

Clinical Task Instruction

Delegated Task

D-NM04: Measure active range of motion of the shoulder using a goniometer

Scope and objectives of clinical task

This CTI will enable the Allied Health Assistant to:

- measure active range of motion of the shoulder using a goniometer with the client in standing.

VERSION CONTROL

Version: 1.0

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Document custodian: Chief Allied Health Officer, Allied Health Professions' Office of Queensland Review date: 30/11/2023

Acknowledgements: Metro North Hospital and Health Service

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.

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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:
 - Physiotherapy Learner Guide: Deliver and monitor a client-specific exercise program
 - 2.2. Positions and planes
 - 2.3 Anatomical movements
- Access the module/s at: <https://www.health.qld.gov.au/ahwac/html/ahassist-modules>

Clinical knowledge

- The following content knowledge is required by an AHA delivering this task:
 - basic anatomy of the shoulder including the anatomical landmarks used to measure range of motion of the shoulder.
 - the normal range of motion and movement patterns for active movements of the shoulder, including scapulohumeral rhythm and the anatomical starting position for each movement.
 - common compensatory strategies and movement errors observed during active shoulder range of motion.
 - basic understanding of a standard goniometer, including placement, reading and recording of shoulder joint angle measurements.
- 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:
 - nil.

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 who are unable to stand safely may be measured in sitting. Standing balance problems may be indicated by the use of a walking aid, body sway in standing or shuffling of the feet when asked to stand still or move the arm. Use of the sitting posture should be noted in the documentation. Information on the variation from standing to sitting for the measuring posture, should be included in the delegation instruction. If the delegation instruction is unclear or the client's balance does not match the delegation instruction, cease the task.
 - the task often requires both sides to be measured. The removal of clothing and/or wearing a gown may assist the visualisation and location of bony landmarks and observation.
 - clients may present with pain with shoulder movement, oedema, wounds or scars. If the appearance of the upper limb does not match the delegation instruction, cease the task and liaise with the delegating health professional.

Equipment, aids and appliances

- Nil

Environment

- To be able to visualise landmarks for measurement, the client may be asked to disrobe. This should be done in a private setting and the client offered a gown to wear.

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 client, including any variance from the usual task procedure and expected outcomes. This may include:
 - the side on which the measurement is to be taken i.e. left, right or both.
 - the range of motion direction/s to be measured e.g. flexion/extension, abduction/adduction, internal/external rotation, etc.
 - alterations to standing posture for measurements e.g. due to poor balance, comorbidities (pain, wounds), surgical restrictions/protocol.
 - timing of the measurement e.g. to coincide with a pain medication regime.

2. Preparation

- Collect the goniometer and recording sheet.

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 am going to measure your shoulder movement using this measuring device called a goniometer (show the client the goniometer). I will ask you to move your arm as far as you can into the movement and then I will take a measurement. This information is used by (delegating health professional) to review your progress and to make decisions about your ongoing care”.
- 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:
 - standing with relevant anatomical landmarks visible.
- The AHA's position during the task should be:
 - standing beside the client on the side to be measured.
 - in front and behind the client to observe and monitor for movement of the trunk, scapulae and shoulder joint during movement.

5. Task procedure

- The task comprises the following steps.
 1. Explain and demonstrate (where applicable) the task to the client.
 2. Check the client has understood the task and provide an opportunity to ask questions.
 3. Identify the required anatomical landmarks for the limb being measured, using visual inspection and gentle palpation.
 4. Inform the client which movement will be measured and demonstrate the movement.
 5. With the client in standing, position the clients arm in the required starting posture for the required measurement using verbal instruction and if required, manual guidance.
 6. Ask the client to copy the movement on their unaffected limb first (if relevant).
 7. Instruct the client to perform the movement on the limb to be measured and observe performance. See Learning resource.
 8. Using the anatomical landmarks, accurately place the goniometer and record the measurement.
 9. Instruct the client to return the limb to their side.
 10. Repeat steps 1-9 for each of the required shoulder measurements.
- During the task:

- provide feedback and correct errors in the performance of the task including:
 - the client does not perform the movement in the required plane as per the delegation instruction. Provide verbal or gentle manual guidance e.g. for pure abduction “keep moving straight out to the side, don’t let your arm come forward”.
 - the client elevates their shoulder complex in an attempt to elevate the arm higher. This is often called “hitching” and can be observed as the top of the shoulder moving upwards towards the ear. Provide verbal and/or gentle manual guidance to “keep the shoulder down and just move your arm”. Record the measurement that the client can perform without hitching.
 - the client moves their trunk during the task in attempt to increase the movement range. This may include trunk side bending to increase shoulder abduction, trunk extension to increase shoulder flexion, or trunk twisting to increase rotation. Provide verbal and/or gentle manual guidance “keep tall, don’t move your trunk”.
 - if full range of movement is not observed, ask the client what is stopping them from moving further. It is not uncommon for clients to prematurely stop at their functional range and continue further into the movement once prompted. If the client indicates a limitation e.g. pain, giving way, clunking, previous injury, record the measurement and note the limitation in the documentation.
- 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:
 - shoulder measured and side/s on which the measurement was taken i.e. left and/or right.
 - the range of motion as measured with the goniometer for each delegated movement e.g. flexion, extension, abduction, etc.
 - any abnormal movement patterns or errors, including any limiting factors such as pain, stiffness or fear of movement.
 - if relevant, the difference between measures e.g. start/end of a treatment session, difference to the unaffected side or pre-morbid baseline measure.

7. Report to the delegating health professional

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

References and supporting documents

- Norkin, C. & White, D. (2017). Upper Extremity Testing. In Measurement of Joint Motion: A guide to goniometry (pp. 115-186). Philadelphia, PA. F.A. Davis Company.
- 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

Assessment: performance criteria checklist

D-NM04: Measure active range of motion of the shoulder using a goniometer

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 goniometer and recording sheet. | | | |
| 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) Accurately identifies the required anatomical landmarks on the limb being measured, using visual inspection and gentle palpation. c) Informs the client which movement will be measured and correctly demonstrates each movement. d) Instructs the client to perform the movement and observes performance. e) At the end of range, uses the anatomical landmarks to accurately place the goniometer and note the measurement. f) Instructs the client to return the limb to a neutral and comfortable position. g) Records the measurement. h) Repeats steps b) to h) for each of the required measurements. | | | |

| | | | |
|---|--|--|--|
| i) During the task, maintains a safe clinical environment and manages risks appropriately. | | | |
| j) 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. | | | |

Shoulder measurements that the AHA has been trained and assessed as competent to deliver

The allied health assistant has been trained and assessed as competent in the following shoulder measurements using a goniometer in standing:

- Flexion
- Extension
- Abduction
- Internal rotation
- External rotation

Comments on the local service model

The AHA has been trained and assessed as competent to deliver the following shoulder measurements (list additional measures, including reference to testing protocol or variations from CTI task procedure):

Comments

Record of assessment competence:

| | | | |
|----------------|--|--------------------|--------------------------|
| Assessor name: | | Assessor position: | Competence achieved: / / |
|----------------|--|--------------------|--------------------------|

Scheduled review:

| | | |
|--------------|-----|--|
| Review date: | / / | |
|--------------|-----|--|

Measure active range of motion of the shoulder using a goniometer: Learning resource

There are multiple protocols available to measure range of motion. Variations include the bony landmarks used for measurement, body position (supine, sitting, standing) and starting position of the arm (neutral or angled). Services may also elect to include additional measurements e.g. horizontal abduction or extension, internal rotation via hand behind back, or external rotation in neutral in standing and/or external rotation at 90° abduction in supine.

The health service will determine the protocol to be used in the local setting. If a protocol is used that differs to that in the task procedure of this CTI, this should be recorded on the Performance Criteria Checklist, including the learning resource.

Required reading and viewing

- Dutton M. (2020). Orthopaedic examination, evaluation and intervention. Online Learning Centre. Principles of goniometry. Available at: http://highered.mheducation.com/sites/0071474013/student_view0/chapter8/goniometry.html
- Physiotutors (2015). Active range of motion: Shoulder. Available at <https://www.youtube.com/watch?v=cP4LLJie9kw>
- Shoulder (n.d.) Range of motion: Normal ROM and goniometry technique. Available at: <http://shouldercomplexgocatsnmu.weebly.com/range-of-motion.html>
- Surface anatomy of the shoulder. (n.d.) Available at: <http://media-cache-ec0.pinimg.com/736x/7b/6d/5b/7b6d5b870e33c4b43adf79e69ec21b91.jpg>

Optional viewing

- Lone Star College-Kingwood (2009). Goniometry for the Upper Extremity, Part 1. Available at: <https://www.youtube.com/watch?v=D5uywZB79HY>