

**National Transport Commission Issues Paper on Innovative Vehicles
Occupational Therapy Australia Submission
Originally due 28/2/2019; extended to 6/3/2019**

1. What characteristics need to be considered when defining what an innovative vehicle is?

An innovative vehicle's motor size measurement unit should be in Watt (W) rather than cubic centimetres (CC) that is commonly used in vehicles because it is typically powered by a smaller sized motor using batteries.

2. What differences between motorised wheelchairs and mobility scooters need to be recognised by this project?

Mobility scooters and wheelchairs are two different types of seated mobility device that serve different needs within the community and have completely different pathways in terms of assessment of need, funding and provision.

A scooter typically has three or four wheels on the ground, is longer than a wheelchair, has a tiller for operation and a generic seat. It is generally used by someone that has physical mobility restrictions, or is no longer able to drive a motor vehicle to access the community. They are generally a low-cost item (in comparison to motorised wheelchairs), and self-funded by the user. They may be chosen as an alternative form of transport by people who have no health or functional limitation or impairment. The choice may be solely related to lifestyle.

In comparison, a motorised wheelchair may come in many different configurations (i.e. rear, mid or front wheel drive, joystick controller), has a smaller footprint and is typically speed limited to 10km/hr in Australia. While it may also fulfil similar functions as a scooter, it has many more applications, especially for those with significant and complex disabilities. A wheelchair is often the only means of mobility for the user. A wheelchair may be vital to accessing the home, educational, work and community settings (both internal and external) and transport, as well as providing postural support, pressure care and access to other assistive technologies. A motorised wheelchair is often a high cost item, subsidised by government, and based on the assessment and recommendations of a qualified occupational therapist.

Occupational Therapy Australia would suggest that separate recommendations pertaining to mobility scooters and wheelchairs are made, otherwise there is a danger that

recommendations regarding the regulation, assessment or licencing of mobility scooters could potentially be applied to people who independently mobilise in power wheelchairs or manual wheelchairs with power assist; and also potentially to carers who operate attendant controls on power wheelchairs or manual wheelchairs with power assist. Due to the different needs, funding and provision of the two types of vehicles, recommendations for one are unlikely to be more than very broadly relevant to the other, if at all.

Please note that currently QLD is the only state that registers mobility scooters.

Scooters are generally on the road more and users need to be much more aware of road law and procedures, and much more aware of the environment around them. Cognition is a key issue. It is often thought that when drivers are forced to retire from driving due to cognitive deficits that they will be safe to use a scooter; there is no regulation around users going directly to the supplier to purchase a scooter

In addition, QLD no longer have the requirement to have medical review in order to have vehicle registered, thus there are significant state variations.

3. What uses of innovative vehicles need to be considered as part of this investigation?

All usage, as all usage related to an aspect of participation in society by the population. For example, as a means of getting from A to B, whether it's to the doctor's appointment, to the shops to get some groceries, or working people using it to get to work, or for work related activities, such as travel within the working day. Innovative vehicles may also be used by tourists as a means of transport while they are visiting the country.

4. What key factors need to be considered when determining safe rules of operation (including speed) for innovative vehicles on roads and road-related areas?

Mobility scooters have potential to be faster than motorised wheelchair – around 16km/hour (over 10km/hour- considered to be a vehicle). There are issues of compliance with these factors – for example, a scooter through a funding source such Department of Veterans Affairs (DVA) versus buying “off the rack”; supplier has programmed to maximum speed limit.

An additional important factor is the stability of the innovative vehicle. Innovative vehicles come in various shapes and structure unlike standard vehicles like cars and bicycles. We have to consider how would the innovative vehicle respond to an unlikely crash and how would it affect the user. Would the user need to have a safety belt on that keeps the user tied to the device? Would the user need to wear a helmet?

The demographics of user needs to be accounted for. Are most users young or older, how is their judgement and perception like on the road; likewise, how alcohol/drug intoxication is going to be managed in the use of these vehicles.

5. What evidence-based distinctions between acceptable and unacceptable levels of risk associated with the use of innovative vehicles could be considered to inform the way innovative vehicles are regulated?

There are currently no checks of age to ride these vehicles, and consideration may need to be given to how they are used in highly populated areas.

In terms of the evidence around risk (or incidents) for some innovative vehicles (primarily motorised scooters), Occupational Therapy Australia points to a research article by Kitching et al (2016) which looked at deaths related to motorised mobility scooters in Australia between 2000 and 2011 and found 77 fatalities during this period. 74 per cent of these deaths were people aged over 80, and 77 per cent were males. However, Occupational Therapy Australia noted in 2013 that over 60 per cent of the population of mobility scooter users is aged under 60 (ACCC, 2012). This may indicate that older people are more at risk as, according to this data, they are not actually the majority of users of mobility scooters. Mortensen and Kim (2016), in their scoping review of mobility scooter related research studies, found a paucity of information on the topic and stated that we need to better understand the frequency and cause of scooter related accidents and the efficacy of interventions to improve users' skills, mobility and safety. Occupational Therapy Australia would imagine that this paucity of evidence is true for all innovative vehicles. Further research in this area is clearly needed, in order to understand the extent of the problem and who it affects, and it is recommended that consistent coding is used between jurisdictions as terms to ensure that data collected is accurate.

The Kitching et al (2016) study found that fatalities were either due to collisions with motor vehicles, or falling from the scooter. Similarly, a study by Gitelman et al (2017) found that mobility scooter riders on roadways created dangerous situations, whereas on sidewalks or pavements they did not cause conflict with pedestrians. This study recommended urgent infrastructure adjustments to successfully manage an ageing population such as Australia's.

In 2013, Occupational Therapy Australia reported that information from the ACCC mobility scooter usage and safety survey indicates that infrastructure issues contribute to accidents, as poor infrastructure can require people using mobility scooters, and other forms of mobility devices, to travel on the road. At that time, Occupational Therapy Australia members

reported that consumers often need to travel on the road in both rural and urban areas due to the lack of footpaths, gradients that do not meet Australian design standards, and barriers such as broken footpaths or construction sites. Additionally, the lack of transport options for people with disabilities, particularly in rural or regional areas, means that people may have no choice but to rely on their mobility scooter. Whilst occupational therapists do not recommend mobility scooters as a replacement for a car or for use on the road, we are aware that mobility scooters are used in this way. Our members have also reported that some schemes actively discourage people from using both a car and a mobility scooter; whereas this may in fact be the combination that best meets the needs of that individual in their environment. Birtchnell et al (2017) used the term 'mobility justice' in their research article to describe balancing the needs of people who are not able to easily or always access cars and public transport within Australia's society. Similarly, Unsworth et al (2017) reported that the public transport system in Australia has many limitations – one key one being that it can be difficult or even on some public transport systems, not permitted to take a mobility scooter on board, thereby limiting how far a user can travel from their home base.

The issue of innovative vehicle usage should be considered part of an urgent broader government approach to improving transport options, including education and information on alternative modes of transport, and providing accessible environments for all Australians, particularly those in rural and regional locations, and as our population ages.

To have a nationally-consistent policy, registration may be an option to control and monitor. There are two ways to go about registering. The first is registering for the innovative vehicle which has been implemented in some states. This might be not be practical because there would definitely be a small fee to pay and many users will not want that. Registration for powered wheelchair users is complex for a range of reasons, and not recommended. The second method would be company registration. This may be a more practical method. Companies/Dealers of innovative vehicles would have to register themselves with a body that monitors and regulates policy to ensure that all goods sold adheres to the Australian Standards.

There is a significant challenge ahead to support older people and people with chronic health conditions and disabilities to achieve the ideal outcome of the population remaining active and engaged in society. In order to do this, the population needs to be mobile in the community, with innovative vehicles as well as the more widely known and recognised mobility scooters and powered wheelchairs being part of this.

The research reviewed for this submission as well as our members' input suggests that Australia has relatively poor infrastructure in urban areas, while in rural and regional areas infrastructure can be entirely non-existent. Infrastructure needs include good pavement/sidewalks which meet standards, and accessible non-car options for people around their communities. However, Australia has not yet adequately addressed policy development in this area (Somehalli et al, 2016), and planning to date has been car-centric. Thus, Occupational Therapy Australia welcome this paper's focus on innovative vehicles, however would like to stress again the importance of particular consideration being given to powered wheelchairs, particularly if sweeping changes to the registration and licencing process for such vehicles is being considered.

Occupational therapists are the key health professionals involved in assessing the need for mobility devices for people with health issues or disabilities that impact functional abilities, yet minimal research exists into this topic. Prescription of mobility devices is complex due to the range of physical, cognitive and environmental factors at play, and the negotiation of risk. Experienced therapists manage this better, and occupational therapists who are novices or new to this area of practice require support and supervision. Additionally, there are workforce issues, particularly in rural and regional Australia, in terms of consumers being able to easily access an appropriately skilled and experienced occupational therapist to adequately assess, advise and intervene (Maywald and Stanley, 2014).

6. What barriers and health or safety risks are associated with the use of a motorised mobility device that does not meet the needs of a user because of the current restrictions?

Mobility scooters also vary in quality and in the safe working limit and stability they offer in different environments. For example, some scooters are designed with higher safe working limits to meet the needs of the increasing bariatric population – limiting available speed may compromise some users when travelling on higher gradients or if they are of a higher weight. Fitting the device to user need is a complex task - heavier people choosing options such as double seated scooters could for example be a risk, due to the offset steering position these have. A member reported: In my experience, most customers are not concerned about the maximum speed of 10km/h. What they want is the features that would enable them to use the mobility scooter in the sort of terrain that they face.

7. How do current classifications of drivers of wheelchairs as both 'pedestrians' and 'vehicles' in the Australian Road Rules create confusion?

This does create confusion and Occupational Therapy Australia has been calling for change to this road rule since 2013. If a driver is both a pedestrian and vehicle it is unclear – both in a practical and legal sense - whether they should be using the pedestrian pathways or the road.

Furthermore, Occupational Therapy Australia members are unclear as to the advice to provide their clients regarding the Road Rules.

The terminology in the Australian road rules requires clarification and should differentiate between mainstream mobility options as well as disability specific mobility devices.

Occupational Therapy Australia recommends that this be urgently clarified. In the ACCC report, it is recommended that scooters travel on pavement/footpath where practicable, although this can cause major issues for those in regional, rural and remote areas where there are no pavements or footpaths in place, and the road is the only option. Please refer to the response to question 5 which discusses Australia's poor road infrastructure in terms of paths to support innovative vehicles, as well as regular vehicles such as bicycles, prams etc.

8. Is there a need for construction and performance requirements for motorised mobility devices to ensure safe use on public transport infrastructure?

Yes, this would ensure the safety of other public transport users. This would also help users know if their equipment is safe to go on public transport facility, which may be a concern for some people.

Many public transport issues exist in terms of access – buses too small for scooters and large powerchairs for example.

Trains typically have portable ramps when platforms aren't level; there has been an increase in platforms being made more accessible in Brisbane (Commonwealth games had influential factor on this), where international events have precipitated an enhancement of local infrastructure. This needs to happen Australia-wide.

9. What evidence is available on the road safety risks associated with motorised mobility devices that could be used to inform the way motorised mobility devices are regulated?

Should there be increased regulation of mobility scooters due to their use as a mainstream alternative transport option, people with limited mobility due to chronic health conditions or disability may be disadvantaged due to delays in obtaining a mobility device and the

increasing cost of licencing, insurance and assessments. Such regulation may be discriminatory under the DDA 1992, as per the Australian Human Rights Commission Advisory Note on Mobility Scooters in Registered Clubs, which defines scooters as a 'disability aid'.

Any recommendations should consider the impact that any licencing or other restrictions will have on the ability of people with chronic health conditions or disability to access their local communities, work, social activities and services.

Summary and Conclusion

Overall, Occupational Therapy Australia has made a number of key points in this submission which cover the differentiation between mobility scooters and other powered mobility devices and call for further research in the area. This submission addresses the urgent need for adequate infrastructure to support engagement with the community, particularly for Australians who are older and/or have disabilities, and welcomes the role that innovative vehicles may play in this.

Occupational Therapy Australia thanks the NTC for the opportunity to respond to this issues paper, and for the involvement we have had with this project to date.

Please be advised that we would be more than happy to elaborate further on the issues raised in our submission.

Reference list available on request.