Motorised Mobility Device use:

Demystifying the Occupational Therapy Clinical Process

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VICTORIA State Government | Department of Transport

ACKNOWLEDGEMENT OF COUNTRY

In the spirit of reconciliation, we acknowledge the Traditional Custodians of country throughout Australia and their connections to land, sea and community.

We pay our respects to their elders, past, present and emerging and extend that respect to all Aboriginal and Torres Strait Islander peoples joining our event today.



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OUR PRESENTERS

Dr Marilyn Di Stefano, Occupational Therapist,

Senior Policy Advisor, Department of Transport



Kathryn Townsend, Occupational Therapist



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WELCOME

Learning objectives

- Gain knowledge about important **road safety and clinical considerations** relating to the use of MMDs
- Develop an understanding of how to apply the **MMD clinical pathway** and use consumer and clinical **resources** to support consistent evidence-based practice & effective communication



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ATTENDEES

- 93% occupational therapists
- 66% members of OT Australia
- 70% currently work in the area of MMD assessment and training

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OVERVIEW

MMDs include powered wheelchairs and mobility scooters

- Project background
- MMD user needs and safety risks
- Clinical pathway for MMD assessment, recommendations and training
- Consumer and clinical resources presented within the context of a Case Study
- Take home messages
- Q&A



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PROJECT BACKGROUND

- Project context
- Stakeholder engagement – health, disability, consumer, professional, transport, enforcement, funding, industry
- Survey of OTs
- Review of current consumer resources
- Development of clinical pathway
- Partnership with OT Australia

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Understanding MMD user needs & safety risks

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User demographics and experience

ACCC Survey 2012

- **Age:** Around half users < 60 years (ACCC 2012)
- **Location:** 50% users live outside capital cities
- **Prevalence:** In 2012 - 13 in 1,000 adults used a mobility scooter or powered wheelchair (≈ 230,000 nationally); approximately 12,000 new scooters purchased annually in Australia (ATSA, 2019)
- **Benefits:** High value placed on user independence, social participation and quality of life
- **Risks:** injuries, reduced physical activity



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MMD incidents, injuries and deaths



Australian Government
Australian Institute of Health and Welfare

infocus

Flinders University

Mobility scooter-related injuries and deaths

Published May 2019

A person's mobility is closely linked to health status and quality of life (Webber et al. 2010). **Mobility scooters are increasingly seen as a lifeline toward independence and emotional wellbeing, particularly for older Australians** (ACCC et al. 2012).

Despite media attention and community discussion about the risks and benefits of mobility scooter use, there are few substantial evidence-based reviews of these largely unregulated consumer products.

Recent publications from Australia and elsewhere have generally focused on mobility scooter uptake, safety, training, design issues, and health benefits (Jancey et al. 2013; Johnson et al. 2013; Nitz 2008; Zagol & Krasuski 2010), with limited focus on mobility scooter-related injuries and deaths (Edwards & McCluskey 2010; Kitching et al. 2015; Mortensen & Kim 2016).

This report aims to help fill this data gap. It provides an overview of mobility scooter-related injuries, including pedestrians injured in a collision with a mobility scooter, and falls that were most likely from a mobility scooter and ended in a hospital admission. These data are for the 5 years from 1 July 2011 to 30 June 2016. It also provides information on mobility scooter-related deaths in Australians aged 60 and over for 10 years from 1 July 2006 to 30 June 2016, using data from the National Coronial Information System (NCIS).

Over the **5 years** from 2011–12 to 2015–2016, **4,613** people were admitted to hospital for a possible mobility scooter-related injury

Most injuries were **fall-related** (97%); the rest were pedestrians injured in a collision with a mobility scooter (3%)

Over the 10 years from 2006–07 to 2015–16, **69** people aged 60 and over died from a mobility scooter-related incident

Mobility scooter-related deaths were most likely to occur when the person was **crossing the road** (45%)

Compared with a decade earlier, fall injuries most likely from a mobility scooter rose for older Australians, from about 200 to about **500** per year

AIHW Stronger evidence, better decisions, improved health and welfare

Deaths:

- Most in 80-89 group and among those in poor health
- ~7- 8 per year nationally
- Most as a result of vehicle interactions/crossing road context (AIHW 2019)

Injuries:

- 4,613 hospital admissions/year nationally (2011-16)
- ~55% over 60 years (AIHW 2019)

Incidents:

- Common (self-reported surveys) and include collisions, tripping, fall in/out, minor injuries
- 5% trips result in incidents causing injury (ACCC 2012)
- 12% reported feeling unsafe on their scooters (ACCC 2012)

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Factors contributing to incidents

ENGINEERING (Device):

- Mechanical (motor, brakes)
- Frame
- Electrical/electronic

ENVIRONMENT:

- Inclines, ramps and curb cuts
- Change in surface
- Driveways
- Street, pavement issues

USER:

- Knowledge and skills
- Capacity (eye sight, physical capacity, cognitive capacity)
- Vulnerabilities, frailty

SYSTEM:

- Inappropriate device recommendations
- Inadequate training
- Inadequate maintenance
- Inadequate health professional input and lack of monitoring

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Interventions to improve safety





Limited evidence points to potential benefits of:

- OT assessment of user suitability
- Clinical guidelines to support / standardise prescription of MMDs
- Consumer/user education e.g. purchasing decisions, safe operation, public transport use, maintenance
- Practical training of MMD users in a range of environments

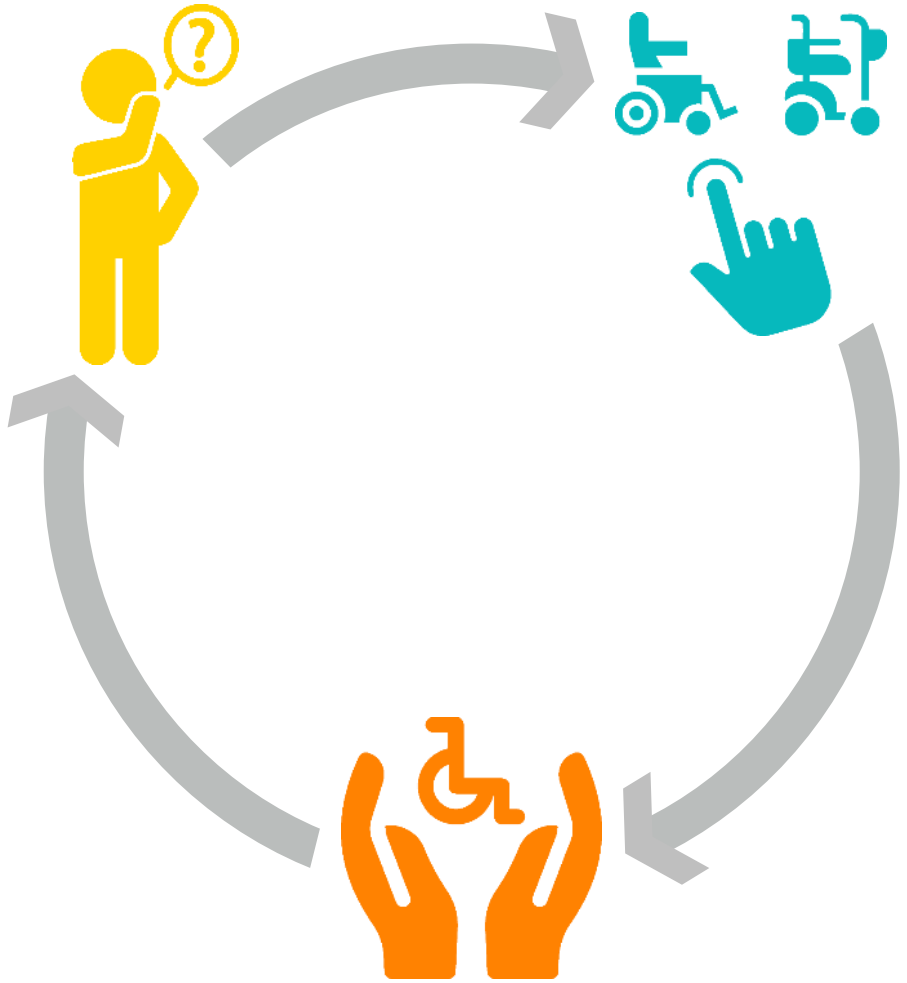
No quick summary/critique of MMD assessment tools

No toolkit to support clinical pathway/communication

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Guiding principles

Initial suitability



Choosing the right device

Education & training regarding safe use

Guiding principles – in practice

Is an MMD right for me?

Personal pre-requisites required to operate safely, consistently

Changing needs over time, different environments, etc.

Legislation: Users considered pedestrians when using compliant devices on road/footpaths



How do I use an MMD safely?

TASK requirements:

Skill development & retainment relevant to environment of use, indoor/outdoor, weather, surrounding hazards

How do I choose the right device?

Environment of use: indoors, outdoors, traffic, road infrastructure, public transport

Device care: Portability, storage, charging, carer inputs, maintenance

Device design: ACCC, Therapeutic devices require health professional input re matching device to the user, speed, weight, features/ constraints

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Touchpoints for MMD users

Family/ Carer

OTs

GPs

Funders

Suppliers

MMD USER



VicRoads

Transport operators

Municipal Councils

Victoria Police

Disability advocacy groups

RACV

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Clinical pathway & resources

Kathryn Townsend

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OT Resource

- Developed in conjunction with Austin Health and OTA
- Sets out a clinical pathway
- Refers to clinical guidelines and tools to inform evidence-based practice
- Provides clinical tools to support pathway steps
- Links to VicRoads consumer resources
- Links to other useful resources including funders and assistive technology supports



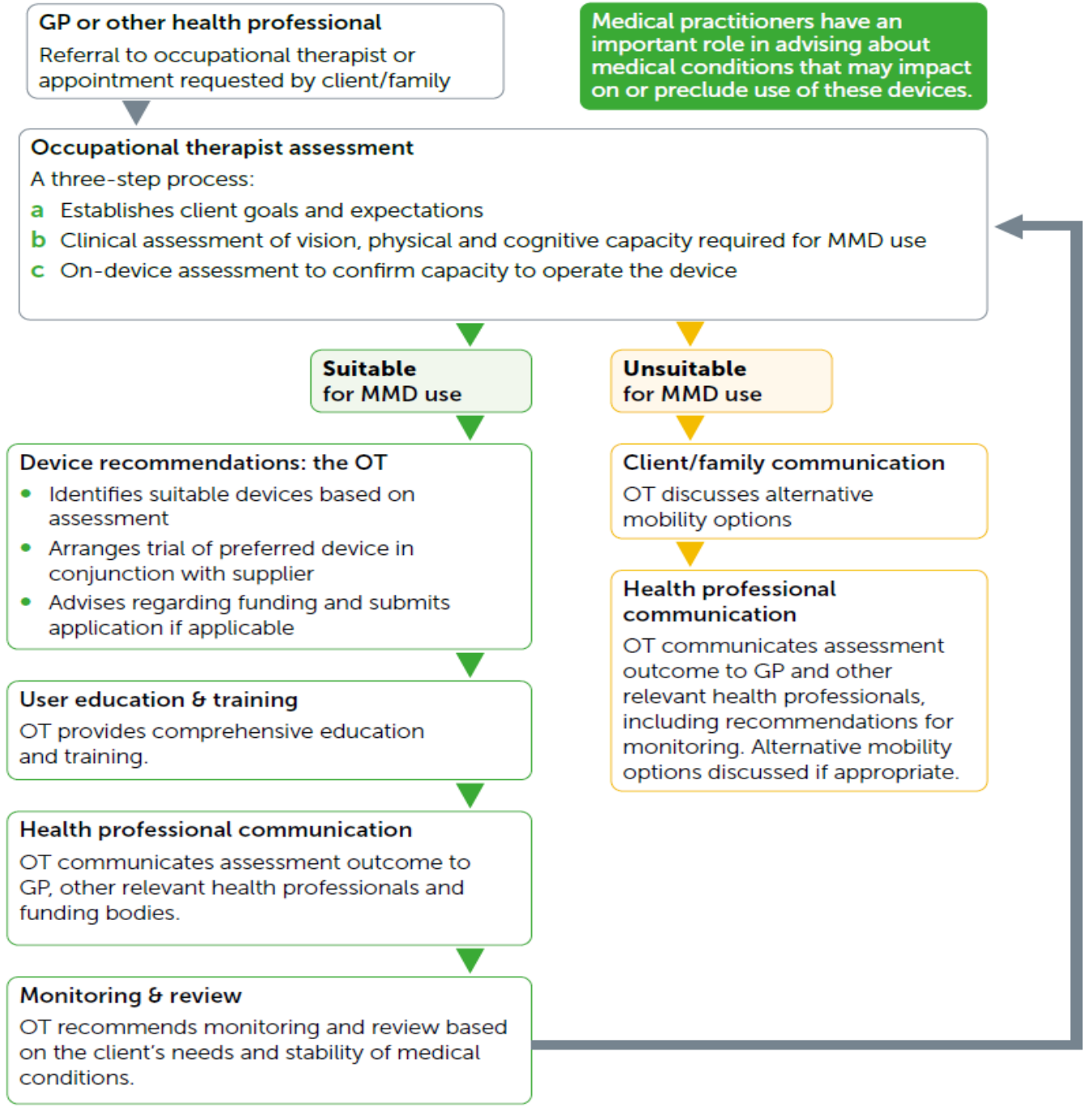
https://otaus.com.au/practice-support/areas-of-practice/motorised-mobility-devices

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Clinical Pathway

This clinical pathway and supporting tools reflect a best practice approach to MMD assessment and training

- Referral
- Assessment
- Device recommendations
- Education and training
- Communication
- Monitoring and review



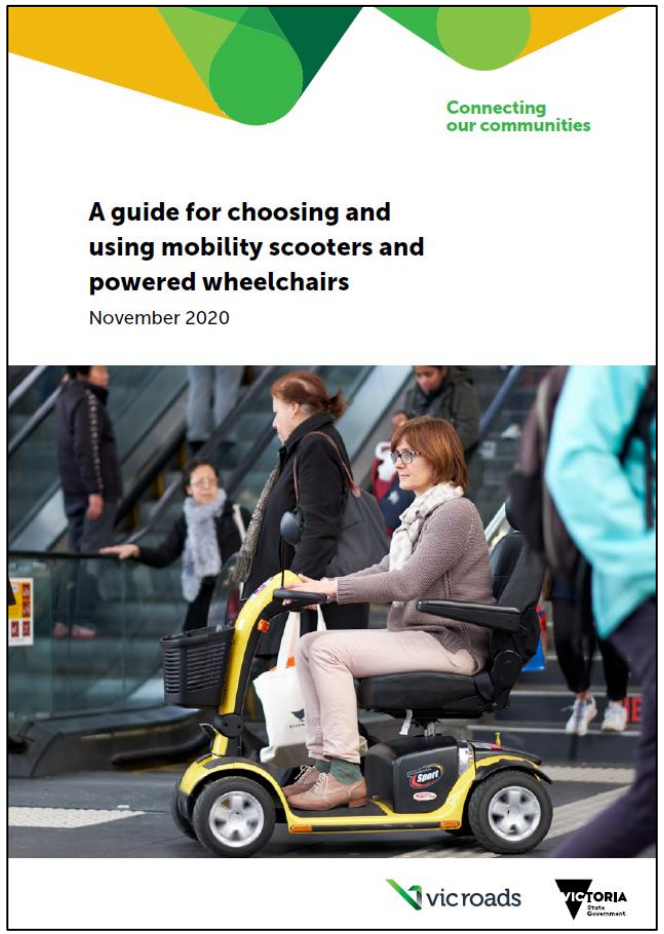
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“There is no formula for prescribing a wheelchair or scooter; rather it is an incremental process. When the person and the wheelchair or scooters are well matched the impact of the person’s impairment is reduced, enabling them to achieve goals, participate in life roles and improve their health and quality of life.”

Enable NSW and Lifetime Care & Support Authority (2011)

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CONSUMER RESOURCES



- **https://www.vicroads.vic.gov.au/safety-and-road-rules/pedestrian-safety/motorised-mobility-devices**
- **communitygrants@roads.vic.gov.au**



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CASE STUDY: ROSIE



- Rosie is a 68-year-old diagnosed with multiple sclerosis.
- She ambulates with a SPS
- She has sustained a couple of falls
- Recently, she has noted a change in her physical abilities
- While Rosie still drives safely, she cannot walk community distances
- She has self-referred to you as OT assessment is required to access government funding

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REFERRAL

Purpose:

- Ensures the OT has sufficient information to inform their assessment and thus optimise the outcome for the client, family/carers, referrers and for community.

Resources:

- ***GP Fact Sheet*** – Explains the pathway and the role of the GP/GP practice in understanding and communicating medical issues relevant to the assessment
- ***Referral template and request letters*** – Standardise and facilitate the referral process and support shared understanding of the assessment process and information requirements
- ***OT Assessment Fact Sheet*** – Explains the role of OTs to consumers



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REFERRAL - Rosie



- Self-referred and seeking a three-wheel scooter
- Able to explain her needs and concerns for mobility
- Able to provide some background about her medical condition
- More information needed about stability of MS and impact on attributes such as vision, cognition, physical capacity and medication

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ASSESSMENT

Purpose:

- Establish suitability to use an MMD - **outcome is suitable or not suitable**

If suitable, the assessment will then

- Guide the choice of mobility device type and features including accessories
- Determine education and training requirements
- Identify the role of family/carers in supporting safe use, maintenance and storage
- Determine funding options.

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ASSESSMENT – Guidelines & tools

- Guidelines for the prescription of a seated wheelchair or mobility scooter for people with a traumatic brain injury or spinal cord injury
- Practitioner Manual for Wheelchairs and Scooters (SWEP)
- Powered Mobility Device Assessment Training Tool (PoMoDATT)
- Wheelchair Skills Program
- Powered Mobility Indoor Driving Assessment (PIDA)
- Powered Mobility Community Driving Assessment (PCDA)



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ASSESSMENT - Three STEP PROCESS

Step A
Initial interview & /goal determination



- Consumer resources support conversations and family involvement
- Self-administered checklists

Step B
Clinical Assessment



- Informed by GP referral
- Main aspects vision, physical & cognitive capacities

Step C
On device assessment



- Access to device
- Assess in intended environment
- Time requirements
- Performance errors

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ON-DEVICE ASSESSMENT RED FLAGS

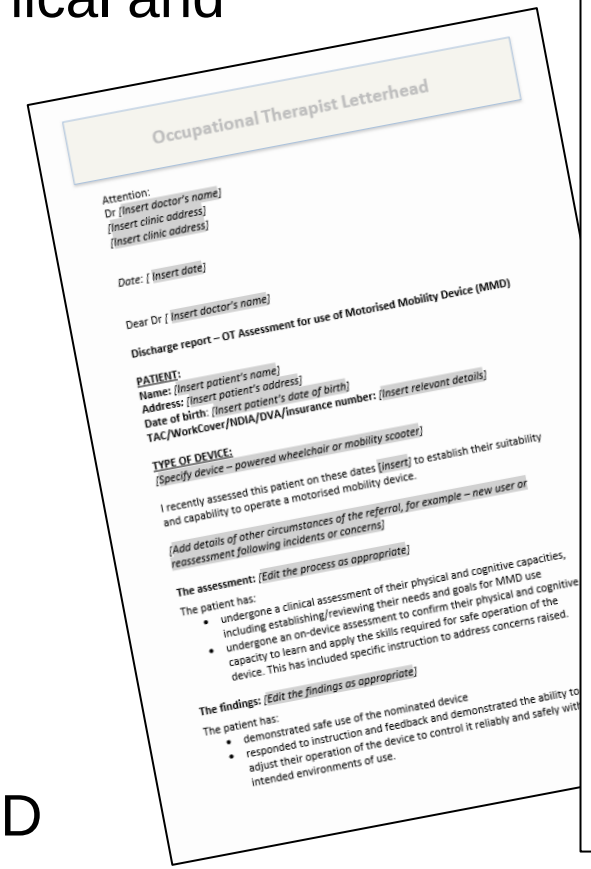
- Do they have trouble **following instruction**?
- Are **verbal prompts** required to ensure safe operation?
- Do they **veer in the direction of eye gaze** or veer when looking over shoulder when reversing?
- Do they **fail to slow** appropriately, including when approaching hazards, turning corners or approaching road crossings?
- Do they have **difficulty judging the position of the device** and manoeuvring in small spaces (e.g., running into other objects)?
- Do they understand **basic road rules** and anticipate possible driver behaviours when travelling in a road context?
- Do they **slow down appropriately** in high pedestrian precincts and anticipate other road user actions (e.g., children, pedestrians pushing trolleys or using mobility devices)

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OUTCOME REPORTING & MANAGEMENT

Report to GP:

- Summarise the findings of the clinical and on-device assessment
- Provide recommendations:
  - Unrestricted use
  - Restricted use
  - Requires training
  - Not suitable



Occupational Therapist Letterhead

Attention:
Dr [Insert doctor's name]
[Insert clinic address]
[Insert clinic address]

Date: [Insert date]

Dear Dr [Insert doctor's name]

Discharge report – OT Assessment for use of Motorised Mobility Device (MMD)

PATIENT:
Name: [Insert patient's name]
Address: [Insert patient's address]
Date of birth: [Insert patient's date of birth]
TAC/WorkCover/NDIA/DVA/insurance number: [Insert relevant details]

TYPE OF DEVICE:
[Specify device – powered wheelchair or mobility scooter]

I recently assessed this patient on these dates [insert] to establish their suitability and capability to operate a motorised mobility device.

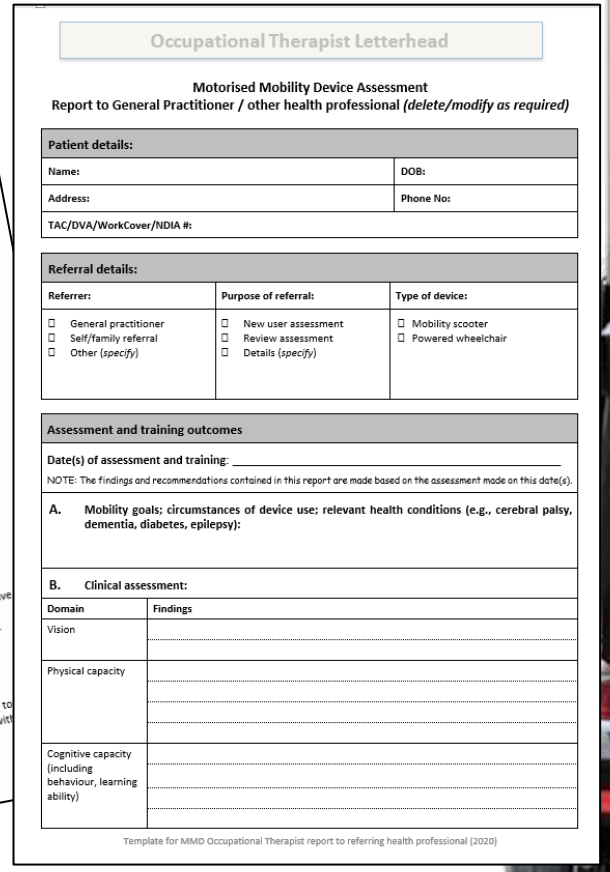
[Add details of other circumstances of the referral, for example – new user or reassessment following incidents or concerns]

The assessment: [Edit the process as appropriate]

The patient has:
- undergone a clinical assessment of their physical and cognitive capacities, including establishing/reviewing their needs and goals for MMD use
- undergone an on-device assessment to confirm their physical and cognitive capacity to learn and apply the skills required for safe operation of the device. This has included specific instruction to address concerns raised.

The findings: [Edit the findings as appropriate]

The patient has:
- demonstrated safe use of the nominated device
- responded to instruction and feedback and demonstrated the ability to adjust their operation of the device to control it reliably and safely with intended environments of use.



Occupational Therapist Letterhead

Motorised Mobility Device Assessment
Report to General Practitioner / other health professional *(delete/modify as required)*

Patient details:	
Name:	**DOB:**
Address:	**Phone No:**
TAC/DVA/WorkCover/NDIA #:	

Referral details:		
Referrer:	**Purpose of referral:**	**Type of device:**
☐ General practitioner ☐ Self/family referral ☐ Other (*specify*)	☐ New user assessment ☐ Review assessment ☐ Details (*specify*)	☐ Mobility scooter ☐ Powered wheelchair

Assessment and training outcomes

Date(s) of assessment and training: _____

NOTE: The findings and recommendations contained in this report are made based on the assessment made on this date(s).

A. Mobility goals; circumstances of device use; relevant health conditions (e.g., cerebral palsy, dementia, diabetes, epilepsy):

B. Clinical assessment:

Domain	Findings
Vision	
Physical capacity	
Cognitive capacity (including behaviour, learning ability)	

Template for MMD Occupational Therapist report to referring health professional (2020)

Resources:

- GP Report template
- Letter template – suitable for MMD
- Letter template – not suitable for MMD

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ASSESSMENT FINDINGS - Rosie



STEPS A & B – Interview and clinical assessment

- Her goals include using public transport
- PoMoDATT (clinical assessment) revealed some clinical concerns:
  - Cognitive changes evident – concentration, short term memory
  - Arthritis – potentially fine motor difficulty
  - Vision OK at the moment
  - Important to keep encouraging incidental activity/mobility for her MS and general physical capacity



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ASSESSMENT FINDINGS - Rosie



STEP C – First on-device assessment

- PoMoDATT (on-device assessment) - Multiple on-device assessments
- Findings:
  - Difficulty using short levers; turning in tight spaces
  - Some difficulty mounting & dismounting
  - Impulsive and inconsistent performance
  - But demonstrated ability to learn the new skills



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ASSESSMENT FINDINGS - Rosie



STEP C – Further training sessions

- Able to modify the way she used the device
- Able to learn and retain new information
- Safely able to use 90 degree position



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POLL - ASSESSMENT CONCLUSIONS - Rosie



What would you recommend for Rosie based on her assessment so far?

- Unrestricted use
- Restricted use
- Requires training
- Not suitable

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ASSESSMENT CONCLUSIONS - Rosie



- ✓ Basic capacity determined
- ✓ Safe scooter use demonstrated
- ✓ Suitable for scooter use confirmed – unrestricted use category
- ✓ Regular reviews of on-device performance recommended

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DEVICE RECOMMENDATION

Purpose:

- prescribe / recommend a device
- To support purchase / funding application

Resources:

- ***Clinical Guidelines and Standardised MMD assessment and training tools***
- ***ATSA***
- ***Funding sources***
- ***VicRoads Consumer Fact sheet "Choosing the right device"*** guides device preference discussion



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DEVICE RECOMMENDATION: Rosie

- Device must meet her needs and capabilities
- Consider future needs with device recommendation (eg, public transport use)
- Device trial collaborate with suppliers
- Funding considerations (waiting lists)
- Second-hand purchases, hiring devices



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Funding considerations

- Discussed options: seek funding, client purchase
- OT knowledge of funding requirements
- Assessment process informs funding application
- MMD funding sources –
  - Statewide Equipment Program (SWEP)
  - National Disability Insurance Scheme (NDIS)
  - Transport Accident Commission (TAC)
  - Department of Veterans' Affairs (DVA)
  - Victorian Workcover Authority



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EDUCATION & TRAINING

Purpose:

- Achieve competency in a range of knowledge, skills and safe behaviours required for MMD use
- Focus is on knowledge and skill acquisition for retention not just for assessing client capability

Resources:

- ***A guide for choosing and using mobility scooters and powered wheelchairs*** and associated Fact Sheets
- ***Skills training fact sheets –*** Basic Operation and Crossing roads



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EDUCATION & TRAINING - Rosie



- Scooter funding approved after six months
- Adaptability to different situations is key
- Training in different environments (e.g. trains)

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Considerations for public transport use:

- Check device suitability
- Safe use on public transport
- Travel tips
- Travelling on trains, trams, buses, regional coaches and trains, in a wheelchair accessible taxi



Connecting our communities

Motorised Mobility Devices
Fact Sheet 5

Using public transport in Victoria

Road Safety Victoria (Department of Transport) has produced a series of fact sheets to support safe use of motorised mobility scooters and powered wheelchairs in our community. This fact sheet provides information about using these devices on public transport, including practical tips, resources and services.

In this resource, the term 'motorised mobility device' includes both mobility scooters and powered wheelchairs, unless they are mentioned separately.

Make sure your device is suitable to be used on public transport

Our public transport system aims to be as accessible as possible for people with disabilities, including those who use a mobility scooter or powered wheelchair. However, not all devices are suitable for use on public transport. So, this is something you should plan for when choosing your device (see *Fact Sheet 2*). Weights, size and manoeuvrability need to be considered.

- **Weight –** The maximum total laden weight allowed for access to trains, trams and buses is 300kg. This refers to the combined weight of the device with the user, any luggage and added accessories.
- **Height –** Only wheelchair accessible taxis have a defined height limit (1500mm) (refer page 7), however all users should be mindful of the height of items added on their device, such as visibility flags or canopies, when using other public transport.
- **Length & width –** For access to trains, trams and V/Line trains and coaches, the device must fit within a space of 1300mm by 800mm. For access to buses, the allowed maximum mobility device dimensions are 1300mm long by 750mm wide.
- **Height of base from the ground –** To be able to be used on buses, the height of the device base must be no more the 300mm from the ground to fit between the wheel axles of the bus.
- **Manoeuvrability –** The device also needs to be manoeuvrable to get on and off the transport vehicle, including using ramps, and moving around within the vehicle. Specifically, the device should be able to turn 180 degrees within an area 2070mm x 1540mm. While a device may be capable of these manoeuvres, the user will require instruction and significant practice to be able to complete these manoeuvres independently.

Did you know?
If you depend on a scooter or wheelchair while travelling you may be eligible for a free travel pass. For information about the various passes available go to the PTV website. ptv.vic.gov.au

vicroads



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MONITORING & REVIEW

Purpose:

- Optimise user's ongoing fitness to operate the device safely
- Maintain knowledge and skills and support development of new skills and problem solving as confidence improves (e.g., public transport use)
- Track any change in their medical/disability condition over time
- Identify need for MMD adjustments
- Address safety concerns that may arise

Resources:

Consumer resources: Fact sheets to reinforce knowledge, skills and safe behaviours

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POLL – MONITORING & REVIEW - Rosie



What OT review period would you recommend for Rosie?

- 3 to 6 months
- 6 to 12 months
- 12 to 18 months
- Longer than 18 months

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MONITORING & REVIEW - Rosie

- Scooter use discussion (as part of GP care plan)
- Family / carer support to reinforce skills and behaviours
- Self checklist to highlight skills and behaviours for safe use



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COMMUNICATION

Family/ Carer

OTs

GPs

Funders

Suppliers



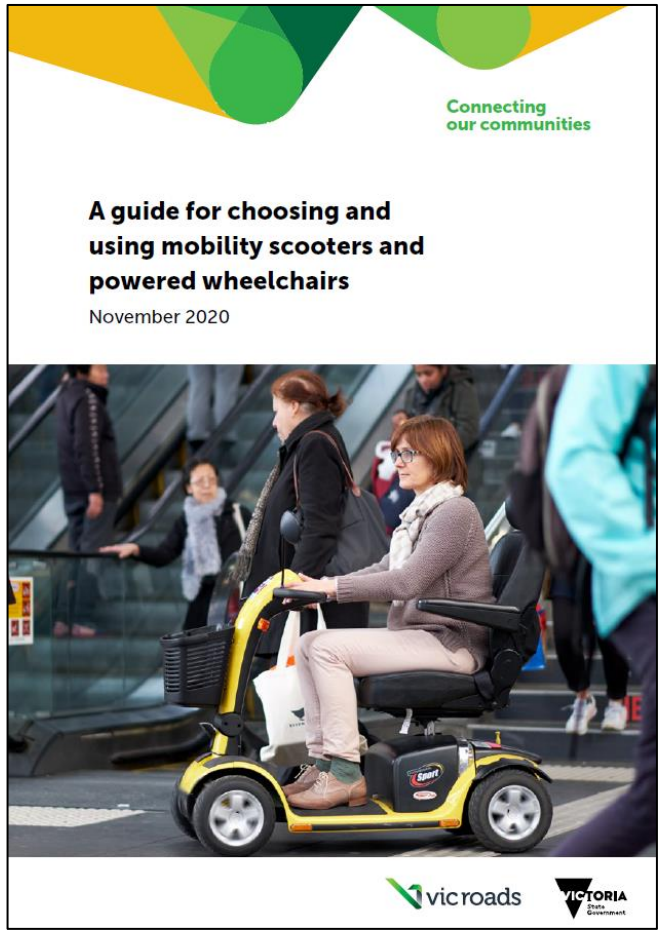
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Key messages for OT practice

- We have the fundamental clinical skills required for MMD assessment and training – the MMD Clinical Pathway assists with developing an intervention plan
- Use VicRoads & OTA resources to support each step of the pathway
- Use clinical guidelines and standardised assessments to further guide the process
- Clear and timely communication is important - GP has key role in monitoring & referral for review
- Collaborate with colleagues, other health professionals and suppliers towards a multidisciplinary approach
- Seek mentoring, supervision or shadowing opportunities to develop skills and confidence

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CONSUMER RESOURCES



https://www.vicroads.vic.gov.au/safety-and-road-rules/pedestrian-safety/motorised-mobility-devices



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OT RESOURCES



https://otaus.com.au/practice-support/areas-of-practice/motorised-mobility-devices

Quick links to OT resources

- Request for information - GP letter template
- Request for Information / OT Assessment Referral Template
- Fact Sheet for GP Practices – Occupational therapist assessment for use of a mobility scooter or powered wheelchair
- OT Assessment - GP Report Template
- Discharge letter template – client unsuitable for MMD use
- Discharge letter template – client suitable for MMD use
- Summary of Clinical Guidelines and Standardised MMD Assessment and Training Tools

Acknowledgements

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Dr Marilyn Di Stefano (Project manager & OT)

Fiona Landgren, Principal Consultant, Project Health

Dr Pam Ross, OT & Consultant

Kathryn Townsend, OT & Subject matter expert, and

Many members of our multi-disciplinary MMD project stakeholder reference group.

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Thanks for using and sharing our resources



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