S-MT09: Prescribe, train and review a manual wheelchair for short term use

Scope and objectives of clinical task

This CTI will enable the health professional to:

- determine the suitability of a client for short term use of a manual wheelchair, including physical capability to mobilise with a wheelchair, risk of pressure injury including the ability to pressure relieve, social supports available, environmental considerations, etc.,
- accurately measure, fit, and adjust the standard manual wheelchair and foam cushion for the client,
• train the client (and carer/s, facility staff if relevant) in the use of the prescribed manual wheelchair and foam cushion including safety checks, safety features, maintenance requirements, limitations and risks associated with use, environmental considerations,
• evaluate the benefits of and mitigate risks of the client using the prescribed manual wheelchair and foam cushion.

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 patient manual handling training including competence in the use of walk belts and assisting clients into standing from lying or sitting.
• Complete the following CTIs or demonstrate equivalent professional competence in:
  - CTI S-MT07: Standing transfer assessment
  - CTI S-MT01: Functional walking assessment
  - CTI S-MT02: Prescribe, train and review of walking aids
• A manual wheelchair prescribing course can provide the knowledge content required e.g. training opportunities provided by Medical Aids Subsidy Scheme (see MASS annual training calendar available via email: MASS-Education@health.qld.gov.au). Equivalent learning may be obtained through readings/independent study of resources and training with the lead profession.

Clinical knowledge

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

• the rationale, benefits, risks and limitations of manual wheelchair use, including changes to functional mobility, risk of pressure areas, cardiovascular fitness changes, psychosocial, etc.,
• client and environmental considerations that support appropriate wheelchair prescription and use,
• of process to fit, adjust and assess a manual wheelchair to meet the clients’ needs,
• of accessories, safety features, maintenance requirements and safe use of manual wheelchairs,
• the use of wheelchair foam cushions to support comfort, risks with use, maintenance requirements,
• of requirements to accurately record wheelchair and foam cushion dimensions to meet local equipment hire/purchase processes and schemes,
• equipment hire/purchase and transport protocols and schemes relevant to local service setting including Department of Veteran Affairs, Medical Aids Subsidy Scheme, National Disability Insurance Scheme.

The knowledge requirements will be met by the following activities:

• undertake wheelchair prescription course as above (if available/appropriate for the service setting),
• review the Learning Resource,
• receive instruction from the lead health professional in training phase,
• read and discuss the following references/resources with the lead health professional at the commencement of the training phase local:
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:
  - objectively assess and determine the risk of developing a pressure injury using local procedures, guidelines and/or processes,
  - provide general advice and education regarding reducing the risk of pressure injury,
  - identify changes in client mobility/function including required transfer methods.

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**

- The client is medically stable and there is no medical prohibition to using a manual wheelchair e.g. the medical record indicates that the client can sit in a wheelchair, propel a wheelchair (if relevant) and vital signs are within expected limits, or the client is living in the community and is not acutely unwell. 
  AND EITHER
- The client is able to walk short distances with/without a walking aid and the purpose of the wheelchair is as a supplementary mobility aid e.g. to improve access to the community with family. This may be due to fatigue, shortness of breath, pain, safety, perception, etc.,
  OR
- During a period of incapacitation where the duration of wheelchair use is expected to be short i.e.<3 months. For example the client may have a lower limb fracture or short term physical restriction due to lacerations to the feet/legs AND the client will not be sitting in the wheelchair for prolonged periods.

**Limitations**

- The wheelchair will be required for long term use i.e.> 3 months, or will be the client’s primary means of mobilisation. This will require more complex prescription including a pressure-relieving device.
- The client requires more than one assist to transfer, uses a hoist or a method of transfer for which the skill share-trained health professional is not competent.
- The client has bilateral surgical restrictions that limit their ability to stand transfer e.g. weight bearing or range of motion limitations, etc. The client should be reviewed by a health professional with expertise in slide board transfers as part of assessing the suitability for a standard manual wheelchair. This method
of transfer has knowledge requirements and risks not addressed in this CTI e.g. transfer technique training, potential for skin shear injury.

- The client is unable to sit upright without support. This may be due to medical/surgical restrictions, poor trunk/head control, structural deformity, contractures, spasticity, vestibular problems, uncontrolled hypotension e.g. head injury, spinal cord injury, motor neurone disease, cerebral palsy, etc.
- The client demonstrates poor sitting balance when reaching outside of the base of support. This may include actual or near loss of balance when reaching out to the side, in front, above head or towards the ground or an inability to return the trunk to a neutral upright position. This may be due to reduced muscle strength, involuntary movements, vestibular issues, visuospatial perceptual problems, etc.
- The client has pressure areas or is likely to develop a pressure area due to poor skin integrity, peripheral neuropathy, inability to attend to pressure area advice, malnutrition, incontinence, etc. This is determined by using clinical judgement and objective risk assessment tool as per the local procedures e.g. Waterlow score 10+ “At risk”.
- The client is unable to manually reposition themselves once seated in the wheelchair and/or demonstrate that they are able to lift/clear their bottom off the seat. This may be due to poor upper limb strength or length, upper limb weight bearing restrictions, reduced upper limb range of motion, etc.
- The client lacks adequate upper limb strength to grip and propel the tyres clockwise and anti-clockwise or engage the brakes and the client will be required to manually propel the wheelchair. This CTI may be appropriate if the client will always have an attendant to propel the wheelchair when the wheelchair is in use.
- The client demonstrates or is known to have reduced/ absent sensation and/or proprioception in the upper limbs and is planning to self-propel the wheelchair. This CTI may be appropriate if the client will always have an attendant to propel the wheelchair when in use.
- The client has a medical history that includes cardiorespiratory problems that limit exercise tolerance or exertion is known to initiate or exacerbate symptoms e.g. angina, bronchiectasis, COPD, lung cancer, is oxygen dependant, etc. and is planning to self-propel the wheelchair. This CTI may be appropriate if the client will always have an attendant to propel the wheelchair when in use.
- The client is disorientated, confused or has a significant cognitive impairment. The client demonstrates or is known to be unable to follow instructions for safety, including remaining seated in the wheelchair, or keeping feet on footplates, etc.
- The client requires a specialised or custom wheelchair due to:
  - being unable to sit upright,
  - complex medical, orthopaedic or neurological requirements for which standard accessories are unsuitable. Examples of non-standard modifications include amputee brackets, stump supports, elevating leg rests, height adjustable or modified armrests or ventilator/oxygen mountings,
  - body shape or weight considerations. Examples include non-basic backrest to accommodate shallow/deep curve, additional tension straps for postural asymmetry, bariatric chair, etc.,
  - preferences/requests for wheelchair use e.g. beach/rough terrain, sporting, etc.,
  - the client’s living environment is inappropriate for wheelchair use e.g. lacks circulation space requirements for a manual wheelchair, ramps are unavailable to access the area, transport options for wheelchair users are not available, etc.,
The client does not consent to using a manual wheelchair and/or would like to consider other mobility aids that the health professional has not been trained to assess for and prescribe e.g. walking aids (4WW, hopper frame, crutches), motorised wheelchairs and/or scooters.

### 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:

- Shoes should be worn as the client will be required to transfer to and from the wheelchair. Shoes should be enclosed, well-fitting and with good traction.
- If the client is self-propelling the wheelchair check hand skin for any trauma (abrasions, redness, wounds) before, during and after the task. If issues arise during the task, assess and correct propulsion technique and if unable to easily resolve, cease manual propulsion. If problems relate to skin integrity on the hands, consider a trial of standard cycling gloves, cotton gloves with non-slip dots or wheelchair gloves, if available. Monitor carefully for skin problems with any further trials and if unable to resolve, consult a health professional with expertise in wheelchair prescription.

#### Equipment, aids and appliances

- Wheelchair and foam cushion (if relevant) have been checked for maintenance and safety including safe working load as per manufacturers guidelines.
- Wheelchair brakes should be engaged when the wheelchair chair is not in use and re-checked prior to the client performing a transfer on/off the wheelchair.

#### Environment

- To accurately measure for fit the client is required to sit in a supportive chair with a removable back/arm rest or on a firm surface e.g. plinth, that allows access to their back/lower limbs with adequate space for the health professional to move around whilst maintaining safety.

### Performance of Clinical Task

#### 1. Preparation

- Perform safety check on loan or trial wheelchair(s)
- Check client’s shoes are on and appropriate.

#### 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 supportive chair. During the measurement stage, sitting comfortably in a supportive chair with a removable back/arm rests or on a plinth. Feet flat on the floor or supported on a box,
• seated in the wheelchair while testing fit.

The health professional’s position during the task should be:
• sitting or standing to the side or in front of the client,
• variable whilst taking measurements.

4. Task procedure

• The task comprises the following steps:
  1. Determine the client’s current mobility requirements and functional ability using the case notes, observation and subjective assessment. Refer to the Learning Resource (Process for conducting a standard manual wheelchair prescription Section 1 & 2, p. 21), and the indications and limitations section above.
  2. Assess whether a standard manual wheelchair is suitable as a mobility aid for the client considering the client’s requirements, physical capacity, standard wheelchair features, cost, carer assistance available, environment, maintenance expectations, etc. If not appropriate for a manual wheelchair, cease the task and develop a plan for ongoing management. This may include referral to a health professional with expertise in wheelchair prescription, and providing information to the client and carers on the criteria for prescribing a manual wheelchair or other mobility/transport options available/appropriate in the short term, etc.
  3. Conduct a pressure area risk assessment using local tools/protocols/processes, including skin assessment and method for determining the risk of developing a pressure area. From the outcome determine the client’s suitability for a standard wheelchair prescription, and if a pressure relieving device is required. If the client requires a pressure relieving device liaise with a health professional with expertise in pressure relieving devices.
  4. Discuss use of a foam cushion with the client, including purpose, maintenance requirements and associated costs Refer to the Learning Resource (Prescribe, fit and supply of a foam cushion for use with a standard wheelchair for comfort, p. 17).
  5. Educate the client and/or carer(s) regarding manual wheelchair use, maintenance requirements, limitations, costs, etc. Seek informed consent to progress to prescription including acceptance of any associated co-payments, required maintenance/repair commitment contracts etc.
  6. Measure the client for a manual wheelchair and foam cushion (if relevant) record measurements on the local recording template or medical record.
  7. Locate a similarly sized wheelchair (and foam cushion) for trial. This may require a follow up appointment to complete the task.
  8. Seat the client in the trial wheelchair (with the cushion). Adjust the chair and/or script to reflect any required modifications.
9. Observe the fit including monitoring for areas of potential pressure, bunching, shearing/gas, make any required adjustments. Subjectively review the client’s comfort in the chair (and foam cushion) including prompting the client to identify areas of tingling, numbness, pain, pressure, discomfort, or heat and noting any potential causes related to fit.

10. Evaluate the client’s risk of pressure injury using the local processes/procedures/forms. If the client is at risk of pressure injury cease the task and liaise with a health professional with expertise in the task.

11. Educate the client (and or carer/s) on the use, features and safe operation of the manual wheelchair (and foam cushion) and the risk and prevention of pressure injury.

12. Assess the client and/or carer giver for basic safe use of the manual wheelchair (see Learning Resource, required reading Kirby et al Table 2: WSP 4.3 List of Individual skills, p. 19-20). If safety issues are evident assess if these are related to:
   - the wheelchair e.g. seating depth inadequate, seat back too low/high etc., or
   - the client e.g. impulsive/risk taking behaviour, requires further education/supervision/ assistance, etc. or
   - the environment e.g. narrow door-ways, confined bathroom space, etc.

13. From the observation and assessment of fit, pressure risk and trial use, determine if the standard wheelchair prescription and foam cushion is appropriate. If so, complete the scripting process making any required adjustments as per local service requirements. If a manual wheelchair is not appropriate, cease the task and develop a plan for ongoing management. This may include referral to a health professional with expertise in wheelchair prescription/home modifications, providing information to the client and carers on the criteria for prescribing a manual wheelchair and other mobility/transport options available/appropriate in the short term, or implementing a wheelchair training program, etc.

14. When the scripted wheelchair (and foam cushion) is available, seat the client in the wheelchair (with the foam cushion in place), make any required adjustments for fit and repeat steps 8 -10.

15. Review the client (and carer if relevant) for safe use of the wheelchair in the required environment(s). If safety risks are identified develop a plan for ongoing management including delaying the provision of the prescribed wheelchair, implementing a wheelchair training program, or referral to a health professional with expertise in home modifications, etc.

16. Educate the client/care(s) to safety features, use of accessories and the maintenance requirements for their chair, transportation of the wheelchair (car/maxi taxi), risk and prevention of pressure injury. Check for understanding and clarify any issues or concerns.

5. Monitoring performance and tolerance during the task

Common errors and compensation strategies to be monitored and corrected during task include:

- During measurement:
  - monitor the client’s posture (trunk and foot position) during measurement to ensure relaxed sitting is maintained. Prompt the client if required.
  - measure both lower limbs in case of leg length discrepancy.

- Transfer difficulties:
  - check the wheelchair brakes are engaged when the wheelchair is stationary and prior to transfers. Check the ‘swing away’ features (arm/leg rests) are used to aid the transfer movement.
  - check the profile/height of the cushion as this may have resulted in an overall height increase for the wheelchair. Consider changing the profile/height of the cushion.

- Wheelchair fit and function:
The client is sliding forward in the wheelchair seat. Potential causes include:

- The client’s feet are not supported by the foot plates. Adjust the foot rests to ensure contact with the feet.
- Posterior tilt of pelvis - “natural or couch sitting”. Over time people will migrate from upright sitting to a “natural or couch sitting” position. Encourage the client (or carer) to monitor and reposition regularly.
- Cushion slippage. See cushion fit and function below.

- Propulsion techniques.
  - Client lifts their hands above the push rim during the recovery phase. This should be discouraged due to the increase strain on the glenohumeral joint. See learning resource for correct propulsion technique. If not resolved consult a health professional with expertise in wheelchair prescription.
  - Excessive forward trunk movement during initial propulsion. This is tolerated for stationary starts until momentum increases i.e. <5 pushes, or when self-propelling up a hill/kerb. If posture remains persistent review the propulsion technique, upper limb strength, cardiovascular fitness and wheelchair for suitability (weight, dimensions). If not resolved consult a health professional with expertise in wheelchair prescription.
  - Excessive forward trunk movement during propulsion or a short propulsion technique. This is apparent with clients who have short arms compared to trunk length and/or are seated too high. Review the propulsion technique with a lower profile cushion. If not resolved consult a health professional with expertise in wheelchair prescription.
  - Increased shoulder extension and increased elbow flexion during propulsion. This is apparent for clients who have long arms compared to trunk length and are seated too low. Review the propulsion technique with a higher profile cushion. If not resolved consult a health professional with expertise in wheelchair prescription.
  - Client fatigue, breathlessness or similar symptoms whilst self-propelling the wheelchair. Self-propelling a wheelchair increases the load on the cardiovascular system. Clients can fatigue quicker than during non-wheelchair mobility. Fatigue management strategies should be considered, including carer/aid pushing the chair for longer distances/up ramps, encouraging rest breaks/timetabling of activities, etc. Using attendant propulsion at all times or a motorised wheelchair or scooter may need to be considered if fatigue or cardiovascular stress is significant. For a motorised wheelchair or scooter refer to the limitations section of this CTI.
  - Hands slip on push rims, or skin can become inflamed due to an increase friction. This may be due to client strength, skin integrity or incorrect propulsion technique e.g. pushing on tyre tread. Check propulsion technique. Monitor for adverse reactions and implement appropriate mitigation strategies as outlined in “Safety and quality” section above.

- Cushion fit and function:
  - Cushion appears to be bunched. Check the cushion is appropriate for the size of the chair. Check that the client has not replaced/sourced an inappropriate cushion e.g. lounge cushion, bedroom pillow, etc.
  - There are gaps around the perimeter of the cushion i.e. between the cushion and the chair. Check the cushion is appropriately sized for the chair. Do not place items i.e. towels/clothing etc. between the cushion and the chair as this increases the risk of pressure injury.
  - Excessive movement of the cushion on the wheelchair. Check the cushion fitted is appropriately sized for the chair. If slippage persists test the shear between the cushion fabric and the wheelchair seat. If slippage is apparent place non-slip matting between the two surfaces. Ensure the non-slip mat is cut to the size of the foam cushion.
- General
  - The client reports tingling/numbness, discomfort or pain during the trial. Ask the client to sit on another surface e.g. chair, plinth, side of bed. If symptoms resolve determine the site of discomfort and perform a visual inspection of the seating surface and the skin. Check that the seating surface does not have any rough/sharp sections, is not coming into contact with a support bar, etc. Observe clients skin for redness, abrasion, blanching etc. If seat is appropriate and skin is intact, wait 10 minutes and repeat steps 8 and 9. If symptoms return liaise with a health professional with expertise in this task. If symptoms do not resolve immediately and/or the skin is not intact, cease the task, refer to the medical team and discuss with a health professional with expertise in the task.

6. Progression

- Task progression strategies include:
  - If no adverse symptoms occur, review the client's wheelchair mobility requirements (as per learning resource - Guide to conducting a wheelchair mobility history) and intermediate skill levels required (see learning resource required reading Kirby et al, Table 2: Wheelchair Skills Program Version 4.3, List of Individual Skills p.19-20). The trial may include similar (or simulated) environments to those required by the client in their home/work setting e.g. outside, bathroom, busy corridors, kitchen, around corners, through doorways, different floor surfaces, gutters, grassed areas, transporting items, etc. At all times observe, respond to and note any changes in the amount of assistance/supervision required.
    Note: this may occur over multiples occasions of service and as part of a wheelchair training program.
  - Determine the timeframes for review considering changes to goals, health status, environment, etc. For example, surgical instructions for non-weight bearing restriction for six weeks then progress to partial weight bearing with walking aid.

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
- The skill shared task should be identified in the documentation as “delivered by skill shared-trained (insert profession) implementing CTI-S:MT09 Prescribe, train and review a manual wheelchair for short term use ” (or similar wording)

References and supporting documents

- Local procedures/processes and guidelines regarding:
  - equipment hire/purchase protocols/processes/schemes and prescription forms,
  - transport schemes,
  - pressure assessment and management.

**Assessment: Performance Criteria Checklist**

**CTI S-MT09: Prescribe, train and review a manual wheelchair for short term use**

<table>
<thead>
<tr>
<th>Performance Criteria</th>
<th>Knowledge acquired</th>
<th>Supervised task practice</th>
<th>Competency assessment</th>
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- Demonstrates knowledge of fundamental concepts required to undertake the task through observed performance and the clinical reasoning record.

- 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 a safety check on loan or trial wheelchair(s) and clients shoes.

- 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) Uses information collected regarding the client's current mobility requirements and physical assessment to determine suitability for standard manual wheelchair and foam cushion.
  
  c) Assesses the clients risk of pressure injury.
  
  d) Determine the clients suitability for a standard wheelchair prescription +/- foam cushion.
  
  e) Educates client and/or carer(s) regarding manual wheelchairs +/- foam cushion, including requirements for scripting and purchase.
  
  f) Accurately measures the client for a manual wheelchair +/- foam cushion and records measurements on the local recording template.
  
  g) Selects a suitable wheelchair +/- foam cushion for trial, including providing education to the client (and or carer/s) to features and safe operation/features.
  
  h) Checks the clients fit to the wheelchair +/- foam cushion. Adjusting the chair and/or script to reflect any required modifications.
  
  i) Assesses the client for basic safe use of the wheelchair. If safety issues arise assess and determines the cause,
### Performance Criteria

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<th>Knowledge acquired</th>
<th>Supervised task practice</th>
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<td>j)</td>
<td>Completes the scripting process, as appropriate.</td>
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<td>k)</td>
<td>Fits the prescribed wheelchair +/- foam cushion to the client, making any required adjustments.</td>
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<td>l)</td>
<td>Ensures the client (and or carer) can safely use the prescribed wheelchair, including education on maintenance, transport, etc. During task, maintains a safe clinical environment and manages risks appropriately</td>
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- Monitors for performance errors and provides appropriate correction, feedback and / or adapts task to improve effectiveness, in accordance with the clinical reasoning record.
- 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:

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### Record of assessment of competence

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<th>Assessor position:</th>
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### Scheduled review

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CTI S-MT09: Prescribe, train and review a manual wheelchair for short term use

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**

<table>
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<th>Name:</th>
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**Lead health professional (trainer)**

**Date this case was discussed in supervision:** / / 

**Outcome of supervision discussion**

| e.g. further training, progress to final competency assessment |

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Clinical Task Instruction - 14 -
Prescribe, train and review a manual wheelchair: Learning Resource

Required reading


Risk of pressure injury assessment

As part of this CTI the health professional must demonstrate skills or experience in:

- objective assessment of developing a pressure injury and
- provide general advice and education for reducing the risk of pressure injury by using the local procedures guidelines and/ or processes.

Each service are respondent to the NSQHS Standard 8 Preventing and managing pressure injuries. Further information is available from the Patient Safety and Quality Improvement Service – Pressure Injury Prevention Resources available at: http://qheps.health.qld.gov.au/psu/pip/resources.htm
Required viewing

- Snyman A (2011). Wheelchair prescription: taking measurements. Available at: https://www.slideshare.net/alma_snyman/measurements-for-prescription-of-wheelchair

Additional resources/optional reading


Example prescription and client education forms


Guide to conducting a wheelchair mobility history for short term use

Information regarding the client’s mobility history may be obtained from the client’s medical record and a face to face subjective examination. It involves determining the following:
• The client’s usual mobility - does the client normally mobilise with a walking aid? If yes, how long have they used a walking aid? how may walking aids does the client use? For example, does the client use the same walking aid indoors and outdoors? in the bathroom? on the stairs? What is the goal/primary purpose of providing a wheelchair? If not for short term use (<3 months), check limitations section.

• Is the client able to transfer on/off the wheelchair safely either independently or with minimal support? If no, check limitations section.

• Does the client have any upper limb limitations that would prevent self-propulsion, including reduced strength or range of movement in the hands, wrist, elbow or shoulders? If yes, will the client have a carer to propel them at all times when the wheelchair is in use? If no, discuss with a health professional with expertise in wheelchair prescription to determine suitability for a standard manual wheelchair.

• Does the client have any lower limb functional limitations that require consideration in the scripting process e.g. spasms, reduced range of motion, deformity etc. If yes, check limitations section.

• Does the client have any postural control issues in sitting or skeletal deformity? If yes, check limitations section.

• Will the client be able to use the wheelchair safely? This includes appropriate use of safety features and environments for use, maintenance requirements, transport of the wheelchair, etc. This may be with/without carer support. If no, discuss with a health professional with expertise in wheelchair prescription to determine suitability.

• Does the client have weight bearing restrictions? If yes, is the expected duration less than 3 months? If no, check the limitations section.

• Does the client have any continence issues that may affect the assessment? Does the client experience urgency, and if so, has this contributed to any previous or ‘near’ falls? Do they experience incontinent episodes? If yes re-evaluate the client’s risk of pressure areas.

• Does the client have any cognitive issues that may affect the assessment and appropriateness of wheelchair prescription e.g. wandering, aggression, difficulty following instructions, disorientation. If yes, check the limitations section.

• What functional tasks is the client required to perform whilst in the wheelchair e.g. carrying items, crossing roads, using ramps, etc.

• Has the client had any falls in the previous 12 months? Determine the number and cause of these falls e.g. slip, trip, hypotension, dizziness, visual disturbances, medications, urinary urgency etc. And if any injuries were sustained? Determine if the client has had a falls assessment. If no, discuss with a health professional with expertise in falls assessment.

• What is the client’s home environment and any other environment they frequently visit e.g. activities/hobbies/employment. Is the client planning on using the wheelchair in these environments? Do they require carer support in any of these environments? What is the circulation space in the planned environment (narrow/cluttered/size of turning area)? Can the wheelchair and/or carer circulate in these environments easily? If no, check the limitations section.

• If planning on accessing other environments how is the client planning to transport the wheelchair? Car/trailer? Confirm the carer is able to lift the chair. If unable, discuss the use of a maxi-taxi. If planning to use a maxi taxi, check wheelchair manufacturer’s guidelines on transportation.

• Is the client required to use stairs? How is the client planning to ascend/descend stairs? Where will the wheelchair be used? e.g. only downstairs, in the community etc. Discuss with a health professional with expertise in stair assessment.

• What are the client’s social circumstances and how do they relate to their mobility requirements e.g. lives with family or alone, support available from carer for mobility, functional tasks undertaken in the home or at work, method of accessing the community drive, taxi or bus?
# adapted from SMT01: Functional walking assessment – Learning resource: Guide to conducting a client's mobility history.

A sample recording form with prompts to assist is available in the following optional resource:


Note: this resource focuses on spinal cord injured clients. The information provided is useful for short term wheelchair prescription. It is recognised that spinal cord injured clients are outside the scope of this CTI.

**Prescribe, fit and supply of a foam cushion for use with a standard wheelchair for comfort**

A foam cushion for a standard wheelchair can be prescribed for comfort. The foam cushion is not a pressure relieving device. If pressure injury risk has been identified on assessment refer to the limitations section of this CTI.

The foam cushion has a removable washable cover and is designed to fit the wheelchair. Pillows, cushions from couches and foam from the hardware store do not fit the wheelchair correctly and pose a pressure injury risk. The foam cushion should be used in its own cover. Wrapping or covering the cushion with towels or sheets will increase the risk of pressure injury occurring. As cushions should be trialled prior to purchase, local infection control procedures and processes need to be adhered to i.e. cleaning between client use.

There are a range of foam wheelchair cushions available on the market. See the ILC Australia website for examples. As access and availability will be a consideration for the short term user, locating and understanding the range from the suppliers in the local service needs to occur as part of completing this CTI.

Consider the following when prescribing a standard foam cushion:

- How long will the user be using the cushion for? If the user is required to sit for more than 2 hrs in the chair pressure relieving seating cushions should be considered. See limitations section of this CTI.
- Which cushions from the available range fit the chair being prescribed? The cushion measurements should match the wheelchair seat measurements.
- Which cushions are available for hire and/or purchase. What is the cost to hire or purchase? Will the client be hiring or purchasing the cushion? And is the client happy to meet these costs or should an alternative be considered?
- Is the cushion available? In stock from the supplier? What is the timeframe for supply?
- Is the client accepting of the aesthetic appearance of the recommended foam cushion? For example, colour, size, etc.

What to do if the client presents with their own foam cushion for fitting.

- Check the fit to the wheelchair. If poorly fitting, inform the client, discussing the problems with ill-fitting cushions including risk of pressure injury, propulsion issues, etc.

### Table 1  Considerations in prescribing a standard manual wheelchair.

**Acknowledgement:** Mackay Hospital and Health Service

<table>
<thead>
<tr>
<th>PROMPT QUESTION</th>
<th>COMPONENT IMPLICATION</th>
<th>RATIONALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where is the wheelchair to be used primarily?</td>
<td>Wheel size – small vs large</td>
<td>Large rear wheels are easier for outside use</td>
</tr>
<tr>
<td>Inside vs outside</td>
<td>Type of tyre – solid vs rigid</td>
<td>Solid tyres are better for inside</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pneumatic tyres for outside as they absorb more of the movement</td>
</tr>
<tr>
<td>How long will the client be sitting in the chair?</td>
<td>Seat or cushion – sling vs cushion</td>
<td>If you are prescribing a cushion this must be factored into the height of the seat to the floor to ensure that the client is not seated too high in relation to the backrest and armrests. Refer to local pressure area risk procedures if the client is to sit in the chair for prolonged period of time and limitations section of this CTI.</td>
</tr>
<tr>
<td>Can the client relieve their own pressure while seated?</td>
<td>seat</td>
<td>Consider the need for a cushion with pressure relieving properties. Refer to limitations section of this CTI.</td>
</tr>
<tr>
<td>Will the client self-propel or be pushed?</td>
<td>Brakes</td>
<td>If the client is to be pushed the brake handles may need to be extended to the support person can put them on when standing behind the chair. Alternatively a set of supplementary brakes can be located on the push handles for the support person to use.</td>
</tr>
<tr>
<td></td>
<td>Push Ring</td>
<td>The client will need a ring mounted lateral to the wheel onto which their hands can be placed to push</td>
</tr>
<tr>
<td>What activities does the client need to do in the chair?</td>
<td>Tray</td>
<td>Client may choose to eat using their tray as a support surface. They may also engage in craft, leisure activities, use AAC devices or access a computer system via their tray.</td>
</tr>
<tr>
<td>Will the wheelchair be transported in the family car?</td>
<td>Frame: rigid vs folding</td>
<td>A folding frame is much easier to place in a car. However it does not offer the same amount of stability as a rigid frame. If the client is to be transported in a wheelchair accessible bus or taxi a rigid frame offers a stronger base on which the client is seated.</td>
</tr>
<tr>
<td></td>
<td>Arm rests – removable</td>
<td>Reduces the overall size of the chair and reduces the weight</td>
</tr>
<tr>
<td></td>
<td>Rear wheels – pop out</td>
<td>Can have pop out action – removal of the rear wheels reduces the overall size of the chair and reduces the weight</td>
</tr>
<tr>
<td></td>
<td>Footrest and hangers – removable</td>
<td>Reduces the overall size of the chair and reduces the weight</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The lighter the chair the less demand is placed on the carer placing the equipment into the car, however this</td>
</tr>
<tr>
<td>PROMPT QUESTION</td>
<td>COMPONENT IMPLICATION</td>
<td>RATIONALE</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Overall weight of chair</td>
<td>came compromise strength and durability</td>
<td></td>
</tr>
<tr>
<td>Will the client be doing a standing transfer?</td>
<td>Footplates – rigid vs flip up</td>
<td>Stops client standing on the footplate when transferring, reduces falls hazard</td>
</tr>
<tr>
<td></td>
<td>Hangers – rigid vs swing away</td>
<td>Gives a clear area for client’s feet to be placed on the ground.</td>
</tr>
<tr>
<td>How much does the client weigh?</td>
<td>Brand of chair</td>
<td>Each wheelchair has an upper safe working load limit. Comparative information weight limitations can be obtained from MASS website. The range of basic chairs vary in their upper limits from 100 to 170 kg. Chairs range in size depending up on the width and depth of the seat base, as well as the height of the backrest. Weight of client may also influence the measurement of the widest point at hips of thighs – width of chair Weight of client may also influence the measurement of the posterior of buttocks to back of knee – depth of chair Bone structure will also impact on these measurements.</td>
</tr>
<tr>
<td></td>
<td>Size of chair</td>
<td></td>
</tr>
<tr>
<td>What is the client’s height</td>
<td>Size of chair</td>
<td>The measurements of the clients height from seat to base of scapular, and back of knee to heel will determine the overall height of the frame</td>
</tr>
<tr>
<td>Is there any equipment required to be attached to the chair</td>
<td>Frame</td>
<td>Some clients require oxygen containers to be attached to the wheelchair or catheter bags are required. Intravenous poles may also be required.</td>
</tr>
<tr>
<td>What height is the person who will be pushing the client?</td>
<td>Push handles</td>
<td>Some manual wheelchair offer the option of extended or telescopic push handles. This enables them to be adjusted to a suitable height so the support person is not bending forward when they are pushing the client. This supports good back care principles and reduces fatigue for the carer.</td>
</tr>
<tr>
<td>Will the client be wearing shoes when seated in the chair</td>
<td>Height of seat</td>
<td>Shoes will add extra length to the measurement between the footplate to the top of the client’s seat. If not factored the clients knees will be too high and resulting reduction in contact with the surface of the seat cushion will mean an uneven distribution of weight along the thighs.</td>
</tr>
<tr>
<td>Will the client’s feet drift backwards off the footplates?</td>
<td>Footplates and hangers</td>
<td>A calf strap may be needed to be positioned on the hangers to prevent the feet drifting off the footplates backwards In some instances straps are attached to the footplates to maintain the foot position. However these require release every time the client engages in a transfer and can be problematic for support staff. If feet are having to be repositioned due to changes in the clients tone, rather than habitual, discuss with the OT or PT as a postural review may be indicated.</td>
</tr>
<tr>
<td>PROMPT QUESTION</td>
<td>COMPONENT IMPLICATION</td>
<td>RATIONALE</td>
</tr>
<tr>
<td>-----------------</td>
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<td>-----------</td>
</tr>
<tr>
<td>Is the client continent?</td>
<td>Seat/cushion</td>
<td>Does the client require a seat cushion that has washable covers and is a breathable fabric. Does the client require water repellent upholstery if this is due to incontinence, review the risk of pressure areas and the limitations section of this CTI.</td>
</tr>
<tr>
<td>Does the client slide forward at the hips when seated in the chair</td>
<td>Pelvic belt, Seat cushion</td>
<td>A pelvic strap/seat belt may reduce this pelvic drift. A slight increase in angle at the front of the seat cushion as opposed to the back of the cushion may assist. The client may require a complete seating review. Refer to the limitations section of this CTI.</td>
</tr>
<tr>
<td>Does the client require a side way transfer</td>
<td>Arm rests</td>
<td>Flip up armrests enable an easier side way transfer from the seat of the wheelchair onto another seat surface</td>
</tr>
<tr>
<td>What is the client’s function like when they are having an ‘off’ day.</td>
<td>All components</td>
<td>It is preferable that the wheelchair be prescribed to meet the needs of the client when they are least functional.</td>
</tr>
<tr>
<td>If the client has difficulty self-propelling with their hands and arms, could they use a combination of hand/foot within their own home.</td>
<td>Seat to floor height, Foot plates</td>
<td>Client will need to be able to touch the floor when seated. These may need to be easily removed or swung away if the feet are to be used for propulsion. However they need to be used when outside the home for protection of the feet on pavements and uneven ground. The height of the footplates still must allow clearance for the casters or else the angle at which they are positioned will require increasing.</td>
</tr>
</tbody>
</table>

The following resource provides general tips and indications/precautions to help decision making transition from assessment to intervention stages of the manual wheelchair prescription:

Process for conducting a standard manual wheelchair prescription

1. **Develop a client profile**
   - An interview is required to establish relevant medical, psychosocial, functional and environmental needs of the client as they relate to manual wheelchair prescription. See Guide to conducting a wheelchair mobility history for short term use (page 16).

2. **Physically assess the client**
   - Can the client transfer independently or with light assistance?
   - Can the client sit upright unsupported?
   - Can the client reach outside their base of support whilst in sitting? i.e. touch the ground, reach up, etc.
   - Can the client reposition/lift/clear their bottom off the seat?
   - Can the client follow instructions for safe use of the wheelchair?
   - Can the client self-propel the wheelchair? If no, will they have an attendant available to propel the wheelchair when it is in use?
   - Does the client have a pressure area? Or are they at risk of developing a pressure area?
   - Local procedures and processes are to be used to identify existing pressure injury. A risk assessment tool will help determine the degree of pressure injury risk subsequent to the client’s altered mobility status. The Waterlow scale is the most commonly used tool. A sample recording form for the Waterlow scale is available to view via the following link: Waterlow Pressure Ulcer Risk Assessment Tool. Sourced 17/02/2016 from [http://qheps.health.qld.gov.au/schsd/docs/form/clin/ot_wpurat.pdf](http://qheps.health.qld.gov.au/schsd/docs/form/clin/ot_wpurat.pdf).

3. **Measurement of the client**
   - Accurate measurement of the client’s dimensions will assist with appropriate manual wheelchair selection using the local recording form.

4. **Translating information to wheelchair specifications**
   - The information gathered from the client profile, physical assessment, skin inspection and measurement of dimensions is used to establish the suitable manual wheelchair options. The skill share AHP is required to complete clinical reasoning to determine an appropriate manual wheelchair prescription. The Guide to Clinical Reasoning will assist.

5. **Prescribing manual wheelchair**
   - The skill share-trained health professional will be required to consider local HHS processes regarding sourcing of manual wheelchair, this may include using an equipment loan pool, advising on local equipment suppliers to purchase/hire etc.
6. Prescribing a foam cushion for comfort

- The skill share-trained health professional will be required to consider local HHS processes regarding attainment of a foam wheelchair cushion, this may include sourcing from equipment loan pool, advising on local equipment suppliers to purchase/hire etc.

7. Pressure care considerations

- The skill share-trained health professional will need to advise the client and/or carer/s regarding pressure care needs and associated risks based on the client’s risk assessment. This may include advice and education regarding pressure relieving techniques (i.e. regular changing of position, avoiding shearing, managing incontinence, skin monitoring, reducing fabric creases/folds on the sitting surface etc.). Referral to a health professional with expertise in wheelchair prescription and pressure care will be required if the client is at risk of a pressure area and/or requires a prescription for a pressure relieving cushion.

8. Client/carer education and training for safe operation of the manual wheelchair

- The client (and carer/services if relevant) will require education and training in the safe operation of the prescribed manual wheelchair. This will include transport of the chair in a vehicle, safe stair and gradient negotiation, use of brakes and propulsion, hygiene and maintenance, consideration of hazards (i.e. traffic, obstacles etc.). This education and training must be completed prior to final prescription in order to ensure client safety, including observation of performance as required.
- In the context of this CTI, following prescription and trial of basic manual wheelchair for short term use by the skill share trained health professional there is nil further action required if the prescription and trial was successful as determined by client report and observation of client performance. In the event the prescription and trial of basic manual wheelchair for short term use was unsuccessful or it is deemed the client would benefit from further assessment or intervention, the skill share trained health professional is to liaise with the lead practitioner to develop an ongoing care plan for the client.