You Are What You Walk:
Investigating the Meaningfulness of the Timed 25 Foot Walk (T25FW)
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Background: The T25FW is a measurement of ambulatory function in patients with MS. Previous work suggests a 20% change in T25FW time is statistically significant and appears clinically meaningful by some anchors. Within the Expanded Disability Status Scale (EDSS) specific scores (e.g. 6.0) appear to have epidemiologic and clinical relevance. It is unknown if similar cross-sectional cut-points apply to T25FW performance.

Objective: Use clinically-relevant demographic traits and T25FW test to determine potential relevant cut-points in T25FW performance.

Methods:
- 300 patients identified with T25FW data available from a single clinic visit
- Surveys sent by mail to collect:
  - Marital Status
  - Employment status
  - Level of education
  - Disability application/approval
  - Instrumental Activities of Daily Living (IADL) ability
  - Use of walking assistive devices
  - Self-assessment tools for disability and depression.

Results:
- 159 surveys returned
- T25FW within 6 months of survey completion

Conclusions:
- T25FW performance differs with clinically relevant demographic traits in MS patients
- Greater than 6 seconds and greater than 8 seconds appear to be relevant cut-points in T25FW performance that differentiate populations by clinically relevant demographics traits
- Ongoing data analysis will focus on these T25FW cut-points and their relationship to other measures of ambulatory function and patient disability.
- Future work is needed to determine the predictive and prognostic value of these T25FW cut-points within individuals and between groups over time.

Performance Scales: Mobility
- T25FW >6s is associated with a change in occupation due to MS, occupational disability, walking with a cane and needing help with IADLs
- T25FW >8s is associated with divorce, collecting SSI and government healthcare, walking with a walker, and inability to perform IADLs

<table>
<thead>
<tr>
<th>Category</th>
<th>Variable (n)</th>
<th>Median T25FW (sec)</th>
<th>Actual and % Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital Status</td>
<td>Married</td>
<td>5.24</td>
<td>7.56, 144%</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>12.8</td>
<td></td>
</tr>
<tr>
<td>Employment Status</td>
<td>Working outside home</td>
<td>4.6</td>
<td>2.3, 50%</td>
</tr>
<tr>
<td></td>
<td>Consider self Disabled</td>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td>Government Healthcare</td>
<td>Not receiving</td>
<td>4.9</td>
<td>3.4, 69%</td>
</tr>
<tr>
<td></td>
<td>Receiving</td>
<td>8.3</td>
<td></td>
</tr>
<tr>
<td>Occupation change due to MS</td>
<td>Yes</td>
<td>4.8</td>
<td>1.34, 28%</td>
</tr>
<tr>
<td>Mobility Assistance</td>
<td>None</td>
<td>4.8</td>
<td>1.7, 35%</td>
</tr>
<tr>
<td></td>
<td>Cane</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Walker</td>
<td>12.9</td>
<td>8.1, 169%</td>
</tr>
</tbody>
</table>

*Walker compared with no assistance.

References:


