

Use of Assessment Tools During Research

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General Principles

- Purpose of the assessment tools
- Setting(s) of the assessments
- Available time to complete the assessments
- Challenges to completion
- Characteristics of tool

Purpose of the Assessment Tools

- Inclusion and exclusion criteria for study enrollment
- Describe study population
- Evaluate potential risk factors
- Ascertain primary, secondary and other outcomes
- Adjust for relevant covariates

Setting(s)

- Patient care facility
 - Hospital: emergency department, hospital ward, ICU
 - Nursing home
 - Outpatient clinic
- Outside of patient care facility
 - General Clinical Research Center (or equivalent): inpatient, outpatient
 - Home
- Remote
 - Phone / Video
 - Digital

Available Time

- What will the budget bear?
 - Collect the data
 - Process and manage the data
- What is feasible within the setting(s)?
- What will the participants tolerate?
- Need to prioritize elements of assessment

Challenges

- Sensory impairments: hearing, vision
- Cognitive impairment
- Language barrier
- Availability of proxy, if needed

Characteristics of Tool

- Validity
 - Content, construct, predictive
- Reliability
 - Test-retest, inter-rater
- Responsiveness
 - Detection of clinically meaningful changes

Assessment of Physical Function

- Self report
- Performance based

Activities of Daily Living

Self-care

Bathing

Dressing

Transferring from bed to chair

Toileting

Grooming

Feeding oneself

Instrumental

Using the telephone

Preparing meals

Managing household finances

Taking medications

Doing laundry

Doing housework

Shopping

Managing transportation

Mobility

Walking from room to room

Climbing a flight of stairs

Walking outside one's home

Disability Assessments are Highly Variable

- Inclusion of different tasks: self-care, IADLs, mobility
- Difficulty with task vs. help with task
- Help from another person vs. special equipment
- Inclusion of a preamble
 - because of a health or physical problem, ...
- Frame of reference
 - at the present time, during the past month, since the last interview

PF-10

The following questions are about activities you might do in a typical day.

Does your health now limit you in those activities? Is so, how?

		Yes, a lot limited	Yes, a little limited	No, not limited at all
1a	Vigorous activities such as running lifting heavy objects, participating in strenuous sports			
1b	Moderate activities such as moving a table, pushing a vacuum cleaner, bowling, playing golf			
1c	Lifting or carrying groceries			
1d	Climbing several flights of stairs			
1e	Climbing one flight of stairs			
1f	Bending, kneeling, stooping			
1g	Walking more than a mile			
1h	Walking several hundred yards			
1i	Walking one hundred yards			
1j	Bathing or dressing yourself			

Physical Performance Measures

Assessment in which an individual is asked to perform a specific task and is evaluated in an objective, standardized manner using predetermined criteria, which may include counting of repetitions or timing of the activity as appropriate.

Short Physical Performance Battery (SPPB)

- Timed standing balance (up to 10 seconds)
 - Side by side, semi-tandem, tandem
- Timed 4-meter walk
- Timed multiple (5) chair rises

Each scored 0-4; total score 0-12

Smart phone app is available for easy administration and scoring

Video: <https://edhub.ama-assn.org/jn-learning/video-player/18865554?widget=personalizedcontent&previousarticle=18865550>

6-Minute / 400-m Walk

- Demonstrate one lap
- Begin timing when subject takes their first step
- Follow participant at close distance
- End test as participant's first foot crosses line



Assessment of Cognitive Function

- Mini-Cog
 - Combines 3-word recall and clock draw test
- Montreal Cognitive Assessment (MoCA)
 - Assesses memory, executive function, abstract thinking, attention, calculation, visual-spatial skills
 - Different versions: MoCA Blind, Short MoCA, digital and on-line versions
- Mobile Toolbox System
 - Assesses cognition through digital tests on a smartphone app
 - <https://mobiletoolbox.org/>
 - <https://pubmed.ncbi.nlm.nih.gov/35716687/>

Geriatric Research Instrument Library (GRIL)

- User-friendly resource to guide researchers in selecting instruments to assess clinical risk factors and outcomes relevant to older adults
- Includes more than 200 instruments across 18 geriatric domains
 - Anxiety, Caregiver Burden, **Cognition**/Dementia, Delirium, Depression, Frailty, General Health Status/Quality of Life, Health Behaviors, Hearing, Medical Comorbidity, Medication Adherence, Pain, **Physical** Activity/**Performance**, **Physical Disability**, Resilience, Sleep, Social Support, and Vision
- Can easily search, compare, and select research instruments based on their description, copyright information, completion time, and available translations
- <https://www.peppercenter.org/public/gril.cfm>

Other Resources

- **NIH Toolbox**
 - Digital assessments of cognition, motor, sensation, and emotion
 - <https://nihtoolbox.org>
- **Patient-Reported Outcomes Measurement Information System (PROMIS)**
 - Set of tools that assess a person's physical, mental, and social health
 - <https://www.healthmeasures.net/explore-measurement-systems/promis>
- **Video: assessing gait speed**
 - <https://edhub.ama-assn.org/jn-learning/video-player/18865554?widget=personalizedcontent&previousarticle=18865550>

THANK YOU