Clinical Task Instruction

SKILL SHARED TASK

S-MT03: Timed Up and Go (TUG) Test

Scope and objectives of clinical task

This CTI will enable the health professional to:

- determine if a TUG test is indicated and appropriate,
- safely and effectively administer the TUG test, record and interpret the results, and
- use the TUG score to support care planning.

VERSION CONTROL

Version: 1.0 Approved (document custodian): Chief Allied Health Officer, Allied Health Professions' Office of Queensland, Clinical Excellence Division. Date: 31/07/2017 Review: 31/07/2020

This Clinical Task Instruction (CTI) has been developed by the Allied Health Professions' Office of Queensland (AHPOQ) using information from locally developed clinical procedures, practicing clinicians, and published evidence where available and applicable.

This CTI should be used under a skill sharing framework implemented at the work unit level. The framework is available at: https://www.health.qld.gov.au/ahwac/html/calderdale-framework.asp

Skill sharing can only be implemented in a health service that possesses robust clinical governance processes including an approved and documented scope of skill sharing within the service model, work-based training and competency assessment, ongoing supervision and collaborative practice between skill share-trained practitioners and health professional/s with expertise in the task. A health professional must complete work-based training including a supervised practice period and demonstrate competence prior to providing the task as part of his/her scope of practice. When trained, the skill share-trained health professional is independently responsible for implementing the CTI including determining when to deliver the task, safely and effectively performing task activities, interpreting outcomes and integrating information into the care plan. Competency in this skill shared task does not alter health professionals' responsibility to work within their scope of practice at all times, and to collaborate with or refer to other health professionals if the client's needs extend beyond that scope. Consequently, in a service model skill sharing can augment but not completely replace delivery of the task by profession/s with task expertise.

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

Requisite training, knowledge, skills and experience

Training

- Mandatory training requirements relevant to Queensland Health/HHS clinical roles are assumed knowledge for this CTI.
- If not part of mandatory training requirements, complete training in patient manual handling techniques, including the use of walk belts, and sit to stand transfers.
- Complete the following CTIs or demonstrate equivalent professional competence:
  - CTI S-MT05: Standing balance assessment.
  - CTI S-MT01: Functional walking assessment.

  and if the use of mobility aids is within the scope of the local implementation:
  - CTI S-MT02: Prescribe, train and review of walking aids.

Clinical knowledge

To deliver this clinical task a health professional is required to possess the following theoretical knowledge:

- understand the purpose, benefits and limitations of the TUG test, including populations tested, interpretation of scores, standard error of measure, normative data etc. and
- describe the basic elements of walking and common abnormalities with specific focus on those relevant to the client population in the local service e.g. limping, shuffling, lack of full knee extension, freezing, ataxia, etc.

The knowledge requirements will be met by the following activities:

- complete the training programs listed above
- review of the Learning Resource
- receive instruction from the lead health professional in the training phase

Skills or experience

The following skills or experience are not specifically identified in the task procedure but support the safe and effective performance of the task or the efficiency of the training process and are:

- required by a health professional in order to deliver this task:
  - competence in measurement of clinical observations relevant to mobilising/exertion where this is relevant to the healthcare setting and client group. This may include blood pressure, heart rate, pulse oximetry, pain scales, exertion scales, etc.
  - competence in the use of mobile oxygen where this is relevant to the healthcare setting.

Indications and limitations for use of skill shared task

The skill share-trained health professional shall use their independent clinical judgement to determine the situations in which he/she delivers this clinical task. The following recommended indications and limitations are provided as a guide to the use of the CTI but the health professional is responsible for applying clinical

reasoning and understanding of the potential risks and benefits of providing the task in each clinical situation.

Indications

- Clients presenting with a recent history of falls or near-fall related to a general decline in functional mobility where the addition of an objective measure of function will support clinical decision making regarding safety and/or assist in tracking the client's progress/decline either short or long term.
- The client has been assessed as safe to mobilise independently with/without an aid.
- The client is observed to be slow or tentative when walking and/or standing up from a chair and the addition of an objective measure of function will support clinical decision making regarding safety and/or assist in tracking the client's progress as part of a functional rehabilitation program for mobility and transfers.
- The client is medically stable and there is no medical prohibition to standing up and walking, including the use of their usual mobility aid, if relevant.
- The client is required to undertake a TUG test as part of a local service care plan/pathway/protocol.

Limitations

- Limitations listed in S-MT01 and S-MT05 apply. If walking aids are used limitations from SMT02 also apply.
- The following client or situational factors indicate a level of complexity or risk that would make the task inappropriate for delivery through skill sharing:
  - The client requires physical assistance to mobilise safely, including assistance of one or two.
  - The client requires equipment that is not available or not within the scope of the health professional performing the task e.g. higher chair due to hip precautions, bariatric equipment, walking aid, orthoses, glasses, etc.
  - The client has communication, cognitive or perceptual impairments that impact on the client's ability to follow instructions required for safe and valid testing e.g. English as a second language and an interpreter is not available, dementia, confusion, etc.

Safety & quality

Client

The skill share-trained health professional shall identify and monitor the following risks and precautions that are specifically relevant to this clinical task:

- As this task is being used to assess a client's balance and mobility close supervision of the client is required at all times.
- Appropriate footwear should be worn during this task, i.e. enclosed, well-fitting shoes with good traction.

Equipment, aids and appliances

- The safe working limit of the chair used in the task must be suitable for the client.

- If the client has had a total hip replacement in the past 3 months and/or has not been cleared by doctors to sit on standard chairs, the chair used in the task needs to adhere to any hip precautions e.g. not greater than 90 degrees of flexion at the hip.

Environment

- Ensure the test area is free of trip hazards and obstacles with minimal distractions to facilitate concentration during task e.g. environment free of pedestrian traffic and ward demands.

Performance of Clinical Task

1. Preparation

- For repeat TUG tests, review the testing conditions of the previous test before proceeding. These may include: non-standard chair use e.g. due to a total hip replacement, safe working load or equipment availability etc.; timing of test to coincide with medication regimes e.g. pain, nebuliser, Parkinson's Disease etc.; use of equipment e.g. walking aid, oxygen, orthotics etc.
- Ensure all required equipment is available and prepared prior to commencing the assessment:
  - Appropriate chair with arms and suitable height and safe working load for the client. If a standard chair cannot be used/sourced ensure the details are recorded (e.g. seat height, arm height, safe working load etc.). The same chair should be used for subsequent TUG tests.
  - A stopwatch.
  - Floor marker (tape, cone).
  - A tape measure.
- Set up the equipment and environment ready to perform test
  - position the chair in a clear, unobstructed area and preferably not against a wall,
  - place a cone/marker on the floor 3 metres away from the chair so that it is easily seen by the client (this distance is measured from a point on the floor level with the front edge of the chair to the back of the cone/marker).

2. Introduce task and seek consent

- The health professional checks three forms of client identification: full name, date of birth plus one of the following: hospital UR number, Medicare number, or address
- The health professional introduces the task and seeks informed consent according to the Queensland Health Guide to Informed Decision Making in Healthcare (2012).

3. Positioning

The client's position during the task should be:

- sitting comfortably in a standard chair with their back resting on the back of the chair, their feet flat on the floor and their arms on the chair's arm rests.

The health professional's position during the task should be:

- standing to one side and slightly behind the client. The health professional should be close enough to provide hands on assistance for balance if required. Note: if hands-on assistance is required the assessment will be ceased and the score recorded as zero (0).

4. Task procedure

- Determine if the client is suitable to undertake the TUG test (refer to indications and limitations section).
- Explain and demonstrate the task to the client including instructions to rise from a standard arm chair, walk to a marker on the floor 3 metres away, turn, return and sit down[1].
- Check the client has understood the task and provide an opportunity to ask questions.
- Undertake the TUG test following the standard testing procedure (see learning resource).
- The task comprises the following steps:
    1. Begin the test with the client sitting correctly in the chair.
    2. Timing of the assessment starts on the command "GO".
    3. The timer is stopped when the client is seated with their back against the back of the chair.

    Notes on the performance of the TUG test:
    - the client may use their arms to stand up, if they wish.
    - the client should walk at a comfortable and safe pace.
    - the client should use their normal walking aid.
    - the client should wear their regular footwear, if safe to do so.
    - the client should have one practice run of the assessment task prior to the formal assessment.
    - there is no time limit – the client may stop and rest (but not sit down) if required. If physical assistance is needed at any time during the assessment such as assisting the client to stand up from the chair, stabilise the client in standing or when walking, the assessment should be ceased and the test is scored as zero (0).

    4. At completion of the test, interpret the score as compared to the client's relevant population (see learning resource).
    5. If the client is identified as being at risk of falls either through observation or TUG test score, develop a plan for client care, including further assessment for falls risk, walking aid prescription, functional rehabilitation program, etc.

5. Monitoring performance and tolerance during the task

- Provide feedback and correct errors in the performance of the assessment during the practice run, however feedback should not be provided during the formal assessment.
- Observe the client's gait noting abnormalities including loss of balance, shuffling, freezing, etc.
- Common errors and compensation strategies to be monitored and corrected during task include:
    - The client does not complete the test according to the test requirements. If required perform a second practice. If more than two practice tests are required cease the test. Document the outcome, including the requirement for a second practice and record the results.

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[1] Podsiadlo D, Richardson S. (1991). The Timed "Up & Go": a test of basic functional mobility for frail elderly persons. Journal of the American Geriatrics Society, 39(2):142–148.

- Monitor for adverse reactions and implement appropriate mitigation strategies as outlined in “Safety and quality” section above.

6. Progression

Task progression strategies include:

– evidence is emerging regarding that the addition of dual tasking to the traditional TUG test may be beneficial in predicting falls. Dual tasking activities have included both cognitive and manual tasks in geriatric populations[2]. Comparative normative and predictive data would need to be sourced regarding the type of task(s) and population being examined for standardisation of testing conditions and to be used as an indicator of falls risk.

– the TUG test has limited predictive value as a single test and the risk of falling is dependent on multiple intrinsic and extrinsic factors[3]. Combining of the TUG test with other standardised measures or tools is required to improve falls risk predictive value e.g. Berg Balance scale, FROP-Com, etc.

7. Document

- Document the outcomes of the task as part of the skill share-trained health professional’s entry in the relevant clinical record, consistent with documentation standards and local procedures. Documentation should include:
  - TUG test undertaken, including any non-standard testing/special conditions required e.g. chair features, timing with medication regime, for vestibular clients it may be necessary to perform the test turning in either direction, in which case the direction of turn should also be recorded, etc.
  - the time taken to complete the test
  - the interpretation of the test score
  - observations of walking performance during the test
  - relevance for client care e.g. further falls assessment and intervention, referral to a rehabilitation program, walking aid assessment, comparison with previous performance, etc.
- The skill shared task should be identified in the documentation as “delivered by skill shared-trained (insert profession) implementing CTI SMT03: Timed up and go (TUG) test” (or similar wording)

References and supporting documents

- Mathias S, Nayak US, Isaacs B. Balance in elderly patients: the “Get-up and Go” test. Arch Phys Med Rehabil. 1986:14(6):387–389.
- Podsiadlo D, Richardson S. The Timed “Up & Go”: a test of basic functional mobility for frail elderly persons. J Am Geriatr Soc. 1991;39(2):142–148.
- Queensland Health, 2012. Guide to Informed Decision Making in Healthcare. http://www.health.qld.gov.au/consent/default.asp

[2] Someshwar HP, Kunde C, Ganvir SS (2017). Predicting the probability of falls in geriatrics using traditional timed up and go test and dual-task constraint timed up and go test: an observational study. International Journal of Health and Allied Sciences 6: 88-92. Available at: http://www.ijhas.in/temp/IntJHealthAlliedSci6288-6925545_191415.pdf

[3] Barry E, Galvin R, Keogh C, Horgan F, Fahey T (2014). Is the Timed Up and Go test a useful predictor of risk of falls in community dwelling older adults: a systematic review and meta-analysis. BMC Geriatrics 14:14. **DOI:** 10.1186/1471-2318-14-14. Available at: http://bmcgeriatr.biomedcentral.com/articles/10.1186/1471-2318-14-14

Assessment: Performance Criteria Checklist
S-MT03: Timed Up and Go (TUG) Test

Name: **Position:** **Work Unit:**

Performance Criteria	Knowledge acquired	Supervised task practice	Competency assessment
Demonstrates knowledge of fundamental concepts required to undertake the task through observed performance and the clinical reasoning record.	Date and initials of Lead HP	Date and initials of Lead HP	Date and initials of Lead HP
Identifies indications and safety considerations for task and makes appropriate decision to implement task, including any risk mitigation strategies, in accordance with the clinical reasoning record.			
Completes preparation for task including ensuring the environment and required equipment are appropriately prepared and positioned for completion of the assessment task.			
Describes task and seeks informed consent.			
Prepares environment and positions self and client appropriately to ensure safety and effectiveness of task, including reflecting on risks and improvements in clinical reasoning record where relevant.			
Delivers task effectively and safely as per CTI procedure, in accordance with the learning resource. a) Clearly explains and demonstrates task, checking client's understanding. b) Ensures the client is positioned correctly in an appropriate chair and has all required equipment e.g. footwear, mobility aid etc. c) Provides instruction to the client, and demonstration. d) Allows a practice attempt prior to the assessed test. Corrects any misunderstandings or errors during the practice. e) Times the client completing the task. f) Documents results appropriately, including any non-standardised testing conditions, gait abnormalities. g) During the task, maintains a safe clinical environment and manages risks appropriately. h) Provides feedback to the client on performance during the practice test and at completion of the task. i) Correctly interprets test outcome and plan for client care During task, maintains a safe clinical environment and manages risks appropriately.			
Monitors for performance errors and provides appropriate correction, feedback and / or adapts task to improve effectiveness, in accordance with the clinical reasoning record.			

Performance Criteria	Knowledge acquired	Supervised task practice	Competency assessment
Documents in clinical notes including reference to task being delivered by skill share-trained health professional and CTI used.			
If relevant, incorporates outcomes from task into intervention plan e.g. plan for task progression, interprets findings in relation to care planning, in accordance with the clinical reasoning record.			
Demonstrates appropriate clinical reasoning throughout task, in accordance with the learning resource.			

Comments:

Record of assessment of competence

Assessor name:	Assessor position:	Competence achieved: / /

Scheduled review

Review date / /

S-MT03: Timed up and go (TUG) test

Clinical Reasoning Record

The clinical reasoning record can be used:

- as a training resource, to be completed after each application of the skill shared task (or potential use of the task) in the training period and discussed in the supervision meeting,
- after training is completed for the purposes of periodic audit of competence,
- after training is completed in the event of an adverse or sub-optimal outcome from the delivery of the clinical task, to aid reflection and performance review by the lead practitioner.

The clinical reasoning record should be retained with the clinician's records of training and not be included in the client's clinical documentation.

Date skill shared task delivered: _____

1. Setting and context

insert concise point/s outlining the setting and situation in which the task was performed, and their impact on the task

2. Client

Presenting condition and history relevant to task

insert concise point/s on the client's presentation in relation to the task e.g. presenting condition, relevant past history, relevant assessment findings

General care plan

insert concise point/s on the client's general and profession-specific / allied health care plan e.g. acute inpatient, discharge planned in 2/7

Functional considerations

insert concise point/s of relevance to the task e.g. current functional status, functional needs in home environment or functional goals. If not relevant to task - omit.

Environmental considerations

insert concise point/s of relevance to the task e.g. environment set-up/preparation for task, equipment available at home and home environment. If not relevant to task - omit.

Social considerations

insert concise point/s of relevance to the task e.g. carer considerations, other supports, client's role within family, transport or financial issues impacting care plan. If not relevant to task - omit.

Other considerations

insert concise point/s of relevance to the task not previously covered. If none, omit.

3. Task indications and precautions considered

insert concise point/s on the indications present for the task, and any risks or precautions, and the decision taken to implement / not implement the task including risk management strategies.

4. Outcomes of task

insert concise point/s on the outcomes of the task including difficulties encountered, unanticipated responses

5. Plan

insert concise point/s on the plan for further use of the task with this client including progression plan (if relevant)

6. Overall reflection

insert concise point/s on learnings from the use of the task including indications for further learning or discussion with the lead practitioner

Skill share-trained health professional	**Lead health professional (trainer)**
Name:	Name:
Position:	Position:

Date this case was discussed in supervision: / /

Outcome of supervision discussion e.g. further training, progress to final competency assessment

Timed Up and Go (TUG) Test: Learning Resource

The Timed Up and Go test is commonly used to assess balance and functional mobility in community dwelling, older adults (70-84 years old). It can also be used as a screening tool for falls risk in either inpatient or community client populations. The TUG is a measure of both gait and balance and correlation has been identified between the time to complete the TUG and a client's independence in transfer tasks involved in activities of daily living, balance as measured with the Berg Balance Scale and speed of mobility as required for safe community ambulation[4].

Required reading

- Barry E, Galvin R, Keogh C, Horgan F, Fahey T (2014). Is the Timed Up and Go test a useful predictor of risk of falls in community dwelling older adults: a systematic review and meta-analysis. BMC Geriatrics 14:14. DOI:10.1186/1471-2318-14-14 Available at: http://bmcgeriatr.biomedcentral.com/articles/10.1186/1471-2318-14-14
- Rehab Measures: Timed Up and Go. Available at: http://www.rehabmeasures.org/Lists/RehabMeasures/DispForm.aspx?ID=903
- Shumway-Cook A, Brauer S, Woollacott M. Predicting the probability for falls in community-dwelling older adults using the Timed Up and Go test. Physical Therapy 2000;80(9):896–903. Available at: https://academic.oup.com/ptj/article/80/9/896/2842520/Predicting-the-Probability-for-Falls-in-Community?searchresult=1
- Timed Up-and-Go Test (p37). Compendium of clinical measures for community rehabilitation. Prepared for Queensland Health. Prepared by Centre for Allied Health Evidence University of South Australia. Accessed 3rd March 2017. Available at: https://www.health.qld.gov.au/__data/assets/pdf_file/0023/363443/clinical_measure.pdf
- Timed UP and GO (TUG). American College of Rheumatology. Available at: http://www.rheumatology.org/I-Am-A/Rheumatologist/Research/Clinician-Researchers/Timed-Up-Go-TUG Include sub-sections on Administration, Scoring, Psychometric Information, Comments and Critique.

Note: During testing conditions. Clinically it is important that the chair is free standing, and not placed against the wall. Clients are allowed to use arm rests and this should be noted. TUG was designed to test people walking at a comfortable speed, yet at times it is tested with the walking at a "quick yet safe speed". Evidence regarding dual task constraint TUG is also emerging.

Example recording form

- Outcome measures: timed up and go test. Children's Health Queensland Hospital and Health Service. Available at: http://qheps.health.qld.gov.au/childrenshealth/resources/clinforms/docs/255120.pdf

[4] Stroke Engine, The Canadian Partnership for Stroke Recovery, viewed 1 November 2015 at http://www.strokengine.ca/indepth/tug_indepth/

Outcome of the TUG test

The TUG test measurement and observation of a client's performance needs to be collated to inform the client's care plan.

The assessment needs to document the time achieved and note any observation of the client's performance during the test, including assistance provided and walking ability e.g. wide base of support, increased postural sway with walking/turning, shuffling gait, etc. To support decision making refer to information on interpretation of the TUG measure in various populations, see cut off scores and normative data in: Rehab Measures: Timed Up and Go required reading section of the learning resource.

It is noted that on its own the TUG test has limited predictive value as it is a single test and the risk of falling is dependent on multiple intrinsic and extrinsic factors5. Interpretation of TUG score therefore contributes to client care and is not a predictive tool on its own. It provides a comparison tool for monitoring functional performance and combined with other measures can assist the decision making and care planning process.

- **LOW RISK OF FALLS**
  - The client's mobility history (as per SMT01 and SMT02) was not indicative of a falls risk.

  AND
  - The client's TUG score was considered to be in the normative values for the matched population.

  AND
  - The client's observation of walking during the task demonstrated the basic elements of a normal walking pattern, i.e. common deviations were not apparent.

  Documentation should clearly state that the assessment revealed that the client is at a low risk of falls. The client should be referred for a comprehensive falls assessment should issues/concerns arise.
- **AT RISK OF FALLS**
  - The client's mobility history (as per SMT01 and SMT02) was indicative of falls.

  AND/OR
  - The client's TUG score was considered to be above the normative values for the matched population.

  AND/OR
  - The client's observation of walking during the task demonstrated deviations from the basic elements of a normal walking pattern. Common deviations include short step length, slow cadence, wide base of support, freezing, shuffling, ataxia, rests during performance (due to pain/shortness of breath/dizziness) etc.

  There must be a plan to address the identified deficits/issues. This may include further assessment by or in partnership with a health professional with expertise in the areas of:
  - falls assessment and intervention,
  - walking aid prescription and training,
  - balance/strength deficits.

Note: services may use the TUG test as an outcome measure for rehabilitation goals. In such instances the TUG score and observations are used to measure functional gain. Where scores have not improved / progressed from pervious measures a review of the timing of re-measurement and/or functional retraining program should be considered.

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[5] Barry E, Galvin R, Keogh C, Horgan F, Fahey T (2014). Is the Timed Up and Go test a useful predictor of risk of falls in community dwelling older adults: a systematic review and meta-analysis. BMC Geriatrics 14:14. **DOI:** 10.1186/1471-2318-14-14. Available at: http://bmcgeriatr.biomedcentral.com/articles/10.1186/1471-2318-14-14