Queensland Health

# Clinical Task Instruction

Skill Shared Task

# S-MT04: Assess stair walking

## Scope and objectives of clinical task

This CTI will enable the health professional to:

- assess a client's ability to safely and effectively walk up and down stairs.
- develop and implement an appropriate plan to address any identified walking deficits on stairs.


**VERSION CONTROL**

| | | | |
|---|---|---|---|
| Version: | 2.0 | | |
| Reviewed: (Profession) | Statewide Directors of Physiotherapy | Date: | 13/12/2020 |
| Approved: | Chief Allied Health Officer, Allied Health Professions' Office of Queensland | Date: | 28/01/2021 |
| Document custodian: | Chief Allied Health Officer, Allied Health Professions' Office of Queensland | Review date: | 28/01/2024 |

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 must 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

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/Hospital and Health Service (HHS) clinical roles are assumed knowledge for this CTI.
- If not part of mandatory requirements complete patient manual handling techniques, including the use of walk belts and sit to stand transfers.
- CTI S-MT05: Assess standing balance.
- CTI S-MT01: Assess functional walking.
- CTI S-MT02: Prescribe, train and review of walking aids. This CTI provides competence in examining walking with aids and should be completed concurrently with CTI S-MT01 if the skill share-trained AHP will implement CTI S-MT01 with clients that use a walking aid. The health professional can implement CTI S-MT01 with the walking aids covered in the training for CTI S-MT02.

## Clinical knowledge

- To deliver this clinical task a health professional is required to possess the following theoretical knowledge:
  - basic elements of a normal walking pattern for ascending and descending stairs.
  - common deviations from normal stair walking patterns and the potential causes, including co-morbidities, pain, weight bearing restrictions, weaknesses and visuospatial awareness.
  - common strategies to improve stair walking patterns and safety.
- The knowledge requirements will be met by the following activities:
  - completing training program (as above).
  - reviewing the Learning Resource.
  - receiving instruction from the lead allied health professional in 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 requirement is relevant to the healthcare setting and client group. This may include blood pressure, heart rate, pulse oximetry, pain scales or exertion scales.

# Indications and limitations for use of a skill shared task

The skill share-trained health professional shall use their independent clinical judgement to determine the situations in which this clinical task will be delivered. 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

- The client needs to negotiate steps in their home or community environment and has been identified as having mobility problems including difficulty using stairs. This information may be accessed through the referral, subjective history or direct observation (looks unsteady/unsafe, incorrectly using/poorly maintained walking aid).
- The client is medically stable and there is no medical prohibition to stair walking e.g. the medical record indicates that the client can mobilise on stairs and vital signs are within expected limits, the client has met all care pathway requirements to walk on stairs (e.g. haemoglobin level or x-ray review and clearance and is safely mobilising on ward), or the client is living in the community and is not acutely unwell.
- The client has been assessed as safe to walk, with or without an aid, on flat ground as per CTI S-MT01: Assess functional walking. This includes adherence to any weight bearing restrictions, where the local health service has determined weight bearing restrictions to be in the scope for the health professional and they have been trained and assessed as competent as part of this CTI. The scope of weight bearing restrictions implemented in this skill shared task in the local health service should be documented in the Performance Criteria Checklist.
- The client is using a walking aid that the local health service has determined to be in scope for the skill share-trained health professional. The walking aid/s the health professional is trained to implement for walking on stairs will be documented in the Performance Criteria Checklist.
- The client, in standing, with their usual walking aid (if relevant), is able to:
  - lift their foot high enough to clear a standard step height (>13 centimetres). This can be assessed by requesting the client to stand and lift their foot to the required height onto the first step, or by providing a block of similar height.

  and

  - two leg mini squat with/without hand support using parallel bars, a rail or their walking aid.

    Note: this includes adherence to any restrictions including weight bearing, range of motion, orthosis wear or clinical observations.

## Limitations

- Limitations for this CTI include those listed on S-MT01, S-MT02 and S-MT05 and should be reviewed as part of implementing this CTI.
- Additional Limitations include:
  - the client is unable to mobilise without the use of a walking frame e.g. hopper frame, four wheeled walker, and is required to access more than a single step landing.

- the client is required to walk with an aid or weight bearing restriction which is outside of the scope for the skill share-trained health professional.
- the client requires more than light assistance to stand up from a chair and/or walk.
- the client has a history of falls on stairs or expresses severe anxiety/fear of falling when walking on stairs. Confirm the client has completed any required local processes for a fall's assessment. Review the client's standing balance as per CTI S-MT05: Assess standing balance walking as per S-MT01: Assess functional walking and review Indications and Limitations for this CTI. If the client is suitable, test the client on one block or single step landing and provide assistance during the task. If the client is unable to complete the test conditions, develop a management plan to address problems e.g. referral for functional retraining, further assessment by a health professional with expertise in the task or recommendation that the client is not yet suitable for the planned discharge destination.
- the client reports or is observed to have unstable angina, excessive pain or shortness of breath whilst at rest and/or mobilising on the flat. Clients with mild symptoms must at a minimum be able to self-monitor and manage symptoms whilst mobilising on the flat e.g. rest on a chair, self-medicate or apply oxygen for symptom relief. Clients expected to develop symptoms must be medically cleared to mobilise on stairs, including implementing any additional clinical observations required for monitoring during the task. The client should be observed using symptom management techniques when walking on the flat prior to being assessed on stairs. During the task, include a short rest after walking to the stairs and prior to commencing the stair ascent/descent. If clinical observations information is unclear or inconsistent with the client's presentation liaise with the healthcare team.
- clients with visual or perceptual deficits. At a minimum, the client must be able to see their feet when in standing and identify the edge of the steps. Ensure the client is wearing the correct glasses (distance not reading glasses) and that the stairs are well lit with treads clearly marked.
- the client has restrictions that preclude walking on stairs or would not be able to be adhered to throughout the task. Medical and surgical restrictions will be documented in the medical chart or as part of care protocols/pathways. Restrictions may include weight bearing (upper or lower limb) or the wearing of braces/splints or orthoses whilst mobilising. Restrictions are often required post fracture or surgery to the chest, pelvis, upper limbs or lower limbs. If restrictions are unclear, speak to the medical team or physiotherapist. Review the client's standing balance as per CTI S-MT05: Assess standing balance and walking as per CTI S-MT01: Assess functional walking. If the client is unable to adhere to restrictions during standing and walking, cease the task and liaise with the physiotherapist for a stair management plan.

# Safety and 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:
  - in health facilities, stairs are often located in public areas (stair wells, gym). Infection control should be considered e.g. for infectious or immunosuppressed clients, a mask is likely to be required for the client and/or the stair rails wiped down before and after the task.

Alternatively, consider providing simulated stairs by using a block for practice in the client's room.

- appropriate footwear should be worn at all times during this task - enclosed, well-fitting shoes with good traction. Clients with no footwear or a restriction affecting the ability to wear footwear should have socks and or compression stockings removed prior to walking.
- the client's clothing should be appropriate for stairs assessment, i.e. ensures modesty during the task, not impede the lower limb range of movement, or be so long as to pose a tripping hazard.
- ensure any prescribed reliever medication/s are available throughout the assessment e.g. Anginine, Ventolin, oxygen. The task should also be timed to coincide with medication regimen.
- for clients who are known to require short rest breaks to support symptom management, a smaller number of stairs should be trialled initially. A chair should be available at the top and bottom of the stairs to rest on, prior to ascent/descent. Symptoms should be monitored throughout the task and symptom strategies implemented. Additional assistance or using a wheelchair to access the stairs may also be beneficial.
- during the task, the client will need to turn from ascent to descent at the top of the stairs. A preferred direction for turning should be identified and practiced prior to commencing the task. This is particularly relevant for clients with unilateral weakness, or to confirm effective self-management strategies for clients with vertigo, dizziness or vestibular symptoms (See Limitations CTI C-MT05).
- to support safety and observation the support of a second person is recommended if the client is excessively tall, obese or requires bariatric equipment.

## Equipment, aids and appliances

- The client should be assessed using their usual walking aid if appropriate (walking stick and crutches only) and any other required devices e.g. ankle foot orthoses (AFO), knee brace. If their walking aid and or required devices are not available, a similar trial/loan aid should be provided. This aid must be within the scope of the skill share health professional to use for this task.
- Confirm safe working load and height restrictions of equipment required for the task is appropriate for the client (e.g. chair to rest, walking aid).
- Ensure equipment is clean and in good working order as per local infection control protocols. Refer to the manufacturers' guidelines for maintenance guidelines for the client's mobility aid e.g. check rubber stoppers are present and have tread, adjustment screws or pins are engaged correctly, brakes are working. If the equipment is unsafe, do not proceed with the assessment.

## Environment

- Ensure the stair environment is prepared to minimise distractions and facilitate concentration on the task e.g. environment free of pedestrian traffic and equipment. It may also be beneficial to position a chair at the base and top of the stairs to allow the client to rest, if required.
- Ensure the stair rail is secure, step tread is intact, lighting is working and that any doors are accessible both to/from the stairs.
- Ensure an appropriate alert system is in place for the local environment in case a client becomes unwell or requires additional assistance during the task e.g. mobile phone, staff member/carer.

# Performance of clinical task

## 1. Preparation

- Ensure all required walking aids are available and appropriately prepared prior to commencing the session. Preparation includes performing a safety check and adjusting walking aid(s) to the appropriate height for the client.
- If trialling a new walking aid for the purpose of the stair assessment, complete the equipment safety check and implement CTI S-MT02: Prescribe, train and review of walking aids.
- Ensure the client adheres to all infection control requirements and wears suitable clothing and footwear, see Safety and quality.
- Ensure a chair is positioned at the top/bottom of the stairs, if required.

## 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 unit record (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 Health Care, 2nd edition (2017).

## 3. Positioning

- The client's position during the task should be:
  - standing in preparation to walk up/down the stairs.
- The health professional's position during the task should be:
  - standing to one side, generally the opposite side to the rail where a rail is present and slightly behind the client when ascending the stairs. The health professional should be close enough to provide hands on assistance for balance, if required. When descending the stairs, the health professional should be in front of the client and to one side, generally on the opposite side to the rail, if present. The health professional should have their feet placed on separate steps, allowing a lunge position for balance.
- An assistant, if present, should be:
  - standing either in front of the client while ascending or to the side, depending on the position of the rails and height of the stairs. When descending the stairs, an assistant should stand behind the client or to the side. The assistant should have their feet placed on separate steps, allowing a lunge position for balance.

## 4. Task procedure

- The task comprises the following steps:
  1. Confirm the client's goal and requirement to access stairs, including the number of steps, rail/s present and side, frequency (e.g. need to regularly ascend/descend stairs to access the toilet or weekly for community access), equipment requirements (e.g. orthotics, oxygen) and any available assistance and/or previous training provided. See the Learning resource.

2. Determine if the client's condition requires a prescribed method to ascend/descend stairs using the collected clinical information and Table 1: Clinical reasoning tool for stair assessment in the Learning resource, and that this is consistent with the client's understanding of how to mobilise on stairs e.g. medical restrictions regarding weight bear, limited range of motion in the lower limb, pain. If no appropriate method to ascend/descend stairs is available that is in the scope of the skill share-trained health professional, cease the task and refer to a health professional with expertise in the task.
3. Instruct the client in the planned stepping pattern to ascend/descend the stairs for the client's requirements/restrictions. Instructions should include placement of hands and walking aid (if relevant).
4. Check the client has understood the task and provide the opportunity to ask questions.
5. Instruct the client to stand in front of the first step and use the prescribed method to ascend the stairs.

   Note: it is always preferable to assess stairs ascent before stairs descent, to support client confidence and safety.
6. The client should turn at the top of the stairs on a landing which has adequate space to allow the client to turn safely. The client may require a short rest break in standing or sitting on a chair before descending.
7. Instruct the client to stand on the top step ready for descent. Observe the client for anxiety or balance problems, providing reassurance and hands-on steadying for safety, if required. Using the prescribed method, instruct the client to descend the stairs.

## 5. Monitoring performance and tolerance during the task

- Common errors and compensation strategies to be monitored and corrected during task include:
  - observing foot sequencing to ascend or descend the step. This should be appropriate for the client e.g. alternate stepping pattern, stronger leg ascending first and the weaker/painful leg descending first. Use verbal prompting or manual guidance as part of feedback to the client.
  - appropriate rail usage e.g. rail use on the side, not facing the rail or pulling with both hands, adherence to any weight bear restrictions for the upper limb.
  - correct use of walking aid during the task e.g. crutch or walking stick moves with the affected leg/foot in the correct sequence to maximise support, adherence to weight bear restrictions.
  - monitor symptoms regularly by checking that the client is feeling well during the task, particularly prior to turning and commencing descent. Observe for signs of fatigue, pain, shortness of breath, dizziness or distress e.g. pain, shaking, increase in compensatory patterns of movement. This includes monitoring the client's clinical observations prior to, during and after the task, as required e.g. O2 saturation, shortness of breath, rating of perceived exertion, pain rating scale.
- Monitor for adverse reactions and implement appropriate mitigation strategies as outlined in the Safety and quality section above.

## 6. Progression

- If no adverse reactions were evident on assessment, and if indicated by the client's functional goals, the task may be progressed to include assessment of simulated or actual environments

relevant to the client's residence including the number of stairs, style of steps (e.g. wooden, solid steps), style of rail (e.g. against a wall, free standing), outside, dual tasking (e.g. carrying an item).

- The client may require further stair assessment if functional mobility goals change (e.g. discharge planning changes) or factors impacting mobility improve or decline (e.g. acute exacerbation of chronic condition, change in weight bearing status, a new fall, acute injury to the lower or upper limbs, hospital admission, illness or surgery).
- In all instances, if the client is not safe to mobilise on stairs, the health professional will ensure any relevant hospital and health service manual handling and/or falls protocol and management plan processes are implemented.

## 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 relevant documentation standards and local procedures, commenting on:
  - the number of stairs assessed and location e.g. ward stairs, gym area, client's home, inside/outside.
  - use of rail and/or walking aid (crutches, walking stick).
  - level of assistance required, including the use of a walk belt, physical assistance, verbal prompts/cueing strategies required e.g. "good foot up". If no assistance required, record 'independent'.
  - type of gait pattern used e.g. step to/alternate step through pattern. NB: these may differ for ascent and descent and should be documented to reflect this.
  - restrictions e.g. weight bearing status, orthotic/brace worn.
  - the use of any pain relief, oxygen, or specific monitoring during the assessment, rest stops used and outcome information.
  - recommendation as to the clients' ability to mobilise on stairs, i.e. the client is safe to mobilise on stairs, safe to mobilise on stairs with restrictions/strategies, or not safe to mobilise on stairs.
  - implications for ongoing care e.g. referral for functional retraining program, prescription of a new walking aid, not safe for planned discharge destination.
  - the skill shared task should be identified in the documentation as "delivered by skill shared-trained (insert profession) implementing CTI S-MT04: Assess stair walking" (or similar wording).

# References and supporting documents


- Ip D (2007). Chapter 14: Rehabilitation after total joint replacement. In Orthopaedic Rehabilitation, Assessment and Enablement. Springer Berlin Heidelberg. ISBN: 978-3-540-37693-4.
- Queensland Health (2017). Guide to Informed Decision-making in Health Care (2nd edition). Available at: https://www.health.qld.gov.au/__data/assets/pdf_file/0019/143074/ic-guide.pdf
- Startzell JK, Owens DAO, Mulfinger LM, Cavanagh PR (2000). Stairs negotiation in older people: a review. Journal of the American Geriatrics Society, 48: 567-580. Available at: http://onlinelibrary.wiley.com/doi/10.1111/j.1532-5415.2000.tb05006.x/full

# Assessment: performance criteria checklist

## S-MT04: Assess stair walking

**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. | | | |
| Identifies indications and safety considerations for task and makes appropriate decision to implement task, including any risk mitigation strategies, in accordance with the learning resource. | | | |
| Completes preparation for task including equipment safety check/s and confirming with client pre-morbid use of a walking aid, preparation of the environment, and ensuring the client is wearing appropriate clothing and footwear. | | | |
| Describes task and seeks informed consent. | | | |
| Positions self and client appropriately and safely throughout task. | | | |
| Delivers task effectively and safely as per CTI procedure, in accordance with the learning resource:<br>a) Clearly explains and demonstrates task, checking client's understanding.<br>b) Obtains stair mobility history and requirements from medical record, and/or client, carer or members of the healthcare team.<br>c) Confirms client's capacity to participate, including review of clinical observations, strength, general movement, balance and ability to follow instructions.<br>d) Identifies appropriate pattern to ascend/descend stairs considering medical restrictions, client's capacity and goals using Table 1: Clinical reasoning tool for stair assessment.<br>e) Completes task by ensuring adherence to required restrictions, providing assistance for safety and/or correct use of walking aid.<br>f) Describes observed gait abnormalities and safety concerns appropriately.<br>During task, maintains a safe clinical environment and manages risk appropriately. | | | |
| Monitors for performance errors and provides appropriate correction, feedback and/or adapts task to improve effectiveness, in accordance with the Learning resource. | | | |

| | | | |
|---|---|---|---|
| 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. | | | |
| Demonstrates appropriate clinical reasoning throughout task, in accordance with the learning resource. | | | |
| **Notes on the scope of the competency for the health professional: tick to indicate** | | | |
| The health professional has been trained and assessed as competent to deliver this task with the following mobility equipment/aids on stairs:<br>☐ Rail<br>☐ Single point walking stick<br>☐ Crutches ☐ Axillary ☐ Canadian | | | |
| The health professional has been trained and assessed as competent to deliver the task with the following weight bearing status on stairs:<br>☐ Full weight bearing (FWB)<br>☐ Weight Bearing as Tolerated (WBAT)<br>☐ Partial Weight Bearing (PWB)<br>☐ Non-Weight Bearing (NWB) | | | |
| The health professional has been trained and assessed as competent to deliver the task for the following assistance on stairs:<br>☐ Supervision<br>☐ Assistance x1 | | | |
| Other restrictions relevant to the local service (e.g. patient groups included/excluded): | | | |

| Notes on the service model in which the health professional will be performing this task: |
|---|
| *For example: in the community setting with cancer care clients; in the medical assessment planning unit to facilitate geriatric discharge. Details of any protocols/care pathways/set crtieria (e.g. hip precuations) relevant to the facility and local service.* |

| Comments |
|---|
| |

| Record of assessment competence: | | | | | |
|---|---|---|---|---|---|
| Assessor name: | | Assessor position: | | Competence achieved: | / / |
| **Scheduled review:** | | | | | |
| Review date: | / / | | | | |

# S-MT04: Assess stair walking

## 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

**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 |

# Assess stair walking: Learning resource

For community dwelling adults, the ability to negotiate stairs is an important activity of daily living. It is also potentially hazardous, with 10% of fatal fall accidents attributed to falls on stairs. When mobilising on stairs, greater demands are placed on the musculoskeletal system and cardiovascular system than during routine mobilisation. There is also an increased demand on other systems in the body including the somatosensory, vestibular and visual systems (Startzell, Owens, Mulfinger, Cavanagh, 2000). As clients will often present at a Hospital and Health Service facility with a decline in mobility, it is essential to assess a client walking on stairs to support safety in the home/community environment.

## Required reading

- Hocking RL, Schmidt DD, Cheung CW (2013). Single-leg squats identify independent stair negotiation ability in older adults referred for a physiotherapy assessment at a rural hospital. Journal of the American Geriatrics Society 61(5). https://doi.org/10.1111/jgs.12311. Available through CKN for Queensland Health staff.

  A copy of the project report is available from NSW Health Education and Training Institute
- Lower Extremity Review (LER) Magazine (2020). Stair negotiation alters stability in older adults. Available at: https://lermagazine.com/article/stair-negotiation-alters-stability-in-older-adults
- Startzell JK, Owens DA, Mulfinger LM, Cavanagh PR (2015). Stairs negotiation in older people: a review. Journal of the American Geriatrics Society, 48: 567-580. https://doi.org/10.1111/j.1532-5415.2000.tb05006.x

## Required viewing

- Rehab and revive (2020)
  - Climb stairs the right way: how to walk up stairs: physical therapy. Available at: https://www.youtube.com/watch?v=gzj4980UvzY
  - Walk down stairs the right way: how to descend stairs: physical therapy. Available at: https://www.youtube.com/watch?v=YpLHb3LIGmA
- For viewing on stair walking using an aid see CTI S-MT02: Prescribe, train and review walking aids

## Supplemental reading/viewing

- Jacobs JV (2016). A review of stairway falls and stair negotiation: Lessons learned and future needs to reduce injury. Gait & Posture 49: 159-167. https://doi.org/10.1016/j.gaitpost.2016.06.030. Available at: https://www.sciencedirect.com/science/article/pii/S0966636216301096
- Tiedemann AC, Sherrington C, Lord SR (2007). Physical and psychological factors associated with stair negotiation performance in older people. Journal of Gerontology 62A(11): 1259-1265. https://doi.org/10.1093/gerona/62.11.1259 Available at: https://academic.oup.com/biomedgerontology/article/62/11/1259/673051

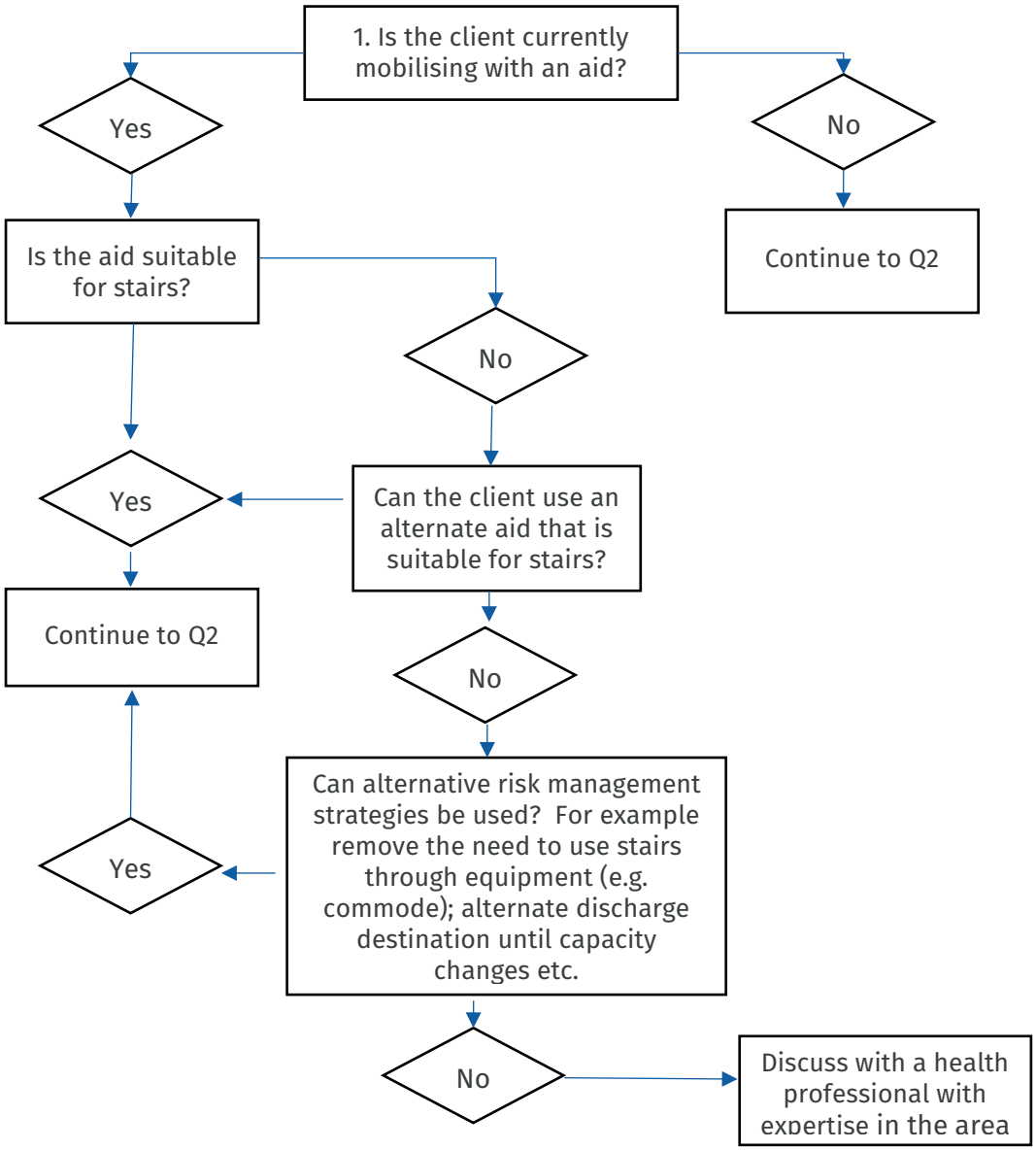
## Mobility history

To be completed with an understanding of standing balance and mobility history as per S-MT01 and S-MT05.

## Considerations for stair assessment

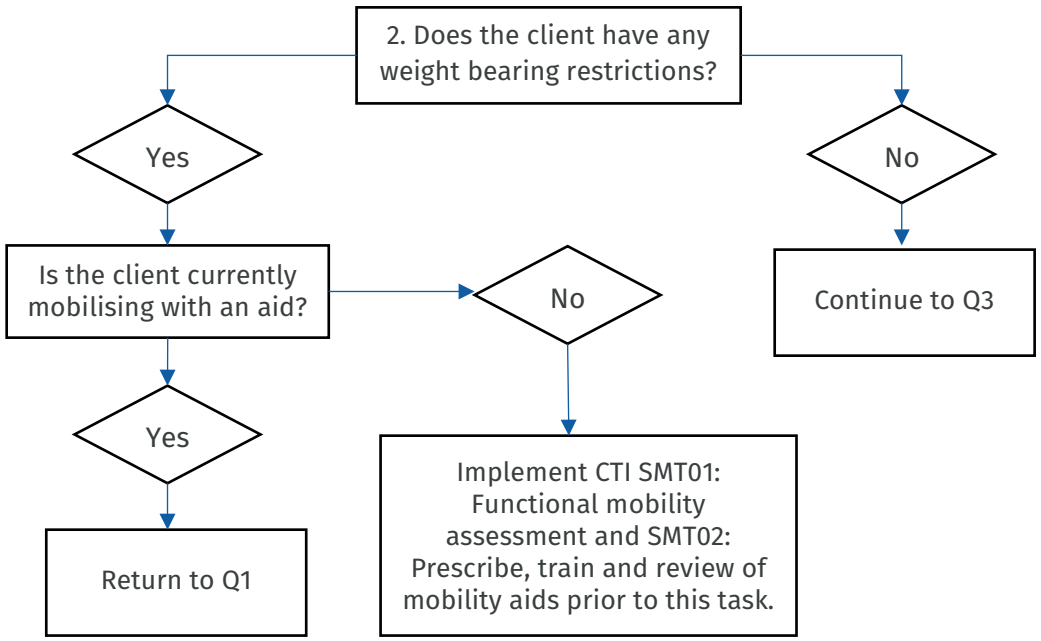
1. Is the client currently mobilising with an aid?

**Figure 1 Mobility aid factors influencing clinical decision making for stairs assessment risk**




2. Does the client have any weight bearing restrictions?

**Figure 2 Weight bearing factors influencing clinical decision making for stairs assessment risk**




3. What limits the client when walking (e.g. knee pain, SOB, chest pain, fatigue)?

   Recognise that these are likely to be exacerbated during a stair assessment. Review Limitations section in this CTI, including S-MT01 and S-MT05.

4. Has the client suffered previous falls in the past 12 months? Have the falls been on stairs?

   Discuss causal factors with the client and/or carer e.g. dizziness, poor maintenance, tripping hazards as part of S-MT01. Review Limitations.

5. Are there stairs at home or in places the client routinely visits?

   Obtain information on the:

   – stair features including number of steps/flights, location (indoors/outdoors), floor surface/tread presence, rails (number and side), landings etc. Use these parameters to assist with progression of the task in either the actual or simulated environment.

   – frequency of access required, for example, weekly to exit/enter house for community outing, multiple times during the day for access to the bathroom etc. During the task, monitor the client's response to the task including symptoms of exertion and time to complete the task and determine if these meet the expected requirements at the destination.

   – associated task requirements for stair mobility e.g. carry washing basket, open/close doors whilst on landing/step, access to lighting (switch only at top of stairs). This will guide the task progression activities.

6. Is there a step/hob/door track in the home, shower or a bathtub the client has to step over?

   If yes, determine the features of the step/hob/door track including height, location, access width, presence of a rail/support. Use these parameters to guide with progression of the task in either the actual or simulated environment.

7. How does the client normally ascend/descend stairs?

   For example, does the client usually use rails, aids, assistance? Ensure these supports are simulated during the task if not performing the task at the client's usual locality.

8. Does the client have any pre-morbid or new cognitive issues?

   This may include confusion, wandering, aggression, difficulty following instructions. Review Limitations including S-MT01 and S-MT05.

9. Does the client have assistance available in the home environment?

   This may include rails or family/carer assistance/support and are these available for the required planned frequency of the task e.g. to ask the bathroom or community.

### Goal setting – considerations

- Identify stairs the client is required to negotiate including the number, presence of rails and type of stairs.
- Consider how the client would like to achieve their goals, i.e. independently, with assistance, with equipment.
- What level of assistance is available to the client at home/in the community? E.g. is a carer available who can provide support.
- What are the requirements that the carer/service need the client to meet to be safe at home/in the community?

## Performing a stair assessment

The client's history will determine the level of stair mobility required for safety in the client's home and community environment. The client's current presentation will determine the appropriate gait pattern, upper limb and assistance/carer support required to perform stairs. It is important to commence with the safest option for stair mobility for the client and staff member.

In walking, stair ascent in the fit and healthy population is usually undertaken with an alternate step cycle and no handrail/aid support. An alternate (or step through) step cycle occurs when each foot is placed on the next step in turn. As a client's capabilities reduce, the capacity to complete stairs can be improved by either providing increasing support or altering the gait pattern. Increasing support is achieved through the use of physical support or equipment such as a rail or walking aid(s). A 'step-to' gait cycle can reduce the load on an affected side in unilateral conditions such as stroke or lower limb orthopaedic surgery (see required viewing). A step-to gait cycle occurs when each foot is placed on the same step as part of the step cycle. On ascending stairs, the unaffected leg steps onto the next step, followed by the affected leg, and if relevant, the walking aid is moved last. On descending stairs, the walking aid is placed one step lower, the affected leg moves next and is followed by the unaffected leg (Ip 2007). Other options for stair mobility include rail support with sideways walking, ascending/descending on the bottom (sitting position) and using a stair lift.  These options are not in the scope of this CTI and require referral to a health professional with expertise in the task.

**Table 1: Clinical reasoning tool for stair assessment**

| | | | |
|---|---|---|---|
| **Weight bearing restriction –** this will limit the number of available options for stair assessment. With full weight bearing/no restrictions having the most options and non-weight bearing having the least. | | | |
| **Weight bearing restriction** | **Non-weight bearing** | **Partial weight bearing** | **Weight bear as tolerated/ Full weight bear/ No restrictions** |
| **Gait pattern –** 'Step-to' gait cycle is where the feet are placed on the same step during the gait cycle.<br>'Step through' gait pattern is where each foot is placed on the next step as part of the step cycle. | | | |
| **'Step–to'** | ✓ | ✓ | ✓ |
| **'Step–through'** | × | ✓ | ✓ |
| **Upper limb support -** provided through the use of either, rails and/or walking aids, or a combination of both.<br>Walking aids on stairs will either be a walking stick or crutch (Canadian or Forearm).<br>The use of two walking aids should only be used when a rail is not present/available. | | | |
| **Nil upper limb support** | × | × | ✓ |
| **x1 rail or X1 walking aid** | × | ✓ | ✓ |
| **x2 rails, or x1 rail and a walking aid or 2 walking aids** | ✓<br>(Excludes SPS) | ✓ | ✓ |
| **Assistance/Carer support** – this is an independent variable and is determined on the capacity of the client to complete the task. It is based on neuromuscular control and strength, balance, cognition, etc. | | | |
| **Independent** | ✓ | ✓ | ✓ |
| **Stand by or Assistance x1** | ✓ | ✓ | ✓ |
| **Assistance x2** | ✓ | ✓ | ✓ |

× - denotes not appropriate

✓ - denotes appropriate

## Outcomes of a stairs walking assessment

- The observations of the client during the stair walking assessment needs to be collated to formulate a recommendation.
- The assessment needs to document the observation of the client's walking on stairs including assistance required, aids used, gait pattern, limitations (environment, symptoms etc.).
- The recommendation must then clearly state if the client is:
  - safe to and independently able to use stairs with or without their usual walking aid i.e. no changes/proposed intervention. This should include a statement that the client be re-referred should issues/concerns arise.
  - safe to walk up and down stairs with restrictions, including a list of recommendations. These may include:
    - the use of a new prescribed walking aid that has been assessed as suitable including the name of the walking aid and the prescribed gait pattern for use with stairs.
    - within limited environments and/or times such as on the ward only, in the house, during the day.
    - with support of a rail, or assistance. If assistance is required details on the amount and type.
    - for a period of time, if relevant e.g. whilst on weight bearing restrictions, or for pain etc.
    - the recommendation must also include a plan to address the identified deficits/issues being addressed. This may be a review in an appropriate timeframe such as when weight restrictions will change, prescription of a new walking aid, or referral for management/ functional retraining for the observed deficits to a health professional with expertise in the task.
  - not safe to mobilise on stairs. This must include a plan to address the identified deficits/issues including further assessment and/or intervention with a health professional with expertise required to address the identified issues such as:
    - rehabilitation for balance/strength deficits.
    - assessment for modification of the home or an alternative access solution e.g. ramp, lift.
    - investigation of alternative housing/living environment options e.g. respite, residential care facility.