**Title and Focus of Activity:** Wheelchair Assignment

*Management of Care; Integrated clinical experience (ICE)*

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Columbia University-Program in Physical Therapy

**Course Information:** Physical Therapy Management of the Adult with Neurological Conditions I; 3 Units; Fall 2nd year of a 3 year DPT program. First Clinical Management course for Neurological Patients. Students have had all Basic Science Classes.

**Learning Activity Description:**

Purpose: Identify the need for seated mobility in a patient using the ICF model and prescribe the appropriate seated mobility device. This experience takes place at a local rehabilitation center. At least one faculty member is present and observes the patient to ascertain whether the student’s prescription is accurate.

You are required to **electronically submit** a **report** via Courseworks on **one** of the **patient observations**. The **following information is to be included** in the report:

1. Patient initials, gender and unit location, therapist name and pertinent case information (Please observe HIPAA requirements) (10 points- 2 pts each)
2. **Using ICF model** identify problems which influence the need for wheeled mobility and categorize them as body structure/function impairments, activity and participation restrictions (30 points-10 pts each )
3. Please **describe the w/c prescribed** for a patient. Be specific with type, parts (footrests, armrests, boards, back/seat etc.), size, and cushion. Please identify why these characteristics are appropriate for the patient. Is there anything you would change or add for this patient and why? (10 points=6 pts for w/c description, 2 for why it’s appropriate for the patient, 2 pts for revisions with explanation)

Time for student to complete the activity:

On 2 consecutive Thursday mornings, half the class at a time visits Kessler Rehabilitation Center. Students are placed in groups of 2 or 3 and spend time rotating through 2 areas observing and interacting with patients with neurological disorders and the physical therapist assigned to that patient (e.g. inpatient stroke, inpatient brain injury, outpatient neuro areas). They have 2 assignments (Intervention Analysis & W/C Rx) associated with this ICE which should be completed at home. The w/c assignment will take approximately 2 hrs to complete.

Readings/other preparatory materials: Lecture material on Seated Mobility.

Learning Objectives:

1. Identify the need for seated mobility in an individual using the ICF model
2. Describe the seated mobility device with all component parts (type (power vs. manual), frame, axel, front riggings, arm rests, seat back and cushion)
3. Formulate a rationale for why the prescribed seated mobility device is appropriate for the individual and prescribe additions or revisions with rationale to support.

Methods of evaluation of student learning:

Points are assigned next to each component identified above.

Examples of student work with instructor comments in **bold**:

Example 1

* Patient initials: B
* Gender: F
* Unit location: OP Neuro
* Therapist name: Julianne
* Pertinent case information: 4-5 years s/p CVA; Visual degeneration; uses Hoyer lift at home **It would be helpful to understand why the subject is using a Hoyer lift (obesity or motoric impairment)**
	+ Goals: to be able to stand for 2 minutes and take a step
* Using ICF model
* Impairments: balance, decreased proprioception, posture, ROM (BUE/BLE), and strength (BUE/BLE)
* Activity: ambulation, ADLs, opening doors, opening jars, stairs, shopping, standing **are transfers a limitation for her?**
* Participation: going to church, spend time with friends, (she no longer is able to do any chores or cooking)
* Footrests: swing away leg/foot rests; casters
* Wheels: fixed rear wheel placement
* Armrests: not-adjustable full length arm rests
* Boards: no boards
* Back/seat: no back support or liner. All were removed so she could fit into the w/c
* Size: standard
* Cushion: cushion was removed so she could fit into the w/c
* Frame: cross frame
* Describe the w/c prescribed for a patient: K1
* Appropriateness: While the current w/c is an effective method for her transportation, the fit could be better.

Changes: This patient would benefit from a “custom fitted” K1, where the w/c is appropriately sized for her and has a contoured combination (foam/gel) cushion providing more comfort and support than her current w/c. The combination cushion would provide the pt. with maximum postural support and high pressure redistribution, which is necessary for this patient as she sits for extended periods of time and has poor posture. Being she has a very caring and attentive care giver, the required manual distribution of fluid would be gladly taken care of by the care giver, if it gives the pt added comfort. This cushion would give the pt. the optimal support for her posture and pressure relief. Pt would also benefit from a sling supported back with a contoured insert, to improve her posture and comfort during sitting. Pt would also benefit from an extra wide w/c, so she has a little extra wiggle room and the ability to fit a cushion and other comforting add-ons. **Is this reasonable in her existing home (doorways, etc…)?** Additionally, a higher handle design would make it easier on her husband, who is her caregiver, to maneuver the w/c. **very nice suggestions with rationale. Must consider these recommendations in relation to patient’s home environment and participation environments (e.g.church)**

Example 2

The following case was based on a patient of PT Adam in the Brain Injury unit.

Patient D.D. is a 79-year-old male admitted to Kessler for acute inpatient rehab following a fall in late August. Pt fell down a flight of 12 steps while under the influence of alcohol and CT scan showed a left temporal-parietal subdural, subarachnoid, and inter-parenchymal hemorrhage. Pt was reportedly functionally independently prior to the injury. He lives with his spouse in an apartment. There is a positive history of alcohol abuse. He has unremarkable family history. Additional medical hx: patient had GI bleed which leads to frequent fluctuations in blood pressure.

* Mental status: Pt seems very tired but do tend to stimuli and voice commands. Pt tries to verbalize occasionally; however, speech is dysarthric.
* Tone: generalized rigidity throughout
* Motor: Pt can sit upright with contact guard. Able to bring UE against gravity for some reach and grasp

ICF model

Impairment

* Decreased Strength (especially LE)
* Increase tone (rigidity)
* Decrease balance
* Impaired postural control
* Difficulty with speech (Global, expressive aphasia)
* Decreased cognition
* Decreased arousal
* Unstable blood pressure

Activity limitation

* Requires max assist for all transfers e.g. bed to w/c)
* Cannot perform self-care without caregiver assist (feeding/toileting)
* Cannot perform personal hygiene (brushing/combing)
* Cannot voice needs efficiently
* Cannot ambulate without w/c operated by caregiver

Participation restriction

* Cannot participate in home making
* Cannot play/take care of grandchildren
* Cannot go to church

W/C prescription for Pt:

* Tilt in Space wheelchair such as Quickie TS
* Specific features: adjustable backrest, dual post flip back armrest, normal foot rest, elevating leg rest option, with combination (foam/gel) cushion.

Patient D.D. needs a manual chair that requires a caregiver to operate. Tilt in space is preferred over the standard wheelchair because it can help to decrease tone. It also decreases energy requirement for good posture. The pt has impaired sitting posture (trunk control), the tilt function allows gravity assisted position to decrease the stress on the patient. Since the pt will be in the w/c chair a lot, and he has limited ability to weight shift/relieve pressure as needed; the tilt in space chair is easier to reposition to reduce pressure for the pt (e.g. relieving pressure on the ischial tuberosity). Another reason that the tilt in space is appropriate for this pt that was discussed with the pt’s PT is that the tilt in space can position the pt in a relative supine position that can help with his BP instability. In addition to the standard tilt in space, we will customize it by adding a combination (foam/gel) cushion because it provides the most postural support and it redistributes pressure well. The added on leg elevation is to help with positioning the pt when his BP fluctuates (drops). A reclining chair was also considered, however, reclining chairs provide less trunk support; thus, it may not be appropriate for this patient who needed the extra trunk stability provided by the tilt in space. **Good job**