to utilize when changing their body position, propelling a manual wheelchair, or driving a power wheelchair.

Furthermore, a hands-on Mat Assessment, in which the clinician assesses the client's pelvic and truncal mobility and posture in supine and sitting on a mat table, can be the ideal time to also observe sitting balance, skin integrity, ability to change body position, and transfer ability. Anatomic measurements should be taken in the optimal sitting position the clinician has determined through the mat assessment and feedback from the client. These measurements may be taken in coordination with the CRT supplier.

The client's current mobility and seating equipment, if applicable, should be assessed for size, age, status and patterns of wear and tear and the history of repairs that have been completed on it. Measurements of the current equipment can be compared to the client's present needs. The overall fit and function, including whether it has been successful or problematic for the client, is also important to assess.

Perform Outcome Measures and Review Activities:

The clinician should consider utilizing outcome measures to assess maintenance or improvement of client function between evaluation and after delivery. "Outcome measures play a critical role, providing baseline information to document changes in the individual that would necessitate changes to the wheelchair and seating system." (2) Reviewing activities that may be challenging for the client, or causing issues with their current equipment, can lead the clinician to which outcome measure to utilize.

The following are suggested outcome measures; however, these lists are not exhaustive. The clinician is encouraged to identify appropriate tools for their specific clinic setting and client and explore options that will not only optimize the goals but also assist with justification needs. In some instances, there may not be patient reported or observer reported outcome measures that fit with the client's wheelchair seating and mobility needs. However, they should always be considered.

Patient Reported Outcomes: Functional Mobility Assessment (FMA), Canadian Occupational Performance Measure (COPM), Assistive Technology Outcomes Measure (ATOM), Wheelchair Skills Test Questionnaire (WST-Q), Patient Specific Functional Scale (PSFS), Barthel Index (self-report or direct observation), Wheelchair Users Shoulder Pain Index (WUSPI), Modified Fatigue Efficacy Scale, Craig Handicap Assessment & Reporting Technique (CHART), Wheelchair Use Confidence Scale (WheelCon), Lawton Instrumental Activities of Daily Living scale, Wheelchair Outcome Measure (WhOM).

Observer Reported Outcomes: Power Mobility Training Tool (PMTT), Wheelchair Propulsion Test (WPT), Wheelchair Skills Test (WST), Function in Sitting Test (FIST), Barthel Index (self-report or direct observation), Modified Functional Reach Test (MFRT), Berg Balance Scale (BBS).

Perform Device Trials:

Trialing appropriate devices in the clinical setting and/or home is essential as this allows the clinical team to address client goals, how their needs match with equipment options, and the client the opportunity to experience different products. The location of the trial must be feasible for client, clinician, and CRT supplier involvement. During the trial, consider how the equipment will meet the client's current and future body system needs, comfort, and function. For example, how the equipment will fit in the client's home, including accessing the entrance and areas such as the bathroom, living, kitchen and bedrooms. Also, the client can provide feedback on how the trial equipment supports ADL and IADL performance. Often, short hands-on, interactive trials with equipment (over 1 clinical session) can produce enough information for the client, clinician, and CRT supplier to identify what will fit optimally with the client's needs.

Pressure mapping is a tool that can be utilized to assess cushion, backrest, and accessory pressure points during static and dynamic postures and movements (including while propelling). If a client has a history of a pressure injury or is at high risk for skin breakdown and the clinician does not have a pressure mapping system available, the CRT supplier may have access to one.

The clinician should identify the lowest level of intervention and equipment that will meet the client's medical and functional needs. Sometimes, what the client wants and what equipment is appropriate for their ability, may not be the same. It is imperative that the team works together to trial and discuss options that will meet their goals and maintain their safety, independence, and timeliness while completing ADLs and IADLs.

The supplier has the most visibility to and responsibility for communicating insurance coverage rules and out of pocket requirements. For equipment that is not covered, there should be a discussion between the client and the team about funding options including alternative funding sources. One should not assume that if it is not covered, it cannot be recommended.

Document:

Therapy documentation includes the results of each step on the checklist and should review the client's goals based on results of the equipment trial in the clinic and home. The equipment should be chosen and recommended in collaboration with the client and the supplier. It is the role and responsibility of the clinician to describe and justify why the chosen equipment is necessary for the client's function and is "medically necessary". This justification should include the wheelchair base, and all accessories, parts, and seating components. It is the clinician's responsibility to create the documentation that justifies the equipment for their client. This documentation should also include recommendations for further plan of care for training, fitting, and adjustments, when necessary, once the client has received their new equipment.

Several detailed evaluation forms are publicly available, but using an existing form is not typically required (check with the funding source for any required forms). Note, however, that for compliance reasons, the clinician should not use a supplier-generated documentation method. Forms provide a structure for the evaluation and remind the clinician of what should be documented; however, the clinician's Evaluation/Letter of Medical Necessity is the document that should be submitted by the supplier to obtain funding. Any changes to the recommended equipment after the time of the appointment should be made with the team, involving at minimum the client, clinician, and CRT supplier.

Participate in Delivery, Fitting and Training:

The delivery and fitting session is the way that the clinician ensures that the treatment plan determined in the justification portion of the evaluation has been met. This session(s) can decrease the occurrence of equipment abandonment, wheelchair malfunction, and wheelchair related accidents. Adjustments are often necessary for positioning components, wheelchair set up, and programming to maximize the client's independence.

The clinician should review the client's wheelchair skills for propulsion, transfers, driving, or utilizing power seat functions. The clinician should also review the client's goals and how they relate to the equipment they will now be using. The clinician provides training to the client and caregivers in functional use of the equipment, including positioning, mobility, device wear and care, and plan for maintenance and follow up.

If possible, it is optimal to have the client return to the clinic after using the equipment to further address any needs that have arisen and complete additional programming or training. If the client is unable to return to the

clinic, the clinician is encouraged to follow up virtually (e.g., Telehealth visit or phone call). The equipment supplier should be present during these delivery and fitting appointments so that they can also follow up with any additional needs in a timely manner.

Discussion:

This checklist was developed to guide the novice to experienced clinician through the wheelchair, seating and mobility equipment provision process in coordination with the client and the qualified CRT supplier. The checklist is recommended as part of best practice and as a tool to help improve client outcomes and satisfaction.

The Clinician Task Force provides the voice of the clinical community to make a positive difference in ensuring appropriate access to assistive technology. https://www.cliniciantaskforce.us/

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