Wheelchair Skills Assessment and Training of: From Research Evidence to Clinical Practice

AGE-WELL & APPTA Policy Rounds
February 28, 2024
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Setting the Stage

- Acknowledgements:
  - Wheelchair Research Team, funding bodies
- Conflict of interest: None
- Target audience: AGE-WELL & APPTA professionals
- Resources: website, handout
- Questions: chat, oral or kirby@dal.ca

Session Objectives

Participants will be able to describe:
1. The WHO wheelchair-service-delivery process
2. The components of the Wheelchair Skills Program (WSP)
3. The extent of research evidence in support of the WSP assessment and training protocols
4. The relevance of the WSP to clinical rehabilitation practice

Wheelchairs

BENEFITS
- Mobility
- Caregiver burden
- LTC placement
- Participation

PROBLEMS
- Improper fit
- Repair
- Overuse injuries
- Acute injuries

Better accessibility
Better wheelchair design
Better wheelchair service delivery
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What’s Different About the WSP?

- Evidence-based
- Both assessment and training
- Both wheelchair users and caregivers
- Manual wheelchairs, power and scooters
- The process and sequencing used
- Updated often (August 2023)
- It’s FREE! ("open source")

www.wheelchairskillsprogram.ca

Wheelchair Skills Program (WSP) Manual and Forms

Manual

- Wheelchair Skills Program Manual versions 1.1 - 2.0

Forms

- Wheelchair Skills Program Forms versions 1.1 - 2.0

332 pages

General Scale for Testing Skill Capacity

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>The subject correctly performs all wheelchair maneuvers</td>
</tr>
<tr>
<td>B</td>
<td>The subject performs all wheelchair maneuvers independently and clearly, but without the assistance of another person</td>
</tr>
<tr>
<td>C</td>
<td>The subject's performance of wheelchair maneuvers is acceptable and demonstrates understanding of the skill</td>
</tr>
<tr>
<td>D</td>
<td>The subject fails to complete most of the wheelchair maneuvers or exhibits poor understanding</td>
</tr>
</tbody>
</table>

Weighting: A = 60, B = 50, C = 40, D = 30

Recording Form

- Name:
- Date:
- Time:
- Location:
- Description of wheelchair:
- Observer:
- initials:
- Date:
- Time:

Notes:

Total Score = Capacity Score - error of individual skill scores / number of possible skills - number of TE errors x 100

General comments including any suggestions for improvements.
WST Comments – Diagnosis


WST Comments – Wheelchair

Wheelchair Skills Program (WSP) Manual and Forms

https://www.youtube.com/channel/UCxnALbMRBCe_zDD548CG-w
Total % Calculated Scores

WST:
- Capacity Score = \(#\) skills passed/total x 100%

WST-Q:
- Performance Score = \(#\) skills passed/total x 100%
- Confidence Score = total/total possible x 100%
- Frequency Score = \(#\) skills passed/total x 100%

Wheelchair Skills Training Program

WSTP Process

Wheelchair Skills Training Program

WST Comments – Training
Training Tips

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Example of WST Paper
Example of Training Tip Paper

Effect of travel direction and wheelchair position on the ease of a caregiver getting an occupied wheelchair across a soft surface: a randomized crossover trial


1. Satisfaction
2. Positive Effect
3. Changed Behavior
4. Impact

Kirkpatrick DL. 1994

WHO Guidelines 2023

Levels of Evidence

1. Satisfaction
2. Positive Effect
3. Changed Behavior
4. Impact

WHO Guidelines 2023
Technology-Impact Grid

Impact*

Low       High
Low ++  ++++
Tech +    +++
High

* On mobility of people with spinal cord injury

WSP Training: In-Person

Metrics

- WSP website:
  - 200 countries
- WSP YouTube channel: (2018 – February 27, 2024)
  - Views: 328,845
  - Hours viewed: 6,800
  - Subscribers: 1,700
“The perfect is the enemy of the good.”

Voltaire, 1694-1778
Dictionnaire Philosophique, 1764

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