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Introduction/Purpose: The use of patient-reported outcomes (PRO) continues to expand beyond research to involve standard of care assessments. Although the PROMIS physical function (PF) is normalized to a T-score it is unclear how to interpret and apply this information in the daily care of patients. The T-score is abstract and unanchored to patient abilities impairing its clinical utility when shared with the patient. Patient questions are concrete such as "when will I be able to run again after this procedure?" The purpose of this research was to link PROMIS PF T-scores with physical function activities and provide a visual map of this linkage to aid in treatment assessment and address concrete patient education.

Methods: The 124 items used by the PROMIS PF item response model (ver. 1.0) were obtained. Of the 124 items, 61 items were placed into tasks categories associated with activities of daily living (ADL's) [hygiene, toileting, bathing, dressing, and transfers], standing, walking (i.e. ambulation), stairs, and running. Other items not included on this lower extremity assessment were specific to the upper extremity, included tasks (i.e. house work) not typically assessed on previous measures, and global questions covering multiple tasks. For each of the 61 items there were 4 item response parameters (Likert scale) used to place patients in 5 categories ranging from low (unable) to high ability (able without difficulty), resulting in 305 possible responses. A one page visual map of the association of the highest PROMIS T- score for each task was produced (Figure 1).

Results: Patients who report independence in ALL ADL's score a minimum T-score of 47. Independence (highest ability) for ADL's results in the following T-scores: hygiene (30), toileting (35), dressing (39), bathing (39), transfers (47), standing (46), walking (52.5), stairs (52.5), and running (72.5). T-scores that ranged from lowest to highest based on the Likert responses were: hygiene (12-30), toileting (14-35), dressing (10-39), bathing (16-39), transfers (15-47), standing (19-46), walking (20-52.5), stairs (21-52.5), and running (35-72.5). Specifically, patients report the inability to transfer, walk, climb stairs, or run with scores of 15, 20, 21, and 35 respectively. Similarly, high scores (no difficulty) for transfers (47), walking (52.5), stairs (52.5), and running (72.5) may be used to set goals in response to treatment or return to work/sports.

Conclusion: PROs provide real time assessments and a road map to follow patients throughout a treatment course. Understanding the translation of the outcome score (T-score) to patient physical activity allows the patient and physician to have realistic expectations of recovery. Applying this PF and activity linkage data to cohorts of patients with common surgeries will allow patients to gain a better understanding of the recovery duration and return to activity timing. Providing this patient friendly knowledge will help enhance patient engagement and patient satisfaction.

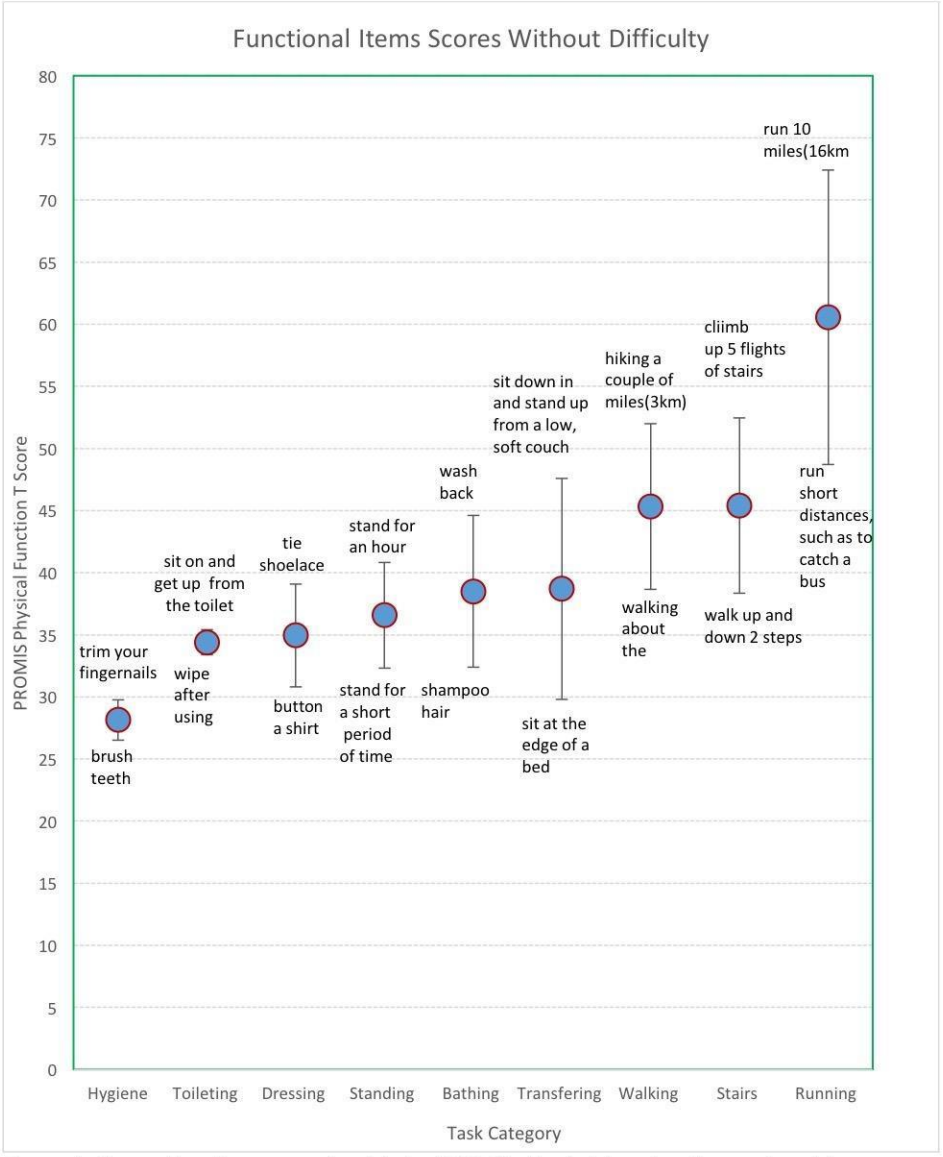

Figure 1. For each task category (x axis) the PROMIS physical function T-score (y-axis) associated with a "without difficulty" item response is displayed. For each task category the easiest and hardest item that is ranked as "without difficulty" is listed. Example: A person with a T-score of 45 reports bathing as "without difficulty" but has "some difficulty" with transfers.

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