

D-MT07: Six Minute Walk Test (6MWT)

Scope and objectives of clinical task

This CTI will enable the Allied Health Assistant (AHA) to:

- safely and effectively administer the six-minute walk test (6MWT) and record the results.

VERSION CONTROL

Version: 1.0

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The CTI reflects best practice and agreed process for conduct of the task at the time of approval and should not be altered. Feedback, including proposed amendments to this published document, should be directed to AHPOQ at: allied_health_advisory@health.qld.gov.au.

This CTI should be used under a delegation framework implemented at the work unit level. The framework is available at: <https://www.health.qld.gov.au/ahwac>

Please check <https://www.health.qld.gov.au/ahwac/html/clintaskinstructions.asp> for the latest version of this CTI.

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Requisite training, knowledge, skills and experience

Training

- Completion of CTI D-WTS01 When to stop.
- Mandatory training requirements relevant to Queensland Health/Hospital and Health Service (HHS) clinical roles are assumed knowledge for this CTI.
- Completion of the following Queensland Health allied health assistant training modules (or corresponding units of competency in HLT43015 Certificate IV in Allied Health Assistance) or equivalent work-based learning:

- Assist with physiotherapy treatments and interventions.

Access the module/s at: <https://www.health.qld.gov.au/ahwac/html/ahassist-modules>

- Completion of Queensland Health Clinical Skills Development Service elearning Performing a Six Minute Walk Test PMWT. Available at: <https://central.csds.qld.edu.au/central/courses/331>

Clinical knowledge

- The following content knowledge is required by an AHA delivering this task:
 - the purpose of the 6MWT including the standard testing process, scoring and documentation requirements.
 - the basic elements of walking and common limitations to walking with specific focus on those relevant to the client population in the local service e.g. antalgic gait, freezing, breathlessness, calf pain.
- The knowledge requirements will be met by the following activities:
 - completing the training program/s (listed above).
 - reviewing the Learning resource.
 - receiving instruction from an allied health professional in the training phase.

Skills or experience

- The following skills or experience are not identified in the task procedure but support the safe and effective performance of the task, and are required by an AHA delivering this task:
 - competent use of the Modified Borg scale.
 - competent use of medical equipment and/or symptom scales to measure clinical observation relevant to the clinical area e.g. blood pressure, heart rate, oxygen saturation, pain scale, modified breathless scale.
 - competence in facilitating the client's use of walking aids relevant to the clinical setting e.g. four-wheeled walker, hopper frame, walking stick.
 - experience and confidence in facilitating client movement and positioning.

Safety & quality

Client

- The AHA will apply CTI D-WTS01 When to stop at all times.
- In addition, the following potential risks and precautions have been identified for this clinical task and should be monitored carefully by the AHA during the task:
 - The protocol for the 6MWT as described in Performing a Six Minute Walk Test PMWT training package (see Training section above) includes contraindications. If the AHA confirms or suspects that contraindications are present through implementing Step 1 of the task procedure, the 6mWT should not be commenced and the AHA should consult with the delegating health professional.
 - As this test can be used as an outcome measure for clients who have balance problems and are at risk of falls, unless the delegating health professional instructs otherwise, standby assistance of the client is required at all times. If required, provide assistance during the task for safety, confirm the client is safe to continue and note the time and type of assistance required as part of documentation. If the task is ceased due to safety concerns, stop the timer and place a marker on the floor. Assist the client to a chair, noting the reason for stopping the task.

Equipment, aids and appliances

- Chairs made available for rests during the task must be suitable for the client including safe working limit or accommodate restrictions e.g. meet height requirements for total hip replacement precautions. Chairs should be placed at either end of the walkway and half way along the pre-determined track (optimal length is 30 metres).
- Appropriate footwear should be worn during the task i.e. enclosed, well-fitting shoes with good traction.

Environment

- For consistency, services may designate a set location for the track. The test area should be clear and level and may be continuous (oval, rectangular) or point to point (stop, turn around and go). The test area should be inspected for safety prior to use, ensuring it is free of trip hazards and obstacles, with few distractions e.g. environment free of pedestrian traffic. Emergency response/alert systems should be available and in working order. If the standard test area is unavailable, liaise with the delegating health professional.

Performance of clinical task

1. Delegation instructions

- Receive the delegated task from the health professional.
- The delegating allied health professional should clearly identify parameters for delivering the clinical task to the specific client, including any variance from the usual task procedure and expected outcomes. This may include:
 - the client's usual walking ability including the use and type of walking aid and assistance required e.g. standby assistance, need for cueing.
 - restrictions and monitoring requirements for the client including expected limits e.g. blood pressure, oxygen saturation, respiratory rate, calf pain, rate of perceived exertion, need for oxygen.

- variations to the standard test protocol to support the task e.g. greater availability of chairs to rest, scheduling for the test such as after resting, medication or a meal.

2. Preparation

- Tape measure/pre-marked area for walking
- Standard height chair placed at either end of the walking area and one or two chairs along the walkway, as appropriate
- Rate of perceived exertion scale card
- Stop-watch to record time, counter to record laps and trundle wheel to measure stopping distance from the marker. Some services may use a mobile phone and app to support this task e.g. iWalkAssess.
- Equipment as per the delegation instruction e.g. heart rate, oxygen, oxygen saturation monitor.

3. Introduce task and seek consent

- The AHA introduces him/herself to the client.
- The AHA checks three forms of client identification: full name, date of birth, **plus one** of the following: hospital unit record (UR) number, Medicare number, or address.
- The AHA describes the task to the client. For example:
 - “I have been asked assist you to complete the six-minute walk test. This task will record the maximum distance you can walk in six minutes”.
- The AHA seeks informed consent according to the Queensland Health Guide to Informed Decision-making in Health Care, 2nd edition (2017).

4. Positioning

- The client's position during the task should be:
 - initially seated whilst the task is explained, then standing at the start position of the test walkway, ready to walk.
- The AHA's position during the task should be:
 - in a position to observe for safety and provide instruction.
 - if the delegation instruction includes providing walking assistance, the AHA should stand to one side and slightly behind the client. The AHA should avoid impeding the client's walking whilst turning. The AHA should be close enough to provide hands on assistance for balance if required.

5. Task procedure

- The task comprises the following steps.
 1. The AHA collects information from the medical record, healthcare team if in an inpatient setting and the client to confirm that the client does not have signs or symptoms that indicate contraindications to participating in a 6MWT as described in Performing a Six Minute Walk Test PMWT training package. See the Learning resource and Safety and quality section.
 2. Show the client the rate of perceived exertion scale and ask the client to rate their current level of perceived exertion i.e. before the test. Record the result.
 3. Using the standard wording, provide instructions for the test. Demonstrate one lap by walking on the track. Confirm understanding by asking if the client has any questions. Refer to the Performing a Six Minute Walk Test PMWT Training above.

4. Instruct the client that you will commence the timer once they are ready and begin walking.
 5. When the client starts walking, start the timer and use the counter to record laps.
 6. At each minute mark, use the standard phrases for encouragement. See Learning resource Required reading, ATS Statement: Guidelines for the Six-Minute Walk Test.
 7. When the timer reaches 6 minutes, instruct the client to stop walking by using the standard phrasing “please stop where you are”. Place a marker on the floor at the spot where the client stopped walking e.g. pen, piece of tape or bean bag. If the client was already resting when asked to stop the marker is placed on the floor at the rest spot.
 8. Assist the client to sit down in the nearest chair and show the client the rate of perceived exertion scale and ask them to rate their current level of exertion. Record the result.
 9. Using the end of test floor marker and lap counter, calculate the distance walked.
- During the task:
 - provide feedback and correct errors in the performance of the task including:
 - to adhere to the standardised test conditions, do not provide feedback or encouragement that is additional to the standard encouragement phrases.
 - if the client chooses to sit down or lean against the wall to stop and rest, record the time and continue timing. Every 30 seconds, use standard phrasing “Please start walking again whenever you feel able.” If the client resumes walking, record the time. Repeat the process as often as required until the test is complete.
 - the protocol for the 6MWT as described in Performing a Six Minute Walk Test PMWT training states the test should be stopped immediately if any of the following are experienced:
 - chest pain
 - intolerable shortness of breath
 - leg cramps
 - staggering
 - diaphoresis (unusual sweating)
 - pale or ashen appearance.
 - monitor for adverse reactions and implement appropriate mitigation strategies as outlined in the “Safety and quality” section above including CTI D-WTS01 When to stop.
 - At the conclusion of the task:
 - encourage feedback from the client on the task.
 - ensure the client is comfortable and safe.

6. Document

- Document the outcomes of the task in the clinical record, consistent with relevant documentation standards and local procedures. Include observation of client performance, expected outcomes that were and were not achieved, and difficulties encountered, or symptoms reported by the client during the task.
- For this task the following specific information should be presented:
 - the total distance walked including gait pattern, the use of any walking aids and walkway length.
 - if the client stopped to rest, the stop and start times.
 - the rate of perceived exertion at the beginning and end of the test.
 - any additional monitoring requirements required as part of the delegation instruction e.g. blood pressure, oxygen saturation, respiratory rate, pain.

7. Report to the delegating health professional

- Provide comprehensive feedback to the health professional who delegated the task.

References and supporting documents

- Dunn A, Marsden D.L, Nugent E, Van Vliet P, Spratt N.J, Attia J, Callister R (2015). Protocol variations and six-minute walk test performance in stroke survivors: a systematic review with meta-analysis. Stroke Research and Treatment DOI: 10.1155/2015/484813. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4320847/>
- Queensland Health (2018). Clinical Task Instruction D-WTS01 When to stop. Available at: <https://www.health.qld.gov.au/ahwac/html/clintaskinstructions.asp>
- Queensland Health (2017). Guide to Informed Decision-making in Health Care (2nd edition). https://www.health.qld.gov.au/_data/assets/pdf_file/0019/143074/ic-guide.pdf
- Salbach N.M, O'Brien K.K, Brooks D, Irvin E, Martino R, Takhar P, Chan S, Howe JA (2017). Considerations for the selection of a time-limited walk test poststroke: A systematic review of test protocols and measurement properties. Journal of Neurologic Physical Therapy 21(1):3-17. Available at: <https://pubmed.ncbi.nlm.nih.gov/27977516/>
- Stroke Engine (20120). Six-Minute Walk Test (6MWT). Available at: https://www.strokeengine.ca/en/indepth/6mwt_indepth/
- University of Toronto. (2018). iWalkAssess (version 1.1) [mobile app]. Available at: App store. <http://www.iwalkassess.com/>

Assessment: performance criteria checklist

D-MT07: Six Minute Walk Test (6MWT)

Name:

Position:

Work Unit:

Performance criteria	Knowledge acquired	Supervised task practice	Competency assessment
	Date and initials of supervising AHP	Date and initials of supervising AHP	Date and initials of supervising AHP
Demonstrates knowledge of fundamental concepts required to undertake the task.			
Obtains all required information from the delegating health professional, and seeks clarification if required, prior to accepting and proceeding with the delegated task.			
Completes preparation for the task including marking the walking track, placing chairs along the route for rests, collecting a tape measure, stop watch and lap counter.			
Introduces self to the client and checks client identification.			
Describes the purpose of the delegated task and seeks informed consent.			
Positions self and client appropriately to complete the task and ensure safety.			
Delivers the task effectively and safely as per delegated instructions and CTI procedure. <ol style="list-style-type: none"> Clearly explains the task, checking the client's understanding. Confirms from the medical record, healthcare team and client that there are no contraindications to performing the task Correctly obtains the client's rate of perceived exertion and records the result. Uses the standard wording to provide instructions for the test. Demonstrates one lap by walking on the track. Confirms if the client understands the task. Instructs the client that the timer will start once they are ready and begin walking. When the client starts walking, starts the timer and uses the counter to record laps. At each minute mark, uses the standard phrases for encouragement. When the timer reaches 6 minutes, instructs the client to stop walking by using the standard phrasing and placing a marker on the floor. Assists the client to sit down and rate their level of perceived exertion and records the result. Accurately calculates the distance walked. 			

k) During the task, maintains a safe clinical environment and manages risks appropriately			
l) Provides feedback to the client on performance during and at completion of the task.			
Documents the outcomes of the task in the clinical record, consistent with relevant documentation standards and local procedures.			
Provides accurate and comprehensive feedback to the delegating health professional.			

Comments:

Record of assessment competence:

Assessor name:	Assessor position:	Competence achieved: / /
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Scheduled review:

Review date: / /

Six Minute Walk Test (6MWT): Learning resource

The 6MWT is a functional walking test that determines the distance that a client can walk in six minutes. It has been used with a variety of client groups including people following stroke, head injury, or with Parkinson's disease, pulmonary and cardiac disease, elderly individuals and healthy adults¹.

Required training

Complete Queensland Health Clinical Skills Development Service elearning package Performing a Six Minute Walk Test PMWT. Available at: <https://central.csds.qld.edu.au/central/courses/331>.

The required training includes information on contraindications for use and when to stop the 6MWT. It is critical that the AHA understands and can identify if contraindications are present. At publication of this CTI the elearning package lists:

- Contraindications for use
 - Unstable angina during the last month.
 - Myocardial infarction during the last month.
- Relative contraindications
 - Resting HR >120.
 - Resting BP >180 mmHg systolic.
 - Resting BP >100 mmHg diastolic.
- The 6MWT should be stopped immediately if any of the following are experienced:
 - chest pain
 - intolerable shortness of breath
 - leg cramps
 - staggering
 - diaphoresis
 - pale or ashen appearance.

The AHA should check the elearning resource to ensure they access current information.

Required reading

- American Thoracic Society (2002). ATS Statement: Guidelines for the Six-Minute Walk Test. Measurements (p 113-114). Available at: <https://www.thoracic.org/statements/resources/pfet/sixminute.pdf>
- Physiopedia (2020)
 - Gait. Available at: <http://www.physio-pedia.com/Gait>
 - Six minute walk test. Available at: https://www.physio-pedia.com/Six_Minute_Walk_Test_/6_Minute_Walk_Test
- Queensland Health (n.d.) Compendium of clinical measures for community rehabilitation. Six Minute Walk Test (p42). Available at: <https://sites.temple.edu/rwiseowls/files/2013/10/compendium-of-clinical-measures-for-community-rehabilitation.pdf>

¹ Stroke engine (2020). Six-minute walk test (6MWT). Available at: https://www.strokeengine.ca/en/indepth/6mwt_indepth/

Optional reading

- Stroke engine (2020). Six-minute walk test (6MWT). Available at: https://www.strokenine.ca/en/indepth/6mwt_indepth/
- If the task is to be performed with client's post-stroke using the iWalkAssess app
 - Read the iWalk guide. Module 2: Performing the Tests. 6-Minute Walk Test Protocol p 23-32.
 - View educational content and demonstration on the test.Available at: <http://www.iwalkassess.com/>

Example recording form QH employee only

- Children's Health Queensland Hospital and Health Service. Six Minute Walk Test (6MWT). V1.00-03/2011. Available at: https://qheps.health.qld.gov.au/_data/assets/pdf_file/0029/715556/253800.pdf
- Queensland Government. Six Minute Walk Test Record Sheet. V1.0 – 11/2013. Available at: https://qheps.health.qld.gov.au/_data/assets/pdf_file/0027/591615/mr28a-7.pdf
- Queensland Government Six Minute Walk Distance Test. V7.00-02/2019. Available at: https://qheps.health.qld.gov.au/_data/assets/pdf_file/0018/411813/mr27g.pdf