

Barriers to the safe use of motorised mobility devices: discussion paper

October 2019

Report outline

Title	Barriers to the safe use of motorised mobility devices (MMDs)
Type of report	Discussion paper
Purpose	For public consultation
Abstract	The National Transport Commission is proposing a policy to address the barriers in the Australian Road Rules that currently prevent the safe and legal use of Motorised Mobility Devices (MMDs). The NTC is seeking feedback on the proposed policy and whether it will address the problem.
Submission details	<p>The NTC will accept submissions until 11 December 2019. Submissions can be made online at www.ntc.gov.au or by mail.</p> <p>Tim Davern National Transport Commission Submission – Barriers to the safe use of motorised mobility devices Level 3, 600 Bourke Street Melbourne VIC 3000</p>
Attribution	<p>This work should be attributed as follows:</p> <p>Source: National Transport Commission 2019, <i>Barriers to the safe use of motorised mobility devices, policy proposal</i>, NTC, Melbourne.</p> <p>If you have adapted, modified or transformed this work in any way, please use the following:</p> <p>Source: Based on National Transport Commission 2019, <i>Barriers to the safe use of motorised mobility devices, policy proposal</i>, NTC, Melbourne.</p>
Key words	Australian Road Rules (ARRs), Australian Technical Specification (ATS), motorised mobility devices (MMDs), motorised wheelchairs, mobility scooters, National Transport Commission (NTC).
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Have your say

What to submit

The views of a broad range of stakeholders are crucial to guide any policy position. The current paper outlines the problem with Motorised Mobility Devices (MMDs) and discusses a potential approach to overcome the key regulatory barriers. The NTC is requesting that stakeholders consider the issues and provide feedback and further evidence to overcome these barriers.


When to submit


Submissions are open from 16 October 2019 to 11 December 2019.

How to submit

Any individual or organisation can make a submission to the NTC.

Making a submission

 Visit www.ntc.gov.au and select 'Engage NTC' in the top navigation menu, or send a hard copy to:

 Tim Davern
National Transport Commission
Public submission – Barriers to the safe use of motorised mobility devices
Level 3, 600 Bourke Street
Melbourne VIC 3000.

Where possible, please provide evidence, such as data and documents, to support the views in your submission.

Publishing your submission

Unless you clearly ask us not to, we publish all the submissions we receive online. We will not publish submissions that contain defamatory or offensive content.

The *Freedom of Information Act 1982* (Cwlth) applies to the NTC.

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Executive summary

The use of a Motorised Mobility Device (MMD) can enable people who cannot walk or have difficulties walking to participate in work, social trips, attend medical appointments and generally meet essential daily needs. However, there is mounting evidence that the maximum unladen mass requirement for MMDs in the Australian Road Rules (ARRs; 110kgs) is a barrier preventing people with a clear need from legally using a heavier device on public infrastructure. This may result in people using non-compliant devices or alternatively experiencing hardship because they cannot legally use a suitable device.

To better understand the issues and implications, the National Transport Commission (NTC) has undertaken extensive consultation involving a national workshop for key stakeholders (November 2018) and an issues paper published for public consultation (January 2019). In addition, ongoing policy advice has been received from key stakeholders through a national working group.

The NTC is seeking feedback on an appropriate response to overcome the barriers identified. In particular, whether or not it is appropriate to increase the maximum unladen mass in the ARRs so that it aligns with the weight requirements set out in the Australian Technical Specification (ATS; SA TS3695.3.2018). That is, removing mass limits for motorised wheelchairs and setting a maximum unladen mass for mobility scooters of 170kgs in the ARRs. Feedback is also requested on the feasibility of amending the ARRs to ensure that all operators of MMDs are classified as pedestrians and as such required to comply with pedestrian road rules.

The NTC has analysed the key issues and impacts associated with these amendments. It has been assessed that these changes would remove existing impediments and allow everyone with a clear need to legally use a MMD that suits their individual needs. This will enable people of all ages and abilities with the freedom to remain mobile and retain their independence and connections with the community.

In addition, increasing mass limits may potentially reduce prices of MMDs by increasing the market size and removing restrictions that may require manufacturers and importers to modify their models for the Australian market. However, it is important to note that the changes to the maximum unladen mass in the ARRs may be met with some minor increase in safety risk to MMD users and other path users.

1 Context

Background

In May 2018, the Transport and Infrastructure Council directed the National Transport Commission (NTC) to review the Australian Road Rules (ARRs) and identify regulatory barriers preventing the safe and legal use of Motorised Mobility Devices (MMDs) and Innovative Vehicles (Personal Mobility Devices; PMDs) on public roads and paths.

There are two main types of MMDs; motorised wheelchairs and mobility scooters (See Appendix A), which can be defined by the following:

- Motorised wheelchairs: generally designed to carry people with greater mobility needs than users of mobility scooters. Motorised wheelchair users usually have a permanent disability, resulting in the inability to walk at all. They commonly require assistance getting in and out of the wheelchair.
- Mobility scooters: often used by older people or by people who have a permanent or long-term physical limitation yet have sufficient mobility to walk short distances. They have capacity to step on and off the scooter unaided (RRATRC, 2018; Staysafe, 2014).

Motorised wheelchairs and mobility scooters will be referred to as MMDs in this paper.

Personal Mobility Devices, on the other hand, are different to MMDs and are typically thought of as devices such as electric scooters and electric skateboards. There are many different types of PMDs and generally these devices are portable, capable of travelling medium range distances and suitable for recreation or commuting.

As identified above, MMDs, PMDs and their users are inherently different. That is, MMDs enable a basic human right and should be considered as a medical device rather than a vehicle (ATSA, 2019). While PMDs are more designed for recreational use, commuting, and offer an alternative mode of transport to more traditional travel modes.

Due to the key differences between MMDs and PMDs, it is more appropriate to complete individual sets of analyses, one for MMDs and one for PMDs. These analyses will be presented in separate papers which allows for a more efficient and effective progression of the policy development and legislative reform process.

The current paper will focus on addressing the regulatory barriers to the safe use of MMDs. A separate paper for PMDs, a Consultation Regulation Impact Statement, will be released separately by the NTC for public consultation.

Policy objective

The NTC recognises the need for freedom of mobility for all people and has identified a number of regulatory barriers through the consultation process. This paper details the key issues identified and presents a discussion on the most appropriate mechanisms to remove these regulatory barriers that are inhibiting safe mobility and independence.

The objective of this project is to provide a nationally consistent approach to enable people of all ages and abilities with the freedom to remain mobile and retain their independence and connections with the community in a way that protects the safety of MMD users and other users of public infrastructure.

Consultation

To better understand the key regulatory issues associated with the safe use of MMDs, the NTC has undertaken consultation which has assisted the development of the policy considerations.

- In November 2018, the NTC held a national stakeholder workshop to gather information about the key issues associated with the safe use of MMDs.
- In January 2019, the issues identified in the national stakeholder workshop were explored further in an issues paper published for public consultation. There were 62 submissions received from a diverse range of stakeholders. The MMD issues and views are detailed in Section 2.
- Ongoing feedback has also been received from key stakeholders as part of a national working group. This comprises of representatives from academia, government, industry and the community.

The current paper discusses approaches to overcome the key regulatory barriers identified through the consultation process.

The NTC is requesting that stakeholders provide feedback and evidence on potential changes to the ARRs. The consultation period for this paper is 16 October to 11 December 2019.

Next steps

The NTC will analyse the submissions received to this paper and undertake targeted consultation with the states, territories and industry peak bodies.

The NTC is scheduled to present policy and legislative amendments to the Transport and Infrastructure Council (TIC) in May 2020 for consideration.

2 Context of issues

This section summarises the key findings and themes identified in response to the NTC issues paper released for public consultation in January 2019.

2.1 The ARR's do not provide for the legal use of many MMDs

Mass restrictions in the Australian Road Rules

The ARR's specifically provide that a wheelchair may be driven on a path providing the following requirements are met:

- its unladen mass is not over 110kg, and
- it is not travelling over 10km/h.

It is important to note that most jurisdictions align with the maximum unladen mass in the ARR's, except the Australian Capital Territory, Queensland and Tasmania, who have all increased the maximum unladen mass to 150kg (NTC, 2010).

There appears to be no historical data to confirm why there is a 110kg unladen mass limit in the ARR's for these devices to be used on footpaths. This matter was not addressed in the original regulatory impact statement for the ARR's. However, it is believed this has been adopted from state and territory rules that existed prior to the introduction of the ARR's (NTC, 2010).

The evidence provided to the NTC suggests that the 110kg specified in the ARR's are not fit for purpose and is restricting the options available to suit the needs of people with temporary or permanent mobility limitations.

In their submission, Assistive Technology Suppliers Australia (ATSA, 2019) outlined that the current unladen mass limits in place are restricting choice and that some MMD users with a clear need for a non-basic device are unable to access one legally. This submission highlighted that some medical or health conditions require specific device functionality or special equipment to be carried that adds weight above the maximum unladen requirement of 110kgs.

The NTC also received individual reports that reflect the challenges faced by people who require a heavier device. If the current unladen mass restrictions are complied with or enforced it will result in some individuals being unable to travel on public infrastructure at all. The significance of this issue was highlighted in a response to the NTC issues paper (Moxon, 2019):

".. I recommend that the NTC reach a finding that any maximum unladen mass of motorised wheelchairs be removed from the Australian Road Rules as a matter of urgency, and that State Governments be urged to take similar action where their road rules have a maximum unladen mass limit.

This is in the interests of users of motorised wheelchairs who need extensive clinically required options which raise the unladen mass above current maximums.

We cannot wait until after late 2020 for our needs to be recognised and met.

Our health and the economy will suffer if this aspect of the inquiry is not addressed urgently.”

Key implications are that authorities and funding bodies may not comply with existing regulations, by prescribing and allowing people to use heavier devices. If these authorities and funding bodies comply with the existing regulations it may result in some individuals having no mobility option on public infrastructure, which can significantly impact a person’s psychological health and quality of life.

Further it has also been reported that most devices available on the current market already exceed the maximum ARR unladen mass requirements (NCRE, 2019). This provides further evidence that many MMD users are already using heavier devices, some of whom may not be aware of their legal obligations.

Speed restrictions in the Australian Road Rules

Similar to the reasoning for mass limits, there is no historical reference for the 10km/h speed restriction in relation to motorised wheelchairs. Anecdotal advice suggests that the 10km/h is equivalent to walking speed for persons on foot and it was intended to restrict motorised wheelchairs to the same speed as these persons (NTC, 2010).

Several submissions (e.g. ATSA, 2019; IAG, 2019; Wyndham City Council, 2019) recommended the ARRs allow for an increase in speed and, for example, align with the European Standard (maximum 15km/h). While several others (e.g. COTA NSW, 2019; Vision Australia, 2019; Victoria Walks, 2019) all strongly opposed any increase of speed in pedestrian areas, even providing a case for a speed reduction.

Road safety research generally accepts a speed of 5-10km/h in pedestrian areas as a safe speed for travel (Hatfield & Prabhakaran, 2013; Paine, 2011; Short et al, 2007). Based on these safety considerations, increasing the maximum speed above 10km/h is likely to increase the risk of injury to the user and/or other path user in the event of a collision.

As shown in Table 2, increasing the maximum speed from 10km/h to 15km/h can result in a large increase in kinetic energy (crash forces) which raises the chance of injury in the event of a collision with another path user, particularly more vulnerable path users (e.g. children or older people).

Table 1. Kinetic Energy differential between 10km/h and 15km/h

	Person (kg)	MMD (kg)	Speed (km/h)	KE (J)
Mobility scooter	80	170	10	965
Mobility scooter	80	170	15	2170

The Senate Inquiry into the *Need for regulation of mobility scooters, also known as motorised wheelchairs (2018)* also concluded that there were significant concerns about the safety of current speed limits for MMDs and acknowledged that there would likely be further negative safety outcomes if maximum speed limits were increased (RRATRC, 2018).

2.2 Pedestrian and vehicle classification of MMDs

MMD users can be classified as either a 'pedestrian' or a 'driver' of a vehicle, depending on the maximum speed the device is capable of. ARRs 15 and 18 set the threshold for establishing this distinction.

The ARRs currently classify motorised wheelchairs (the definition of which includes motorised scooters, see Appendix A) differently based on device capability; either as a pedestrian or a vehicle. This results in confusion as to which road rules motorised wheelchair users should follow. Specifically,

- ARR15: provides that a motorised wheelchair (including a mobility scooter) that *can travel over 10km/h* is classified as a *vehicle*.
- ARR18: provides that a person driving a motorised wheelchair (including a mobility scooter) that *cannot travel over 10km/h* is classified as a *pedestrian*.
- ARR288(3): provides that the driver of a motorised wheelchair (including a mobility scooter) may drive on a path if:
 - The unladen mass of the wheelchair is not over *110 kilograms*; and
 - The wheelchair is *not traveling over 10 kilometres per hour*; and
 - Because of the driver's physical condition, the driver has a reasonable need to use a wheelchair.

These rules mean that a MMD that *can travel over 10km/h* can be legally used on a path, providing the user *does not travel over 10km/h*. However, regardless of the speed travelled the MMD is classified as a *vehicle* meaning the MMD user *is not required* to comply with pedestrian road rules.

On the other hand, while a MMD *that cannot travel over 10km/h* can also legally be used on a path, the MMD user is considered a *pedestrian* and *is required* to comply with pedestrian road rules.

This is further complicated when considering ARR 238, which permits a pedestrian to travel along a road if it is not practical to travel on a footpath or nature strip. Due to the ARRs classifying a MMD that *can travel over 10km/h* as a vehicle, any instance where one of these devices is required to travel along a road they would be subject to all the same road rules applicable to the driver of a vehicle in that state and territory and in most cases registration requirements.

In addition, ARR18 states that a person pushing a motorised wheelchair is classified as a pedestrian. However, with advancements in technology there are more innovative ways of controlling a wheelchair that do not involve physically pushing it. For example, some motorised wheelchairs can be controlled using a wired or wireless controller. The existing definition in the ARRs does not capture these more innovative methods of operation, which results in confusion as to which rules apply to these persons/attendants.

The submissions to the issues paper outlined general agreement that these classifications are not clear, and that classifying MMD users as both pedestrians and vehicles creates confusion about what infrastructure they should be using. In particular, the Royal Automotive Association (RAA, 2019) outlined that:

“...the confusion is more that users of motorised wheelchairs do not in general understand that a difference exists between their device and the current definition of a vehicle. As a result, some users believe they can use their

motorised wheelchair on the road (including in bicycle lanes) because they consider that their motorised wheelchair is a 'vehicle'."

MMDs are designed to enable mobility for people who have difficulties or are unable to walk, rather than being an alternative to a motor vehicle. It is therefore appropriate that device operators are treated as such in the ARR. ATSA (2019) supported this position:

"Devices enable a basic human right. They are not a vehicle but a medical device. As such, they should be treated as pedestrians to ensure they are not discriminated against."

2.3 Incompatibility of MMDs with public and transport infrastructure

It is suspected that the lack of guidelines and technical standards for MMDs means that, at the point of purchase, users of these devices may not know whether or not they will be able to access and travel on all the public infrastructure.

Public spaces and related infrastructure

The only regulatory requirements that a MMD must meet to be used on paths in Australia is that the maximum forward speed of the device must not exceed 10km/h and not have an unladen mass of more than 110kg - 150kg, depending on the jurisdiction the device is being operated in. Many MMDs currently sold in Australia exceed these unladen mass and/or speed requirements. Further, there are currently no restrictions on width or length of these devices, or minimum performance requirements for their safe operation on slopes and uneven surfaces (Austroads, 2018).

Gradients are encountered by MMD users in a number of common situations, such as footpaths and access ramps to buildings. In order to navigate these gradients, it is critical that MMDs have the ability to come to a complete stop and for users to safely perform functions such as repositioning the MMDs, adjusting the controls, or waiting for pedestrians to pass (Austroads, 2018).

Public transport

Similarly, it is not evident to persons wanting to purchase a MMD whether or not their device will be suitable and safe for use on public transport infrastructure.

Issues relating to the access of passenger transport may arise when a device is too heavy to use passenger ramps (e.g. buses and ferries), too wide to access doorways, or too long or lacking manoeuvrability to access reduced spaces in a public transport vehicle. This risks injury to MMD users, other commuters, passenger transport workers as well as damage to infrastructure (Austroads, 2018).

Submissions

Many submissions highlighted that a lack of mandatory design standards for MMDs result in some devices being incompatible with public infrastructure.

Many submissions suggested that the ARR should, therefore, adopt the Australian Technical Specification (ATS) to overcome these issues. In principle, adopting the ATS would result in clear identification of a device to show its compatibility with public transport infrastructure (See Appendix B).

However, a submission from Central Queensland University (CQU, 2019) reported that their research has found adopting the ATS may not practically result in compatibility with the *Disability Standards for Accessible Public Transport 2002* (DSAPT).

“If a motorised Mobility Device is awarded a Blue Label under the current Standards Australia – Technical Specification 3695.3:2018, this is NOT sufficient to determine if the device will be able to access a bus. The SA TS 3695.3:2018 (White and Blue Label scheme) should be immediately recalled and further testing undertaken to increase accuracy. We anticipate huge frustration and anger when consumers purchase an expensive Blue Label MMD with an intention to take it on public transport, and then find the device they bought CANNOT access a bus.”

2.4 Limited understanding of the safety risks associated with MMDs

While the ARRs provide rules for how MMDs are to be used on roads and road-related areas, there is not extensive evidence regarding the magnitude of safety concerns. Research about the safety of these devices and their compatibility with the urban environment is scarce. This lack of data has contributed to a reliance on anecdotal information for the Senate Inquiry into the *Need for regulation of mobility scooters, also known as motorised wheelchairs* (2018), with the Senate’s Rural and Regional Affairs and Transport References Committee recognising the need for gathering comprehensive evidence (RRATRC, 2018).

The limited information available results in uncertainty around the actual injury and death rates involving MMDs. Existing data sources, including hospital and police records, lack detail about the circumstances and risk factors associated with MMDs, and few research studies have been conducted in this area (Staysafe, 2014).

Given the lack of evidence in relation to the safety of MMDs, a large number of submissions to the Senate Inquiry agreed on the need for a systematic and sustained approach to data collection in this area. It was argued that new research is needed in relation to the design, safety performance, user experience and needs, the rates and causes of accidents, and injuries and deaths involving mobility devices. It was also argued that the areas of road design and regulatory interventions to improve user safety and user-behavioural risk factors merit further research and analysis (RRATRC, 2018).

It was widely acknowledged in the submissions that there is limited additional empirical data available to provide insight into the safety risks associated with MMDs. However, it appears that risk of collision, speed and stability are key areas of concern for submitters (CQU, 2019; OTA, 2019).

To assist in determining the safety implications associated with MMDs and to ensure the proposed changes to the ARRs meet community expectations without resulting in any adverse safety implications, the NTC has undertaken an up to date review of the research and completed a safety risk analysis (See Section 3.1.1).

3 Discussion

3.1 Maximum unladen mass

As outlined in Section 2.1, a key barrier to the use of MMDs on a path relates to the current regulatory weight requirement in the ARR. The NTC is therefore exploring the feasibility of amending the weight requirement for MMDs in the ARR for use on a path.

Specifically, the NTC is seeking feedback on the appropriateness of aligning the unladen mass requirements in the ARR with those set out in the Australian Technical Specification (SA TS3695.3.2018) *Wheelchairs, Part 3: Requirements for designation of powered wheelchairs and mobility scooters for public transport and/or road-related area use* (ATS).

Aligning the maximum unladen mass requirements in the ARR with the ATS would result in the following amendments:

- Motorised wheelchairs and motorised mobility scooters would be recognised as two separate devices in the ARR, and
- The unladen mass requirements for use on a path would be changed from 110kgs to:
 - Motorised wheelchair: no unladen mass limit
 - Mobility scooter: maximum unladen mass limit of 170kg.

This change would be expected to facilitate mobility and independence as it will increase the choices available for MMD users. It is also consistent with the requirements under the *Disability Standards for Accessible Public Transport 2002* for ramps and lifts to support a minimum safe working load of 300kg (See Appendix B).

However, it is important to note that although this amendment would align the unladen mass limits for MMDs with those set out in the ATS, compliance with the other technical specifications in the ATS would remain voluntary.

3.1.1 Rationale

To better understand the impact of these changes the NTC has undertaken a review of the available research and completed an analysis of the associated issues.

Austrroads project on a national framework for MMDs

In 2012, Austrroads initiated a project to develop a nationally agreed framework for the safe interaction of MMDs with other road users (on road and road-related areas). The objective of the Austrroads project was to improve both the construction and performance requirements for MMDs.

The project resulted in the development of the ATS. Further details about the ATS are provided in Appendix B which includes important information about the rationale for weight selection for motorised wheelchairs and mobility scooters.

Austrroads is currently exploring options for the adoption of the ATS. Austrroads' and NTC's program of work are complementary in that the outcomes of the Austrroads project will inform the NTC's work. Austrroads and the NTC are working in parallel to achieve a nationally consistent approach that will enable people of all ages and abilities with the freedom to remain mobile and retain their independence and connections with the community.

Mobility and independence

As discussed in Section 2.1, the consultation process provided evidence that the maximum unladen mass requirement specified in the ARR for MMDs (110kgs) is a key barrier that is inhibiting mobility and independence.

While it is difficult to quantify the number of people in Australia impacted by the weight requirement in the ARR, the Australian Competition and Consumer Commission (ACCC, 2012) estimated that the incidence of mobility scooter use in the Australian adult population is approximately 231,000. In addition, the Australian Bureau of Statistics (ABS, 2015) reported that 0.6% Australians, or approximately 26,000 people, use an electric wheelchair. With an ageing population and the rollout of the National Disability Insurance Scheme, the number of these devices is likely to grow (RRATRC, 2018).

It was also discussed in Section 2.1 that many MMDs available and in use across Australia already exceed the maximum unladen mass requirements in the ARR (NCRE, 2019). This is largely because most devices are supplied by overseas manufacturers who generally follow European Standards. This results in a misalignment of the ARR with the current consumer market, meaning some people may have no option but to choose a heavier device to enable mobility. Alternatively, others may be unaware of their legal obligations regarding maximum unladen mass requirements.

The inability to legally use a suitable device can also result in difficulties for some people in attending work, social trips, medical appointments and generally meeting essential daily needs. Not being able to undertake these tasks has been found to negatively impact on a person's psychological health and quality of life (Congiu & Harris, 2008; Johnson et al 2013; RACV, 2009).

Safety implications

In the context of risk and severity of crash outcomes, mass and speed are the two properties of kinetic energy (impact forces) that can be transferred during a crash. However, it is well established that during a crash the kinetic energy greatly increases due to speed rather than weight (Khorasani-Zavareh et al, 2015).

As shown in Table 2, the kinetic energy differential is proportional to mass differential (including the person on it) between a mobility scooter weighing 110kg compared to 170kg, when both are travelling at the current legal maximum speed of 10km/h. The resulting increase in kinetic energy of a 5km/h increase in speed (125 per cent) is 4 times that of a 60kg increase in mass (32 per cent).

Table 2. Kinetic Energy of motorised mobility devices at increased mass and speed

Vehicle Type	Person (kg)	Device (kg)	Speed (kms)	KE (J)	KE % Difference to current limit
Current MMD limit	80	110	10	733	
Wheelchair	80	250	5	318	-56%
Mobility Scooter	80	150	10	887	21%
Mobility Scooter	80	170	10	965	32%
Wheelchair	80	250	10	1,273	74%
Mobility Scooter	80	110	15	1,649	125%

For mobility scooters, the increase in kinetic energy (32 per cent) from raising the unladen mass limit to 170kgs (assuming a passenger of 80kgs), would somewhat increase the chances of injury occurring to pedestrians in the event of a crash. For jurisdictions that have adopted a maximum unladen mass of 150kgs, raising the mass to 170kgs would result in an even smaller increase in kinetic energy (11%). On the other hand, a 5km/h increase in speed at the existing mass limit would more than double the kinetic energy exerted in the instance of a crash with a pedestrian.

In the event of a crash, a wheelchair with a combined mass of 330kgs (that is, a 250kg wheelchair and a passenger of 80kgs) travelling at 5km/h would exert less than half the kinetic energy than an MMD at the existing mass limit travelling at 10km/h. Even if travelling at 10km/h, a wheelchair of such a mass would still exert a considerably lower kinetic energy than a MMD travelling at the existing mass limit, but travelling at 15km/h.

This is not suggesting that serious injury cannot occur in the event of an MMD crash with a pedestrian at 10km/h. However, recent research has identified that pedestrian injuries accounted for only three per cent of injuries associated with mobility scooter crashes, with the remaining proportion of crashes attributed to MMD users being fall-related (AIHW, 2019).

This may suggest that rather than causing injury to other road users, a greater safety concern for these devices may relate to their design and stability. Alternatively, falls may also occur because of driver error, the physical or functional capacity of the user to operate the mobility scooter in a safe and appropriate manner or the condition of the infrastructure (ACCC et al, 2012; AIHW, 2019).

The ATS has been designed to improve these key safety concerns and the NTC is working closely with Austroads to investigate suitable options for the adoption of the ATS. A key safety focus of the ATS is on improving construction and performance requirements. This aims to make it less likely that MMD users will experience unsafe outcomes on footpaths and other public infrastructure.

The ATS also has a direct intent to improve pedestrian safety through a requirement of a slow speed switch for devices that can exceed 6km/h. This provides a practical mechanism to help ensure users do not accidentally speed. The use of the low speed switch will also be encouraged in areas of high pedestrian activity, or other locations where there may be danger from an errant manoeuvre.

The NTC acknowledges that allowing an increase in mass without requiring compliance with the other technical specifications in the ATS, would result in at least some increase over time in the number of MMDs with a higher overall mass that are not required to comply with any standard. Subsequently this may very marginally result in an increase in safety risks (See Table 2).

The alternative option is to maintain the maximum unladen mass in the ARRs and require greater enforcement and compliance with the 110kg or 150kg requirement. However, this may place some people within the aged and disability sectors at a significant mobility disadvantage regarding MMD choice. It has also been reported (ATSA, 2018) that doing so may also contravene the United Nations Convention on the Rights of Persons with Disabilities and Optional Protocol Article 20 - Personal mobility. This states that:

“State parties shall take effective measures to ensure personal mobility with the greatest possible independence for persons with disabilities, including by:

- a) Facilitating the personal mobility of persons with disabilities in the manner and at the time of their choice, and at an affordable cost*

- b) *Facilitating access by persons with disabilities to quality mobility aids, devices, assistive technologies and forms of live assistance and intermediaries, including by making them available at an affordable cost”.*

Market Impediments

Regulations that differ across state borders, or are misaligned with international standards, further increase the costs of operation and may lead to:

- international sellers bypassing the Australian market, thereby reducing choice for Australian consumers
- local businesses experiencing a competitive disadvantage by having to modify units to sell into export markets
- increased provision costs leading to increased consumer pricing.

Aligning the maximum unladen mass in the ARR with the ATS will ensure a clear national set of rules and likely result in an increase in the choice available to MMD users. In addition to aligning with the mass limits in the ATS, the recommendation will also align the ARR with European standards that have larger markets. This will subsequently reduce costs associated with modifying existing MMDs to fit within the existing requirements.

The alignment with the ATS mass limits will not result in any additional burden on suppliers that are already voluntarily complying with the ATS. It may also potentially reduce prices by removing restrictions and increasing the size of the market.

Question 1: Do you agree with aligning the maximum unladen mass with the ATS or is there a more appropriate response to overcome the regulatory barriers identified? Please provide evidence to support your position.

3.2 Pedestrian and vehicle classification

To address the issues identified in Section 2.2, the NTC is seeking feedback on the appropriateness of making the following amendments to the ARRs.

3.2.1 Classification of MMDs as vehicles and pedestrians

The NTC is exploring the feasibility of amending the ARRs so that all users of MMDs will be classified as pedestrians and be required to follow pedestrian road rules, regardless of the device's speed capability.

In addition, to ensure MMD users do not travel at excessive and unsafe speeds in circumstances where they may travel on a road, the NTC is calling for views on the appropriateness of amending the ARRs so that any MMD that needs to travel along a road, not travel over 10km/h.

3.2.2 Pedestrian classification for attendants

The NTC is keen to gather further evidence and support from stakeholders on whether or not it is appropriate to classify a person/attendant who is assisting a person in a motorised wheelchair by operating the wheelchair in a manner other than pushing (i.e. through use of a controller, whether it be wired or wireless), as a pedestrian. It is important to note that this will not apply to mobility scooters as they are not equipped with attendee control functions.

Question 2: Do you agree with the proposed pedestrian classification? Is it appropriate that all MMD operators are required to follow the pedestrian road rules? Please provide evidence to support your position.

4 Summary

The NTC assesses that aligning the maximum unladen mass in the ARR with the ATS would likely:

- Enable people of all ages and abilities with the freedom to remain mobile and retain their independence and connections with the community by allowing everyone with a clear need to legally use a MMD that suits their individual needs
- Remove the existing impediments to the use of MMDs to enable mobility and overcome associated disadvantage
- Reduce prices through increasing the size of the market and removing restrictions that may require manufacturers and importers to modify their models for the Australian market
- Result in some minor increase in safety risk
- Ensure all MMD operators understand their obligations to comply with pedestrian road rules, and
- Provide higher net benefits than the current situation with MMDs.

Therefore, the NTC is seeking feedback on whether or not it is appropriate to adopt the ATS maximum unladen mass limits into the ARR. That is,

- Recognise motorised wheelchairs and motorised mobility scooters as two separate devices in the ARR, and
- Change the unladen mass requirements for use on a path from 110kgs to:
 - Motorised wheelchair: no unladen mass limit
 - Mobility scooter: maximum unladen mass limit of 170kg.

In addition, the NTC is calling for views on the appropriateness of amending the ARR so that,

- All MMD users are classified as pedestrians and required to comply with pedestrian road rules, regardless of the device capability.
- All MMD users must not travel over 10km/h whether they are on a path or road.
- A person/attendant who is assisting a person in a motorised wheelchair by operating the wheelchair in a manner other than pushing (i.e. through use of a controller), is a pedestrian and required to comply with pedestrian road rules.

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Appendix A ARR definition of mobility scooter and motorised wheelchair

The ARR definitions define a wheelchair as a chair mounted on two or more wheels that is built to transport a person who is unable to walk or has difficulty walking, but does not include a pram, stroller or trolley (ARR, 2018). This definition captures both motorised wheelchairs and mobility scooters, which are the two main categories of MMDs used in Australia.

Motorised wheelchairs

Motorised wheelchairs are generally designed to carry people with greater mobility needs than users of mobility scooters. They are, for the most part, controlled by a hand-controlled joystick (although other methods of control exist, such as head or mouth controls). Motorised wheelchair users commonly require assistance getting in and out of the wheelchair.



Pride Mobility – Motorised wheelchair



Pride Mobility – Powerchair

Mobility scooters

Although not specifically defined in the ARR definitions, mobility scooters share the same classification as motorised wheelchairs.

There is general agreement that mobility scooters are often used by older people or by people who have a permanent or long-term physical limitation. However, these individuals have sufficient mobility to walk short distances (within their own home environment) (RRATRC, 2018), and are safe to step on and off the scooter unaided (Staysafe, 2014).



Pride Mobility – 3-wheel scooter



Pride Mobility – 4-wheel scooter

Appendix B Austroads MMD project

In 2012, Austroads initiated a project to develop a nationally agreed framework for the safe interaction of motorised mobility devices (MMDs) with other road users (on road and road-related areas). The Austroads project aimed to improve both the construction and performance requirements for MMDs.

The objectives of the project were to:

- introduce improved construction and performance requirements for MMDs, so that they are less likely to result in unsafe outcomes when using footpaths and other public infrastructure
- encourage designs of MMDs that are more harmonious with infrastructure to minimise the consequences of user error or misjudgement
- address existing inadequacies in the Australian Road Rules related to MMDs
- make it easier to identify devices that are suitable for conveyance on public transport (Austroads, 2018).

The project has resulted in the development of, *Technical Specification (SA TS3695.3.2018) Wheelchairs, Part 3: Requirements for designation of powered wheelchairs and mobility scooters for public transport and/or road-related area use*. Copies of the technical specification are available to purchase through SAI Global.

The technical specification focuses on collision avoidance and sets out construction and performance requirements, such as:

- 170kg maximum unladen mass for motorised mobility scooters
- no maximum laden mass for motorised wheelchairs
- a maximum laden mass of 300kg for MMDs for a blue label
- 10km/h maximum speed
- for devices capable of exceeding 6km/h, a low-speed switch that will restrict the speed of a device to 5km/h (this functionality is common in many European devices), other requirements based on Australian and international standards such as stability on slopes, braking performance and electrical safety
- maximum dimensional limits
- optional requirements for public transport that display key advice characteristics including make, model, length, width, unladen mass, maximum safe slope, year of production and a unique identifier:
 - a blue or white permanently affixed label that displays key device characteristics including make, model, length, width, unladen mass, maximum safe slope, year of production and a unique identifier
 - a white label for MMDs that meet the specifications for use on public infrastructure
 - a blue label for devices that are also likely suitable to access passenger transport. The blue label specifications are based on the *Disability Standards for Accessible Public Transport 2002* (Austroads, 2018).

Austroads also advised that successful adoption of the technical specification would:

- provide customers with better information at the point of sale (about the appropriateness of MMDs for their intended use)

- improve safety for users and other pedestrians (by improving the design of MMDs being used on public infrastructure)
- assist users and passenger transport operators to better understand the devices likely to be suitable for conveyance on passenger transport (using the labelling scheme).

The increased maximum unladen mass for mobility scooters recognises the needs of larger and heavier people in purchasing a mobility aid that can support them. The 170kg limit for mobility scooters was based on the adult population; 95% weighing no more than 100kg, meaning the vast majority of users, plus a load of 30kg (for accessories and luggage) would remain under the 300kg limit for a blue label (Austroads, 2018).

The removal of the maximum unladen mass for traditional motorised wheelchairs recognises that users of such devices have no alternative for mobility on public infrastructure. Any powered wheelchair, including motorised scooters accessing passenger transport conveyances, should not exceed a gross mass of 300kg. The 300kg unladen mass limit is consistent with the requirements under the *Disability Standards for Accessible Public Transport 2002* for ramps and lifts to support a minimum safe working load of 300kg (Austroads, 2018).

The implementation of the technical standard is designed to improve the safety of MMDs. Specifically, the technical standard will require MMDs to demonstrate dynamic and static stability on slopes, limit the dimension of devices, introduce a slow speed switch for devices that can exceed 6km/h, and ensure devices can negotiate uneven surfaces (Austroads, 2018).

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