Core Measure: 10 Meter Walk Test (10mWT)

Overview	• The 10mWT is used to assess walking speed in meters/second (m/s) over a short distance.
Number of Test Items	• 1 item
Scoring	• The total time taken to ambulate 6 meters (m) is recorded to the nearest hundredth of a second. 6 m is then divided by the total time (in seconds) taken to ambulate and recorded in m/s[1,2]
Equipment	• Stopwatch • A clear pathway of at least 10 m (32.8 ft) in length in a designated area over solid flooring[2,3]
Time (new clinician) **Time (experienced clinician)**	• 5 minutes or less • 5 minutes or less
Cost	• Free
Logistics-Setup	• A clear pathway of at least 10 m (32.8 ft) in length in a designated area over solid flooring is required. • Measure and mark the start and end point of a 10-m walkway. • Add a mark at 2 m and 8 m (identifying the central 6 m which will be timed). • Quiet conditions[1]
Logistics-Administration	• Comfortable walking speed: o Have the patient start on the 0-m mark (start line) o Instructions to patient: *"Walk at your own comfortable walking pace and stop when you reach the far mark."* • Fast walking speed: o Have the patient start on the 0-m mark (start line) o Instructions to patient: *"Walk as fast as you can safely walk and stop when you reach the far mark."* • Two trials are administered at the patient's comfortable walking speed, followed by 2 trials at his/her fast walking speed, per the below instructions. The 2 trials, for each speed, are averaged and the 2 gait speeds are documented in meters/second.[1] • Patients may use any assistive device or bracing that they are currently using. The type of device and/or bracing must be documented. • When administering the test, do not walk in front of or directly beside the patient, as this may "pace" the patient and influence the speed and distance they walk. Instead, walk at least a half step behind the patient.

	• If a patient requires assistance, only the minimum amount of assistance required for a patient to complete the task should be provided. The level of assistance documented, however, should reflect the greatest amount of assistance provided during the test. For example, if a patient required minimum assistance for the majority of the test but required moderate assistance for stability on one occasion, the patient should be rated as requiring moderate assistance. Assistance should be provided to prevent a fall or collapsing (i.e. knee buckling, trunk collapse, etc). Assistance should <u>not</u> be provided for limb swing, or any other manner in which the assistance is propelling the patient forward. o The level of physical assistance documented using an ordinal 7-point scale is described below. 1 = *total assistance* [patient performs 0%-24% of task]* 2 = *maximum assistance* [patient performs 25%-49% of task] 3 = *moderate assistance* [patient performs 50%-74% of task] 4 = *minimum assistance* [patient performs 75%-99% of task] 5 = *supervision* [patient requires stand-by or set-up assistance; no physical contact is provided] 6 = *modified independent* [patient requires use of assistive devices or bracing, needs extra time, mild safety issues] 7 = *independent* ***Note:** if your patient requires *total assistance*, a score of 0 should be documented
Logistics-Scoring	• The time is measured for the middle 6 m to allow for patient acceleration and deceleration.[1,4] o The time is started when any part of the leading foot crosses the plane of the 2-m mark. o The time is stopped when any part of the leading foot crosses the plane of the 8-m mark.[1] • <u>Document the time to walk the middle 6m, the level of assistance, and type of assistive device and/or bracing used</u>. • If a patient requires *total assistance* or is unable to ambulate at all, a score of 0 m/s should be documented.
Additional Recommendations	• Patients should not talk during the test, as this depletes their respiratory reserves. Exceptions to this are if the patient requests to stop the test or needs to report any symptoms (e.g. pain, dizziness). • The person administering the test also should not talk. Talking during the test can distract the patient and affect their score on the test. • For patients who are unable to walk, but have a goal and the capacity to achieve walking, a baseline score of 0 meters/second should be documented. • To track change, it is recommended that this measure is administered a minimum of two times (admission and discharge), and when feasible, between these periods, under the same test conditions for the patient.

	• Recommend review of this standardized procedure and, on an annual basis, establish consistency within and among raters using the tool.

Common Questions and Variations

1. "What if I don't have 10 open meters to do the assessment?"
    a. Variations to the 10mWT exist, including the 5MWT. Clinical recommendations include a "rolling start and finish" during the 5MWT to allow for acceleration and deceleration. It is important to note that the 5MWT has not been validated in as many health conditions as the 10mWT. [4,5]
    b. Individuals or organizations should use the 10mWT standardized protocol to assess aggregate data for their patients. In cases when the protocol cannot be used, the modifications to the administration process should be documented.

2. "My patient requires contact guard assistance, can I still administer this measure?"
    a. Yes, If physical assistance is needed for a patient to complete the 10mWT please document the time (m/s), the level of assistance provided, and the assistive device or bracing used.
    b. The level of physical assistance required should be documented using an ordinal 7-point scale described below.
        1 = *total assistance* [patient performs 0%-24% of task]*
        2 = *maximum assistance* [patient performs 25%-49% of task]
        3 = *moderate assistance* [patient performs 50%-74% of task]
        4 = *minimum assistance* [patient performs 75%-99% of task]
        5 = *supervision* [patient requires stand-by or set-up assistance; no physical contact is provided]
        6 = *modified independent* [patient requires use of assistive devices or bracing, needs extra time, mild safety issues]
        7 = *independent*
        ***Note:** if your patient requires *total assistance*, a score of 0 should be documented
    c. It is important to note that the assisted test may not be directly comparable to the distance that patient walks without assistance, and it may not be compared to published normative values.

3. "What if it is not clinically feasible to complete two trials of each condition, comfortable and fast walking speed?"
    a. If four test trials are not clinically feasible, it is recommended that two trials, one trial at a comfortable and one at a fast walking speed, be performed to provide an assessment of the patient's ability to alter gait speed.
    b. If two trials are not clinically feasible, it is recommended that a trial of comfortable walking speed be prioritized. Consider that if a patient has goals to return to the community, the assessment of fast walking speed has more value. If a patient has the ability to walk fast, he/she may be able to more fully participate in the

community and adapt to environmental context. If the projected outcome for the patient is community ambulation, a fast gait speed should be collected at the earliest time point possible, and re-testing is recommended to track change.

4. "My patient has impaired cognition and gets distracted during the test, frequently forgetting what their goal is. Can I still administer this measure?"
    a. Yes. Examiners can use brief verbal, visual, or tactile cues to keep a patient on-task and to remind him/her of the goal, but be consistent (e.g., "Keep going. Walk to the mark."). Document the type and frequency of the required cues.

5. "Can the patient use an assistive device during the test?"
    a. Yes, the patient can use an assistive device during the test. Recommendations include documenting the assistive device and keeping the assistive device consistent between trials and reassessments.
    b. Inappropriate assistive devices can have a negative impact on walking speed and therefore reduce the validity of the test.[2] It is likely that the type of assistive device a patient needs may change over time. If/when a different assistive device is indicated, the reason behind a different device choice should be noted.
    c. If the patient no longer needs the assistive device, or has progressed to a less restrictive device, it would be appropriate to repeat the test with this change in conditions and document this fact.
    d. It is appropriate to have the patient utilize the assistive device which he/she is most likely to use in his/her own environment.

6. "Can the patient use orthoses or bracing during the test?"
    a. Yes, the patient should wear the walking devices necessary for ambulation (AFO, KAFO, Neuroprostheses, etc). The walking device should be documented and kept consistent between trials and assessments.[6]
    b. If the patient no longer needs the orthosis which was used in the initial test, it is appropriate to repeat the test without the orthosis and document this fact.
    c. It is appropriate to have the patient utilize the orthosis or brace which he/she is most likely to use in his/her own environment.

7. "Where should the therapist stand and guard?"
    a. Standing behind the patient will reduce the likelihood of the clinician setting the pace and will also keep the clinician and stopwatch out of sight of the patient to reduce the likelihood of the patient "racing."[2]

8. "Should I count the number of steps taken to complete the 10mWT?"
    a. You can! The number steps to complete the test may provide insight into stride length. Although documenting this number may add individual value to specific clinical situations, there has not been extensive research validating the observational step count in various neurological conditions.[2]

9. “What if it is not clinically feasible to complete two trials of each condition, comfortable and fast walking speed?”
    a. If four test trials are not clinically feasible, it is recommended that two trials, one trial at a comfortable and one at a fast walking speed, be performed to provide an assessment of the patient’s ability to alter gait speed.
    b. If two trials are not clinically feasible, it is recommended that a trial of comfortable walking speed be prioritized.
    c. Consider that if a patient has goals to return to the community, the assessment of fast walking speed has value. If a patient has the ability to walk fast, he/she may be able to more fully participate in the community and adapt to environmental context. If the projected outcome for the patient is community ambulation, a fast gait speed should be collected at the earliest time point possible, and re-testing is recommended to track change.

References

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