

# Clinical Task Instruction

## Delegated Task

### D-DN01: Height, weight and Body Mass Index

#### Scope and objectives of clinical task

This CTI will enable the Allied Health Assistant to:

- obtain an accurate recording of a client's height, weight and Body Mass Index (BMI).
- measure BMI (height and weight) and compare with a BMI range to support the health team's determination of whether the client is within a healthy weight range.

#### VERSION CONTROL

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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](mailto:allied_health_advisory@health.qld.gov.au).

This CTI must be used under a Delegation 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.

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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.
- If part of the implementation of this task into the local service model, competence in D-DN02: Malnutrition Screening Tool (MST) and/or D-DN04: Administer the Subjective Global Assessment (SGA) e.g. a service may have a protocol-driven process whereby a change in BMI results in implementation of CTI D-DN02: Malnutrition Screening Tool (MST) and/or D-DN04: Administer the Subjective Global Assessment (SGA) to support the triaging of clients.

## Clinical knowledge

- The following content knowledge is required by an AHA delivering this task:
  - understanding of how to perform the calculation for BMI, basic understanding of the purpose of BMI and how the output is used by health professionals to contribute to clinical decision-making.
- The knowledge requirements will be met by the following activities:
  - complete 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:
  - competence in patient manual handling and facilitating transfers and mobility to the extent required to complete the measurement of height and weight for the local service setting client cohort.

## Safety and 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:
  - clients presenting to healthcare facilities may have difficulty with transfers and walking, or their mobility status may change. Confirm the client's mobility status, including any assistance required by asking the client and/or consulting with the healthcare team (nurse/occupational therapist/ physiotherapist) prior to commencing the task. Apply manual handling procedures to transfers, sit to stand and mobilisation (as relevant). If the client's mobility status does not match the delegation instruction, cease the task and consult with the delegating health professional e.g. the client is unable to stand tall to have their height measured, stand

unsupported to have their weight measured accurately, is very unsteady with transfers or is on bed rest.

- clients with an amputation require an adjusted weight prior to calculating the BMI. Prior to commencing measurements, determine if the client wears a prosthesis e.g. breast or leg prosthesis. If the client wears a prosthesis and this was not part of the delegation instruction, liaise with the delegating health professional to determine if the prosthesis needs to be removed prior to weighing. As part of documentation record any amputation sites and prosthetic wear e.g. prosthetic leg removed during weighing.
- significant swelling or the wearing of a synthetic or plaster cast will impact on the client's weight and therefore the health professional's interpretation of the measurements. Prior to commencing the task, determine if the client is wearing a cast or is experiencing any significant swelling e.g. swelling in the legs, arms or abdomen. Note any casts or reported swelling including the location and size and inform the delegating health professional.
- there is some evidence that BMI differs according to ethnicity e.g. Chinese, Samoan, African American and Polynesian people. The World Health Organisation (WHO) maintains that these cut-offs are not significantly different and, therefore, the standard WHO BMI classifications should be used (WHO 2004).
- BMI does not distinguish between body fat and muscle mass. It is also not suitable for pregnant women, infants, children and adolescents (<18 years old). If the client reports or is observed to have a high muscle mass (athlete, body builder), be pregnant or less than 18 years of age and this was not included in the delegation instruction, discuss with the delegating health professional prior to commencing the task.

## Equipment, aids and appliances

- To improve consistency between results always use the same scales when weighing a client and weigh them in the same position as far as practicable.
- To improve accuracy of weight recording, scales should be periodically calibrated e.g. annually. Before use, check the calibration date is current. If expired, liaise with the delegating health professional prior to use.
- The maximum weight for scales is generally between 150-200kg. Safety and accuracy of the weight measurement may be compromised if the client's weight exceeds the operating limits of the equipment. If relevant, consult the delegating health professional.
- Ensure chair scale wheels are locked prior to use, if relevant.

## Environment

- Ensure scales are on a hard, flat surface and slightly away from the wall/sideboard/work surface or chair.

# 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 type of scale required e.g. standing scale, chair scale, wheelchair scale, hoist scale.
  - position for measuring, including any required assistance e.g. standing, sitting or lying.
  - presence of a prosthesis and if it needs to be removed.

## 2. Preparation

- Equipment required to perform the task:
  - a) Height:
    - measuring device e.g. wall mounted height-measuring device or tape measure mounted to the wall and a ruler.
  - b) Weight:
    - Scales.
  - c) BMI:
    - calculator.

## 3. Introduce task and seek consent

- The AHA introduces themselves 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 am going to measure your height and weight today to allow me to calculate your Body Mass Index (BMI). Weight and BMI are useful tools for health professionals to monitor your health”.
- 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:
  - supported and comfortable and consistent with mobility capacity.
- The AHA's position during the task should be:
  - to the side of the client to allow observation of the task and provide assistance for safety, if required.

## 5. Task procedure

- Explain and demonstrate (where applicable) the task to the client.
- Check the client has understood the task and provide an opportunity to ask questions.
- The task comprises the following steps:
  - a) Height
    1. Ask the client to remove their shoes, hair ornaments and stand up straight beneath the height-measuring device and look straight ahead, provide assistance if required.
    2. Ask the client to stand with feet flat, together and against the wall. Make sure legs are straight, arms are at sides and shoulders are level.
    3. Lower the measuring marker until it rests gently on the client's head.
    4. Accurately record the height to the nearest 0.1 centimetre. Note the measurement in centimetres or metres.
  - b) Weight
    - Prior to being weighed, ask the client to remove their shoes, heavy clothing and any objects from their pockets.
    - Using portable or standing scales:
      1. Ask the client to mobilise to the scale. If using portable scales, place scales on an uncarpeted floor.
      2. Switch the scales on as per the user manual. Ensure the scales read zero and are measuring in kilograms (kg) prior to the client stepping onto them.
      3. Ask the client to step up onto the scales. See the “Safety and quality” section.
      4. If using a walking aid, ask the client to let go once steady. After vibration has stabilised, the weight reading will flash on the screen.
    - Using chair scales:
      1. Ensure the scale wheels are locked and press the ON/Zero switch. Ensure the scales read zero prior to the client sitting onto them.
      2. Ask the client to mobilise to the scales. If required, seek assistance with the transfer as per manual handling requirements.
      3. Ask the client to sit onto the scales. Check that the client is positioned with their lower back touching the back of the seat and feet off the floor (placed onto foot rests if available). If using a walking aid ask the client to let go once seated. After vibration has stabilised, the “weight lock” arrow turns on.
    - Using wheelchair scales:
      1. Press the ON/Zero switch. Propel the empty wheelchair to the centre of weighing platform and record the weight. If the client is sitting in the wheelchair and is unable to stand, transfer for empty wheelchair weighing, or obtain the wheelchair weight from the product manual, manufacturer or supplier and commence step 4.
      2. Record the weight of the wheelchair. Remove the empty wheelchair from the weighing platform.
      3. Transfer the client into the wheelchair using patient manual handling techniques.
      4. Propel the wheelchair (with the client in it) to the centre of the weighing platform. After vibration has stabilised, the weight reading will remain stable. Record the weight.

5. Calculate the difference between the two weight readings i.e. (client + wheelchair) – wheelchair.
- Using hoist scales:
    1. Hoist scales may be available in medical and rehabilitation wards. If required to weigh a patient with hoist scales, liaise with the delegating health professional who will assist you with the process.
- c) BMI
1. Using the recorded height and weight measures, calculate the client's BMI. Refer to the Learning resource.
  2. If being undertaken as a comparison, quantify any change in BMI and date range.
- During the task:
    - 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.
    - inform the client of their results including BMI and that the results will be provided to the delegating health professional who will determine if further assessment is required.
    - 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:
  - Weight – to the nearest 0.1 kilogram (kg) e.g. 60.3kg
  - Height – to the nearest 0.01 metre (m) e.g. 1.71m
  - BMI – kg/m<sup>2</sup> e.g. 20.6 kg/m<sup>2</sup>
- If the task was being undertaken as a comparison, record the change by including the difference in weight, BMI and the date range. This may be relevant where there is a protocol for the review of BMI in the local service e.g. clients who exceed a defined length of stay have the task performed fortnightly during an inpatient admission, or clients presenting for an outpatient consult with a particular diagnosis.

## 7. Report to the delegating health professional

- Provide comprehensive feedback to the health professional who delegated the task, including any changes to previous BMI recordings or if the client is outside of a healthy weight range, or had any questions about the task.

Note: clients with a decreasing BMI range may also require further screening using the Malnutrition Screening Tool (MST) or assessment using the Subjective Global Assessment – refer to the local care protocol or the delegating health professional for direction regarding indications and access.

# References and supporting documents

- BAPEN (2003). Reprinted 2011. The 'MUST' Explanatory booklet. Available at: [https://www.bapen.org.uk/pdfs/must/must\\_explan.pdf](https://www.bapen.org.uk/pdfs/must/must_explan.pdf)
- Centers for Disease Control and Prevention (2021). Measuring children's height and weight accurately at home. Available at: [https://www.cdc.gov/healthyweight/assessing/bmi/childrens\\_bmi/measuring\\_children.html](https://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/measuring_children.html)
- Isenring EA, Bauer JD, Banks MD & Gaskill D (2009). The malnutrition screening tool is a useful tool for identifying malnutrition risk in residential aged care. *Journal of Human Nutrition and Dietetics* 22(6): 545-550.
- Queensland Health (2015). 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). Available at: [https://www.health.qld.gov.au/\\_data/assets/pdf\\_file/0019/143074/ic-guide.pdf](https://www.health.qld.gov.au/_data/assets/pdf_file/0019/143074/ic-guide.pdf)
- WHO expert consultation (2004). Appropriate body-mass index for Asian populations and its implications for policy and intervention strategies. *Lancet* 363:157-63. DOI: [https://doi.org/10.1016/S0140-6736\(03\)15268-3](https://doi.org/10.1016/S0140-6736(03)15268-3)



# Assessment: performance criteria checklist

## D-DN01: Height, weight and Body Mass Index

**Name:**

**Position:**

**Work Unit:**

Performance criteria	Knowledge acquired	Supervised task practice	Competency assessment
	<i>Date and initials of supervising AHP</i>	<i>Date and initials of supervising AHP</i>	<i>Date and initials of supervising AHP</i>
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 collecting and preparing equipment.			
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. a) Clearly explains the task, checking the client's understanding. b) Checks for factors impacting measurement accuracy/ interpretation e.g. prosthesis, swelling. c) Accurately takes height and weight measurements aligned to the standard process. d) Calculates BMI correctly. If required compares to previous recordings. e) During the task, maintains a safe clinical environment and manages risks appropriately. f) 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.			



**Weighing devices:**

The allied health assistant has been trained and assessed as competent in the use of the following weighing devices:

- ☐ Portable or standing scale
- ☐ Chair scale
- ☐ Wheelchair scale
- ☐ Hoist scale
- ☐ Other \_\_\_\_\_

**Comments on the service model:**

e.g. CTIs, workplace instructions and protocols included during the training phase

**Comments:****Record of assessment competence:**

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

Review date:	/ /	
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# Height, weight and Body Mass Index: Learning resource

The Body Mass Index (BMI) is a tool used by health professionals to help determine whether a person is a healthy weight. BMI provides a guide to the client's risk of having health complications. A BMI in the healthy weight range carries the lowest risk of disease.

## Required reading

- Manufacturers instruction for the weighing scale(s) used in the local service. Information includes safe working load, cleaning instructions, calibration requirements and measuring sequence.
- Queensland Government (2017). Using Body Mass Index. Available at: [https://www.health.qld.gov.au/data/assets/pdf\\_file/0031/147937/hphe\\_usingbmi.pdf](https://www.health.qld.gov.au/data/assets/pdf_file/0031/147937/hphe_usingbmi.pdf)

## Choosing the right scales to weigh a client

The choice of scales will depend on availability and appropriateness for the client considering their capacity to stand and mobilise and will be part of the delegation instruction.

- Portable or standing scales are used for clients who have adequate mobility and standing balance to step up on to the scale. Clients may use assistance and/or their usual walking aid as required. Once standing on the scale, clients must, at a minimum, be able to stand independently for the time required for an accurate recording to occur i.e. with no hand support or assistance.
- Chair scales are used for clients who are able to transfer to a chair, but unable to stand independently.
- Wheelchair scales are used for clients who cannot transfer or stand unassisted.
- Hoist scales are generally only used for in-patients when they cannot transfer.

## How to calculate a BMI

To calculate a BMI, measure the client's weight and height and use the following equation:

$$\text{BMI} = \frac{\text{Weight (kg)}}{\text{Height}^2 (\text{m}^2)}$$

$$\text{Example: BMI} = \frac{53 \text{ kg}}{1.75\text{m} \times 1.75\text{m}} = 17.3 \text{ kg/ m}^2$$

This can be performed on a calculator in this sequence:

$$\text{Weight} \div \text{Height} \div \text{Height} = \text{BMI}$$

$$\text{Example: } 53 \div 1.75 \div 1.75 = 17.3 \text{ Kg/m}^2$$

