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## **People with disability: the forgotten road user group**

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### **Abstract**

Transportation is a significant policy issue for people with disability. Accessible, affordable, safe and convenient transport is necessary for accessing education, health care, shopping, work and recreation and to participate fully in community and public life. Transport disadvantage, or ongoing difficulties associated with access to transport, can result in social exclusion and associated negative health and wellbeing effects, with specific sub-groups in Australia, including people with a disability, being particularly at risk (Rosier & McDonald 2011).

To assess the travel choices and current level of transport accessibility for people with disability in Western Australia, the Department of Transport conducted a survey in 2012 amongst people with a range of disability and their carers. A total of 608 people completed the survey, 37% male and 63% female. The average age category was 45 – 54 years old with a majority of people from the Multiple Sclerosis Society (37%) and the Association for the Blind (25%). Almost all of the respondents (96%) had public transport in their local area and 68% used it at least once per month. In contrast, 92% of respondents were either a passenger or driver of a private vehicle at least once per month. With respect to weekly transport choices, the most common mode of accessing work, recreation, shopping, education and medical appointments was the private vehicle (63%) followed by walking (17%). Public transport accounted for 5 – 20% of transport depending on the purpose of the destinations.

The results suggest that it is vitally important to continue implementing the Disability Standards for Accessible Public Transport Standards (2002) and improve access for people with disability to public transport, including taxis. Transport policy, however, should also consider further measures that maintain or improve access to a private vehicle for people with disability who need to use this mode of transport in order to avoid transport disadvantage. In addition, continued improvements in the local built environment (e.g. footpaths and connectivity) which facilitate walking for people with disability, especially to access local facilities and public transport, are also necessary to reduce transport disadvantage.

## 1.0 Background

Transportation is a significant policy issue for people with disability. Accessible, affordable, safe and convenient transport is necessary for accessing education, health care, shopping, work and recreation to participate fully in community and public life. Transport disadvantage, or ongoing difficulties associated with access to transport, can result in social exclusion and associated negative health and wellbeing effects, with specific sub-groups in Australia, including people with a disability, being particularly at risk (Rosier & McDonald 2011).

In recognition of the importance of public transport to people with disability, in 2002, the Federal government passed the Disability Standards for Accessible Public Transport (the Transport Standards) under the *Disability Discrimination Act 1992*. The Standards outline the measures that transport providers and operators should take in order to make public transport more accessible to people with disability (e.g. access paths, allocated spaces, handrails and boarding devices).

To assess the travel choices and current level of transport accessibility for people with disability in Western Australia, the Department of Transport conducted a survey in 2012 amongst people with a range of disability and their carers. This paper presents some of the salient results and outcomes of the survey and highlights the barriers of transport access for people with disability to inform policy direction in improving transport options for people with disability.

## 1.1 Disability defined

The Australian Bureau of Statistics (2009b) defines disability as ‘any limitation, restriction or impairment which constrains the performance of everyday activities and lasts for at least six months’. The types of disability are broadly defined in the *Disability Discrimination Act 1992* as:

- Physical disability (e.g. mobility impairments and paraplegia)
- Intellectual disability (e.g. autism and brain injury)
- Psychiatric disability (e.g. depression, mood disorders, schizophrenia and phobias)
- Sensory disability (e.g. hearing impairment, blindness, vision impairment)
- Neurological disability (e.g. epilepsy)
- Learning disability (e.g. dyslexia)
- Physical disfigurements (e.g. scars and birthmarks)
- Medical conditions (e.g. asthma, diabetes, chronic fatigue, allergies), and
- The presence of disease causing organisms in the body (e.g. hepatitis, HIV).

Other than the type (i.e. physical, psychological, sensory or intellectual), disability is also assessed on the level of severity. The severity is an indication of a person's limitations in the core activities of communication, mobility and self-care. Some people with disability have no specific limitations or restrictions in their core activities whereas others do and some also have a schooling or employment restriction. Approximately 78% of reported disability is associated with a core activity limitation. Core activity limitations are classified as profound, severe, moderate or mild. Approximately 40% of core activity limitations are classified as mild (ABS 2009b).

'People with disability', therefore, are not a homogenous group and having varying needs with many people having more than one type of impairment. Further, knowledge that a person has a disability, even if it classified as severe, does not necessarily indicate whether mobility constraints are an issue (Rosenbloom 2007). Examples of disability can range from the loss of eyesight or hearing which cannot be technologically corrected, to arthritis which precludes the performance of many daily activities, to advanced dementia that requires constant help and supervision. Transport operators, therefore, need to account for people with a wide variety of disability, such as wheelchair users, those with walking and balance issues, sensory loss, behavioural problems, losses of memory and the inability to learn or understand.

## **1.2 Disability in Australia**

According to the Survey of Disability, Ageing and Carers (SDAC), conducted by the Australian Bureau of Statistics (ABS) in 2009, there were approximately four million people in Australia (18.5%) who reported having a disability (ABS 2009b). Western Australia recorded 17.4% of the population with disability (ABS 2009b). Nationally, the most common cause of disability was back pain (15.6%) and arthritis (14.8%), with physical conditions accounting for the majority of disability (87%). Of people with a disability aged 15 – 64 years, 30% did not have any core activity limitations in communication, self-care or mobility (although they may have had a schooling or employment restriction), whereas 23% had a profound or severe limitation and 47% a moderate or mild restriction (ABS 2009b). Males and females were similarly affected by disability (nationally, 18% and 19% respectively) (ABS 2009b).

The prevalence and severity of disability has a linear relationship with age. In 2009, the disability rate for people aged 15 - 24 years was 6.6% and the rate successively increased with age, with 18% in the 45 – 54 age group and 31% aged 55 – 64 years having a disability (ABS 2012). Although more than half (52%) of people aged 60 years and older reported having a disability, almost two thirds (63%) did not require any assistance (ABS 2009b).

People with disability have lower labour force participation and educational attainment than people without a disability. In the 15 - 64 year age group, labour force participation was 54% for people with disability compared to 83% for those without a disability (ABS 2012). Women with disability were most affected with only 49% employed compared to 60% for men (ABS 2011). In addition, people with disability who were employed were more likely to work part time (38%) compared to people without a disability (31%)(ABS 2011). Labour force and education participation is also affected by the type and severity of disability. Labour force participation for those with mild or moderate disability was 53% compared to people with a profound or severe disability which was 31%. This pattern between severity and workforce participation is evident across all types of

disability. People with disability, therefore, tend to have lower incomes than people without disability (ABS 2011). In fact, close to half of people with disability are classified as at or near poverty and are 2.5 times more likely to experience poverty than Australians without a disability (ABS 2011).

Some people with disability require ongoing help and support by a carer. A carer, under the *Disability Services Act 1993*, is defined as a person who provides ongoing care or assistance to a person with a disability but who is not under a contract of service or doing community work. In Australia in 2009, there were 2.6 million (12%) carers for people with disability or old age (ABS 2009a). Approximately 29% of carers were the primary carer or the person who provided the majority of informal help to the person with disability. As with the prevalence of disability, the number of people caring increases with age. Carers in the 55 – 64 year old age group account for 22% of the population within that age group (ABS 2009a). Forty per cent of all carers are 55 years or older and 68% of carers are women. Due to the relationship between disability and age, approximately a third (33%) of carers have a disability themselves with 39% of primary carers reporting a disability.

### **1.3 Disability and the law**

The Australian Commonwealth, States and Territories have implemented a range of laws and regulations to ensure people with disability are treated fairly and can participate fully in public life. The *Disability Discrimination Act 1992* makes disability discrimination unlawful and aims to ensure people with disability have equal rights and opportunities in all aspects of life. The Australian Human Rights Commission leads the implementation of the Act. With respect to transport, the Disability Standards for Accessible Public Transport 2002 (the Transport Standards) provide transport operators and providers with certainty about their obligations under the *Disability Discrimination Act 1992*. The Transport Standards state that ‘access to public transport is crucial to the ability of people with disability, and their families and carers, to participate fully in community life’.

In 2008, the Federal Government ratified the United Nations Convention on the Rights of Persons with Disabilities which aims to enhance opportunities for people with disability to participate in all aspects of social and political life, including access to employment, education, health care, information, public transport (Article 9) and the built environment. Article 9 (public transport) states that people with disability should ‘be able to live independently and participate fully on an equal basis in the physical environment with obstacles and barriers to the accessibility of roads and transportation eliminated’. The National Disability Strategy developed in 2009 also considers inclusive and accessible physical environments, such as public transport, a priority area.

In Western Australia, the *Disability Services Act 1993* applies to the provision of services to people with disabilities and mandates specific requirements in relation to Disability Access and Inclusion Plans (DAIPs). The *Disability Services Act 1986* largely deals with the funding and provision of Federal support services for people with disability and focuses predominantly on employment services.

## 1.4 Transport for people with disability

The transport options for people with disability include modified or unmodified private vehicles (as either a driver or passenger), taxi, public transport (i.e. bus, train or ferry), walking, cycling and mobility scooters (i.e. Gophers) or other aids, such as wheelchairs, which are classified as pedestrian activities. Generally, the mode of transport depends on the level of independence of the person with disability, as well as their income. The latter is particularly pertinent for people with disability who generally have lower incomes and may be unable to afford extra transport costs, such as unsubsidised taxi's, expensive vehicle modifications or additional car trips, especially when the price of fuel increases. For people with disability on limited budgets and people who cannot drive at all (e.g. those who are blind), public transport is an important transport option (Hill 2010, Rosenbloom 2007).

Limited research suggests that many people with disability rely on private transport as their primary mode of conveyance. In 2009, approximately 80% of people with disability reported being either the driver or passenger in a car in the last trip prior to the survey (ABS 2009b). Only 7-8% of people used public transport as their last trip mode whereas 10 – 15% walked (this includes the use of wheelchairs, Gophers and other aids). For people with disability, the private vehicle (whether or not they drive) and walking are crucial transport options (Rosenbloom 2007). The reasons given for the use of private transport were mainly convenience and that it is quicker and/or easier to use than other modes of transport. Only ~6% of respondents stated that the lack of public transport was a reason for using private transport with a further 3% stating that problems with their health and/or disability precluded the use of public transport (ABS 2009b).

The dependency on the car by people with disability is generally not related to the availability of public transport in their local area. In 2009, 82% of people with disability had public transport in their local area whereas only half of these people used it (ABS 2009b). The use of public transport is related to the severity of disability and the age of the person, with the less severe a person's disability and the younger they are the more likely they are to use it. In 2009, 40% of those mildly limited in core activities used public transport compared to 20% of people who were profoundly limited in core activities (ABS 2009b).

The respondents to the SDAC (ABS 2009b) reported a range of problems and difficulties associated with the use of public transport. Of all people with a disability, 32% reported difficulties with public transport whereas 68% had no difficulties. Those with the greatest severity of disability were more likely to report having difficulties with public transport (60%) compared with mild disability (20%). Of the people who had difficulties with public transport, the problems varied with the nature of the disability. People with profound limitations stated that getting to the stops or station (38%) and getting in and out of vehicles/carriages due to the steps (48%) was their most common difficulty. In contrast, people with mild core activity limitations reported the greatest problem with public transport was the steps getting into or out of vehicles/carriages (23%) and fear and anxiety (14%) (ABS 2009b). Other difficulties reported included getting in/out of the vehicles due to the doors, the lack of seating, difficulty standing and pain or discomfort. Difficulties in using public transport, however, contributed to only 3% of reasons for people with disability not leaving home as often as they would have liked (ABS 2011).

It appears that despite the implementation of the Transport Standards in 2002 there are still significant barriers to the use of public transport by some people with disability. Problems with the safety, frequency and reliability of services, connectivity and transfer between home and bus stops and train stations, and the absence of direct services are considered the most salient problems of public transport by people with disability (AIHW 2011). The physical barriers which may impact on the use of public transport by people with disability include the height of the steps into the vehicle, the gap between the vehicle and the kerb/platform, the width of doors and passages, the layout of the interior of the vehicles, the size and number of travelling spaces and the lack of handrails. Other factors may include the provisions of lifts at train stations, the availability of clear signage for people with vision impairment, the use of announcements for people with hearing problems, the availability of toilets, the capacity to access bus/train stations (particularly the steepness of the ramps and footpaths) and the availability of multi-purpose taxis (ABS 2009b, Capability Scotland 2004).

The pedestrian environment is also an important component of mobility for people with disability, especially as walking (including the use of Gophers and wheelchairs) is necessary to access local facilities and public transport and is second only to the car as the preferred transport option (ABS 2009b). Consequently, available footpaths which offer a clear, obstacle free, short, direct and safe route to local area facilities and public transport is essential to prevent transport disadvantage for people with disability (Capability Scotland 2004).

### **1.5 Concessions and assistance**

In Australia, the cost of transport for people with disability is made more affordable by the issuance of concession cards and subsidies. The Disability Support Pension is paid to people whose disabilities prevent them from working and is administered under the Commonwealth's *Social Security Act 1991*. The Disability Support Pension Card is the most common concession card used by people with disability. With respect to public transport, this entitles the holder to be eligible for a Disability Support Pension SmartRider which allows free travel on Transperth services during certain hours. It can also provide concession or free travel on local council services. A carer of a person with disability may also travel free with the person holding the Disability Support Pension Card by obtaining a Transperth's Carers Permit or Companion Card. The ABS (2009b) reported that for people with disability who used public transport, 12% did not have a concession card. Of those who did have a concession card, the most common card was a pension or benefit concession card (18%) with the Seniors Card the next most common (7%).

Other forms of financial assistance which may impact on the transport options of people with disability include the Commonwealth Carelink scheme (part of Home and Community Care Services), the Specially Modified Vehicle Scheme, the Taxi User Subsidy Scheme (TUSS), the Mobility Allowance (Centrelink), ACROD parking and travel passes for people with vision impairment. In Western Australia, as part of the Royalties for Regions program (implemented by the Department of Regional Development and Lands), the Country Age Pension Fuel Card is available to people receiving the Disability Support Pension and covers the cost of fuel and/or taxi travel for up to \$500 per year.

## **2.0 Transport survey for people with disability**

Given that access to transport is vital to the wellbeing of a person with disability, a survey was developed in 2012 by the Western Australian Department of Transport to determine the travel choices and the extent to which people with disability and their carers have access to transport which allows them to participate fully in community and public life. The objectives of the survey were to:

- Determine the current use of the transport system and the transport choices of people with disability and their carers
- Elucidate the specific needs of people with disability and their carers with respect to their travel choices, and
- Identify transport related barriers for people with disability and their carers and suggest possible solutions.

### **2.1 Methodology**

The target population was people with a disability or their carers within Western Australia. The target population was reached through a range of disability organisations who distributed the survey. Fourteen disability organisations (plus Local Government Disability Access and Inclusion officers, ACROD and Carers WA) were identified and initially contacted by telephone. This was followed by an email containing further details of the study and a link to the survey. The disability organisations either emailed their clients directly or posted information about the survey on their websites or in newsletters. The majority of respondents were able to complete the survey online without assistance, although some required help which was provided by family or friends. Respondents who could not answer the survey online were posted hard copies and some respondents telephoned their answers. Data was collected during April and May 2012.

### **2.2 The survey instrument**

The online pilot survey instrument consisted of a total of 42 questions. Question Logic was used with respondents answering targeted questions according to their previous responses rather than completing every question. All respondents were asked demographic (i.e. age, sex, employment status, place of residence), about the nature of their disability and a range of transport related questions. The latter included questions on the use of concession cards and the availability and use of cars, taxis, multi-purpose taxis, Transperth services (i.e. bus, train and ferry) and community bus services. The barriers and difficulties associated with each transport mode were investigated by splitter questions which were asked to tease out additional responses regarding barriers and suggestions for overcoming these obstacles. Questions were also asked about the pedestrian environment, such as footpaths, and the physical capacity to reach work, leisure and social activities with the available transport options. Respondents were given multiple opportunities to provide comments and explain issues or barriers in detail.

### **3.0 Results**

#### **3.1 Demographics**

A total of 608 people completed the survey. Of the respondents, 37% were male and 63% female. The average age group of the respondents was 45 – 54 years with 70% being 35 years or older. The majority of the respondents (83%) lived within the Perth metropolitan area whereas 17% were from regional Western Australia (predominantly Albany, Bunbury and Kalgoorlie-Boulder).

Twenty one per cent of respondents were employed full time (>35 hours per week) and a further 21% were employed on a part time basis. Only 5% of respondents reported that they were unemployed and 13% stated that they could not work. The remainder of the respondents were retired (12%), students (16%) or performing home duties (7%).

Of the respondents, 61% belonged to a formal disability group which catered for their particular disability. The disabilities cited by respondents were diverse but the majority of respondents were from the MS Society (37%) and the Association for the Blind (25%). Over half of the respondents reported that they used a mobility scooter (i.e. Gopher) (27%) and/or had difficulty negotiating stairs or steep slopes (30%). A further 15% used mobility aids (e.g. crutches, walking frame or walking stick) and 18% had vision impairment. The sample contained a high proportion of people with mobility issues and may reflect the type of disability organisations contacted to distribute the survey.

#### **3.2 Transport concession cards**

The majority of respondents (70%) held a concession card. The most common concession cards were the Health Care Card (33%) and the Disability Support Pension Card (18%). Many also had Companion Cards (28%) which allows their carer to accompany them on public transport in metropolitan and regional areas. A further 28% of respondents were eligible for TUSS.

#### **3.3 Transport modes**

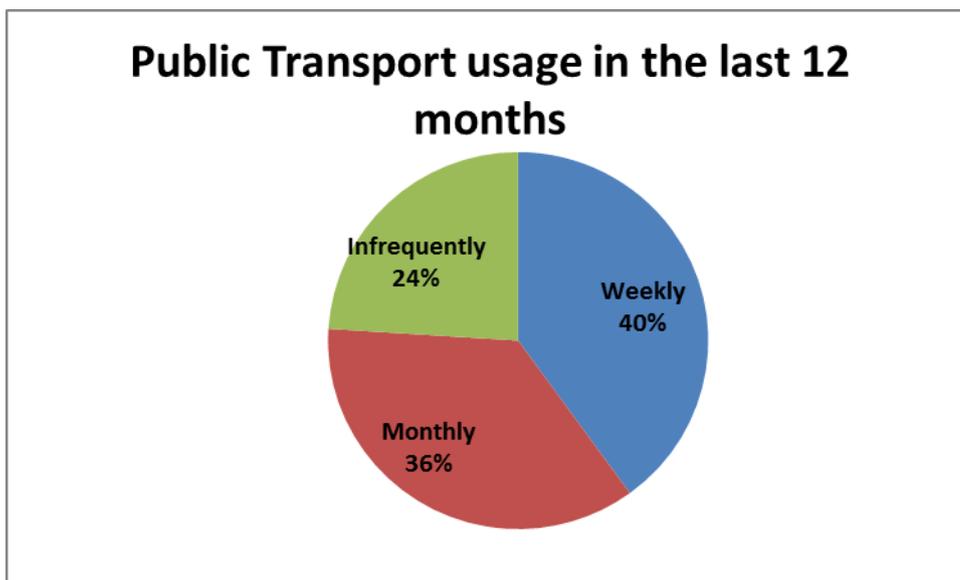
##### **3.3.1 Public transport use**

The great majority of respondents (96%) reported that public transport services were available in their local area. Of the survey respondents, 68% reported that they had used buses, trains or ferries within the last 12 months (Figure 1). Of the respondents who had used public transport within the last 12 months, ~40% used it weekly, 36% used it at least monthly and the remainder (24%) used it infrequently. Of the 68% of respondents who had used public transport, 41% reported difficulties due to their disability with its use and 59% had no difficulties. The common difficulties reported included:

- Getting in and out of the vehicle due to step height (44%)
- Lack of seating on crowded trains and buses (41%)
- Need of help or assistance (38%)
- Fear and anxiety (37%)
- Unconnected footpaths (37%)

- Inadequate wheelchair/Gopher access on trains and bus platforms (34%), and
- Vision problems (i.e. the inability to see bus numbers, train platform stopping details or the buttons to open train doors)(20%).

The relatively high proportion of respondents who reported difficulties with vehicle step heights (44%) may be due to the large proportion of respondents who had mobility issues, particularly with negotiating stairs or steep slopes (30%) or requiring the the use of mobility aids (15%). Of the people who had not used public transport in the last 12 months (28%), 71% stated that their disability prevented its use. However, over 30% of respondents commented that the main reason for not using public transport was the availability of private transport which was considered more convenient, flexible, direct, quicker and easier to use than public transport.



**Figure 1: Use of public transport in the last 12 months**

### 3.3.1.1 Taxi use

Of the respondents, 38% reported using a taxi occasionally whereas 14% used a taxi on a regular basis. Forty eight per cent of respondents did not use a taxi. Taxis appeared to be used mainly for ‘emergency’ situations or when there was no other transport alternative available (e.g. if travelling at night, unexpected need to travel and/or to get to an appointment/hospital). The main reason for not using a taxi was the expense (even with TUSS).

With respect to the use of multi-purpose taxis or wheelchair accessible taxis (WAT), 13% reported using them occasionally, 9% regularly and 77% reported they did not use them at all due to not requiring their use. For the people who did require the use of WAT, the major barriers to their use was the cost, the need to book in advance, and the unreliability and unavailability of the service.

### 3.3.2 Motor vehicle use

The use of the motor vehicle was the most common transport mode among the survey respondents. Ninety two per cent of respondents were either a passenger in a private vehicle or drove a vehicle over the 12 months prior to the survey.

Over half (55%) of the respondents reported driving a vehicle at least monthly whereas 45% never drove a vehicle. Of the people who drove (55%), 73% drove daily, 20% twice per week and 7% at least once per month (Figure 2).

Almost 30% of respondents were a passenger in a private motor vehicle daily, 41% were a passenger at least once per week and 21% were passengers at least once per month. Only 9% of respondents were never passengers in a car or other type of private motor vehicle.

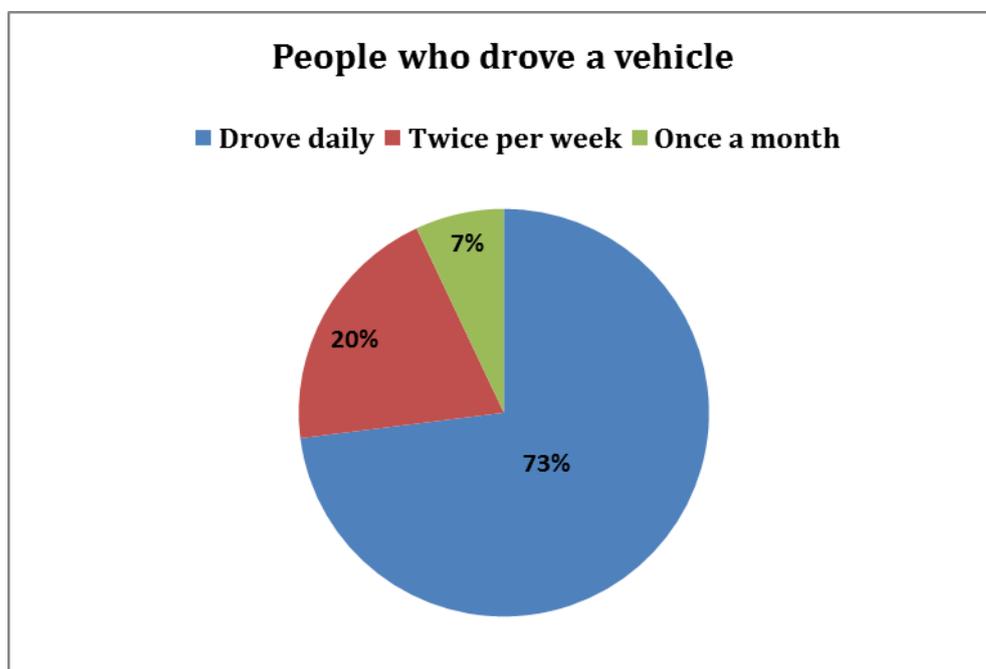


Figure 2: Proportion of people with disability who drive a car

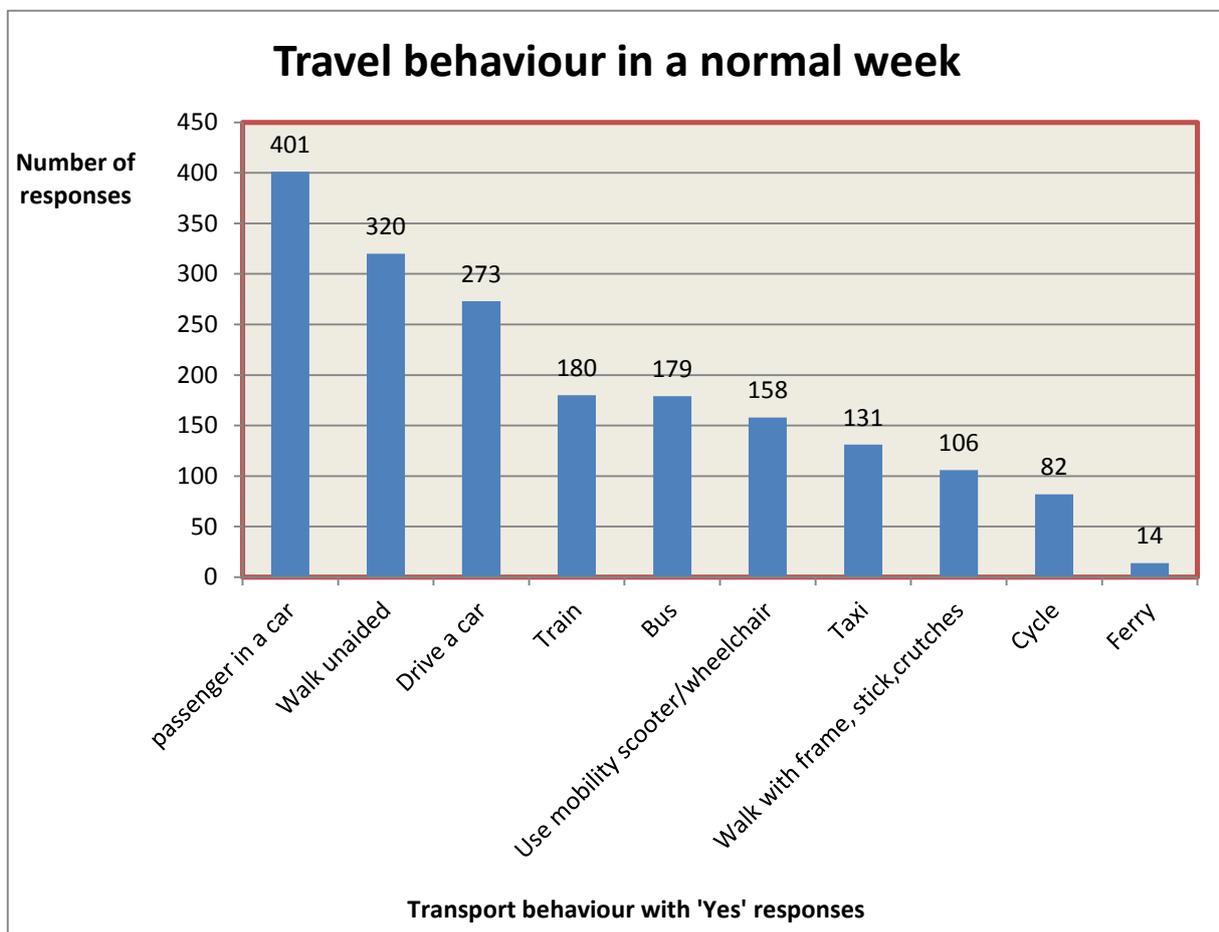
### 3.3.3 Use of the pedestrian environment

The ability to access public transport and local facilities, such as shops, depends on the characteristics of the pedestrian environment, such as footpaths and road crossings. Of the respondents, 58% reported that they had difficulties using footpaths due to their disability. The most common difficulties were lack of accessible footpaths (e.g. non-existent, too narrow or steep, stairs)(68%), hazards or obstructions on footpaths (e.g. bollards, signage) (55%) and wheelchair or Gopher accessibility problems (45%). Lack of adequate resting points (27%) and the inability to walk or stand for long periods (37%) was also highlighted by respondents.

Respondents were also asked to rate the level of difficulty experienced in getting to public transport facilities, including bus stops and train stations. Seventy seven per cent of the respondents stated they experienced varying levels of difficulty with 31% reporting it was very difficult and 28% somewhat difficult whilst 8% had no difficulty at all.

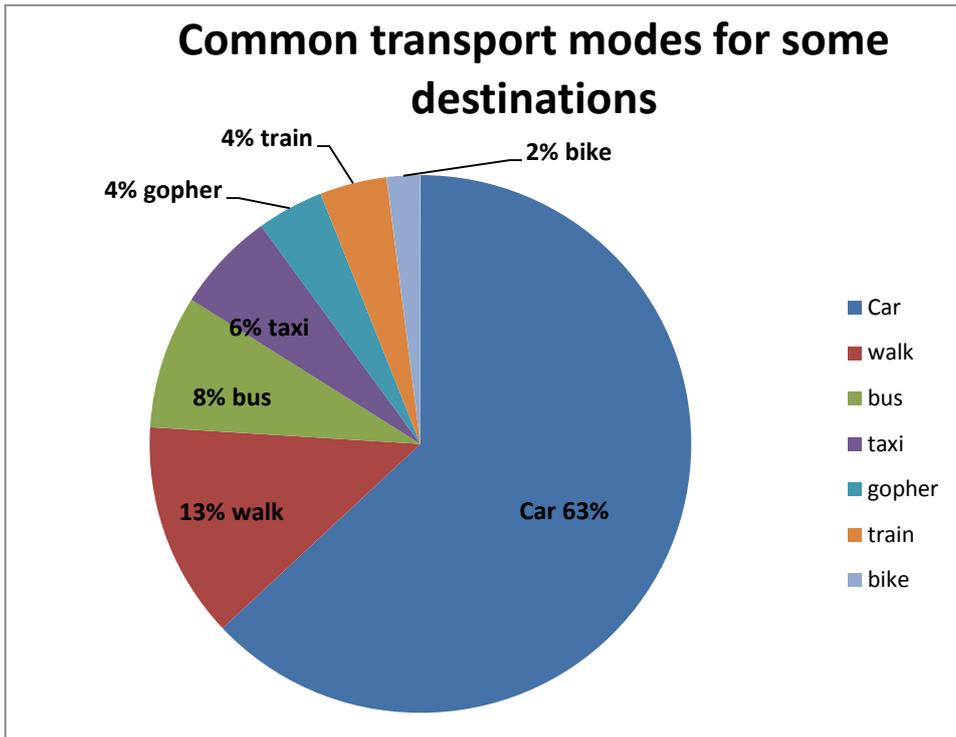
### 3.4 Weekly transport behaviour

The respondents were asked to indicate the various travel modes used in a normal week. 73% of the respondents indicated that they were a passenger in a car, 58% walked unaided; 50% drove a vehicle whilst 33% used the bus and 32% rode in a bus. (Figure 3). The most common reasons for accessing transport were for work (32%), recreation (33%), shopping (29%), study (16%) and medical appointments (13%).



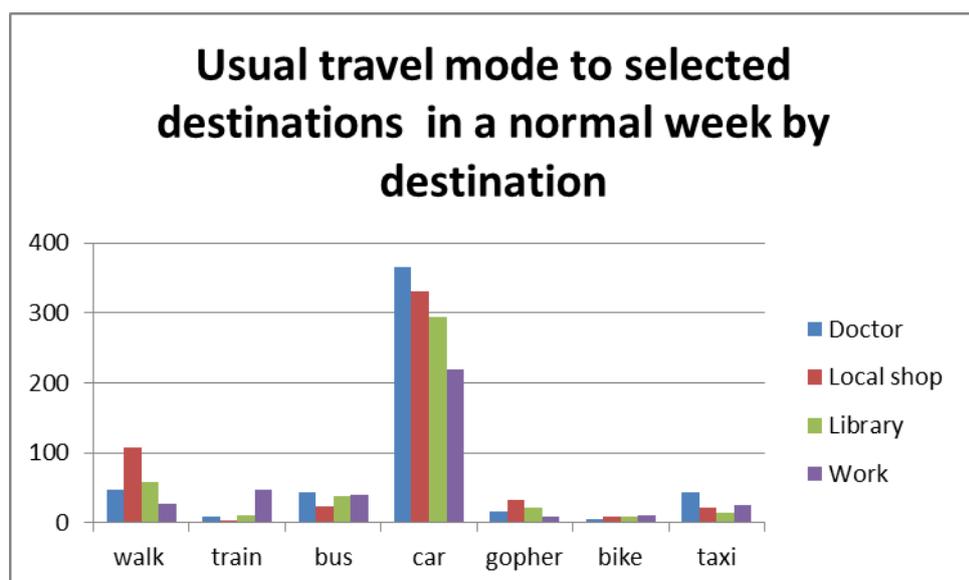
**Figure 3: Weekly travel choices by people with disability**

The modes of transport used to access different travel destinations (i.e. work, recreation, shopping, education and medical appointments) varied slightly depending on the purpose of the journey. The most common mode of transport chosen to access all the destinations, however, was travel by car 63% followed by walking 17% (including 4% Gopher), bus 8%, taxi 6%, train 4% and bike 2% (Figure 4).



**Figure 4: Mode of travel chosen by people with disability**

The proportion of respondents travelling by car was the highest to medical appointments (69%) and the lowest for travel to work (58%). The proportion of people walking was highest for trips to the local shops (26%) (including 6% Gopher) and lowest for travelling to work (10%) (including 3% Gopher). Public transport use was the highest for travel to work (13% train and 10% bus) and lowest to the local shops (4% bus and 1% train) (Figure 5). Overall, the private vehicle is the most frequently used travel mode for people with disability followed by walking.



**Figure 5: Modes of travel to different destinations chosen by people with disability**

In the month prior to the survey, 35% of respondents reported an inability to participate in fun or recreation activities due to transport unavailability. The reasons given for the lack of availability was insufficient night time and weekend services, unreliability of multi-purpose taxis, the cost of taxis, fear or anxiety about using public transport at night, lack of support (i.e. carer, family or friends), and crowded trains, no parking capacity close to the venue and lack of universal access at Subiaco Oval for the AFL. Fourteen per cent of respondents also stated that they had run out of essential items in the month prior to the survey due to insufficient funds, the inability to carry a large amount of shopping on public transport and/or the necessity to also hold a guide dog and the lack of support from other people, such as family or friends.

Many respondents provided suggestions to assist in increasing transport accessibility for people with disability. The most common responses were related to the pedestrian environment, such as more footpaths (especially leading to public transport nodes and local facilities), wider footpaths to accommodate a range of users, safer crossings (including rest spaces on the median strip), more connectivity between paths, more on/off points to the footpaths, less steep ramps, better maintenance of paths (i.e. some paths are uneven) and less obstructions (i.e. bollards, signage, bins, cars parked over footpaths). Further, people who are hard of hearing or rely on hearing for their communication, find it difficult with continual traffic noise and so better placed footpaths was another suggestion. With respect to public transport, more carriages on trains so they are not so crowded, more accessible frequent buses, more restraint devices on trains and buses, better maintenance of buses (i.e. the ramps are often not functioning) and improved alignment of the vehicle step height with the curb or platform, were the most common suggestions.

### **3.5 Limitations**

How accurately the respondent sample represented people with disability in Western Australia could not be determined from the survey response rate. This is because although the survey was sent to a number of disability organisations which distributed the survey to their clients, it appeared that these clients then forwarded the survey to their friends or family (and which accounts for the 39% of respondents who did not belong to a disability organisation). Consequently, the number of people who received the survey but declined to respond could not be ascertained and the response rate for the survey could not be calculated. Given that most of the survey results are consistent with the data collected by the ABS (except for gender and employment rate), however, it could tentatively be assumed that the sample is representative of people with disability in Western Australia.

There was a significant difference in the proportion of males and females responding to the survey (37% and 63% respectively) compared to the proportion of each gender with disability in Australia which is approximately equal. The high proportion of female respondents may be due to more females having access to a computer and/or more time or inclination to complete the survey than males. The higher proportion of females in the study may have been the reason for the relatively low employment rate (~42% total) recorded as females with disability have a significantly lower employment rate than males.

The mode of transport utilised by people with disability would likely vary between urban and rural areas. The provision of public transport differs significantly between urban and rural areas and there are also geographical, physical infrastructure and cost differences which may influence the transport mode for people with disability in rural areas. The results from rural (17%) and urban (83%) respondents, however, were combined and this may have affected the results.

A large proportion of the respondents were from the MS Society (37%) and the Association for the Blind (25%) and 18% of respondents were from the cities of Stirling and Joondalup. Both factors may have influenced the results. Finally, the data did not differentiate travel choices by age, gender, the degree of severity of the disability, household income, car ownership or licensing status.

#### **4.0 Discussion**

Transport availability is vitally important for participation in all aspects of community, social and public life in Australia, from accessing work to leisure activities. Transport disadvantage, or the inability to easily access transport, has an important role to play in social exclusion and the associated negative health and wellbeing effects. People with disability are at higher risk of transport disadvantage compared to people without disability, due predominantly to the impact of their disability on the capacity to access a range of transport modes but also low income and age (Disability Rights Commission 2003).

In recognition of the importance of transport to the health, wellbeing and social cohesion of people with disability, the Commonwealth, states and territories have passed laws and regulations since 2002 which aim to address the transport issues of people with disability. With respect to public transport, since the implementation of the Disability Standards for Accessible Public Transport (the Transport Standards) in 2002, there have been some general improvements in access for people with disability to public transport, largely due to modifications of the vehicles and associated infrastructure and the availability of multi-purpose taxis. However, a recent review of the Transport Standards states that there appears to be a continued lack of confidence in the reliability of accessible public transport, safety issues with restraints of mobility aids in buses and taxis and a lack of 'whole of journey' accessibility for people with disability (The Allen Consulting Group 2009). Many respondents in the survey reported ongoing barriers to public transport use.

It appears that people with disability prefer not to use public transport if other transport options are available (Schmoker et al 2008). Ninety six per cent of people with disability had access to public transport in their local area and 68% used it over a 12 month period. Of the people who used it, 40% reported difficulties with its use due to physical (e.g. step heights, over-crowding, inability to see bus numbers), spatial (e.g. unconnected paths and inadequate wheelchair access to trains stations and bus stops), social (e.g. lack of family, friends or carers to offer help or assistance) and psychological (e.g. fear, anxiety) barriers. When considering weekly travel choices, public transport was utilised for 12% of all trips on average, with the highest usage for trips to work (~22%). Although it cannot be completely determined due to deficits in the research, it does appear that people with disability have a higher usage of public transport than people without a disability (~5% of all trips in Western Australia) (Department of Planning and Infrastructure [DPI] 2006) and reflects its importance as a

transport option. As improvements in public transport access have been shown to increase public transport use (Schmoker et al 2008), it is important that the implementation of the Transport Standards continue to progress in providing the kind of transport provision that allows people with disability to live full and active lives. Public transport is an important transport mode for people with disability, especially those who have limited resources and/or cannot drive at all (e.g. visually impaired).

People with disability generally have lower access to cars and drive less than people without disability (ABS 2007), but nonetheless, the most common mode of transport from the survey was as a passenger in a private vehicle (73%) or as the driver (50%). For weekly trips, the private vehicle comprised 58% - 69% of trips depending on the destination. The private vehicle was considered quicker (i.e. less planning and travel time required) and more direct, required less effort to access, was more flexible, convenient and safe and afforded more control than other forms of transport. The private vehicle was also vitally important for people who were unable to walk or to use public transport. The evidence suggested that the dependence on the private vehicle for people with disability increases with age (Schmoker et al 2008) and the severity of the disability (which also increased with age) (ABS 2009b). For some people with disability access to private vehicles is necessary to avoid transport disadvantage and this is expected to rise as the population ages and the severity of disability increases. Despite being the most common mode of transport for people with disability, however, it appears from the available research that the percentage of trips in a private vehicle for this group is significantly lower than that for people without a disability (63% compared to ~84%) (DPI 2006).

Walking is a mode necessary for the successful use of all other transport modes, as well as for personal mobility (Rosenbloom 2007). For example, an accessible bus, train or ferry is unusable if it is not easily accessible due to the lack of physical infrastructure. The results showed that walking was the second most popular mode of weekly transport for people with disability (10 – 26%), with trips to local facilities associated with the highest amount of walking including Gopher and wheelchair users. Despite what would be expected, it appeared that people with a disability use walking for a higher percentage of trips compared to people without a disability (17% compared to ~10%) (DPI 2006), although the research is limited. Barriers to pedestrian travel for people with disability, particularly in accessing public transport, included a lack of footpaths (especially on both sides of major roads), unconnected pathways, unsafe crossings, paths too steep or narrow, lack of sufficient on/off ramps to footpaths, poorly maintained paths and many obstructions (e.g. cars parking over footpaths, signage and bollards). Generally, the most significant problems mentioned in the survey by people with disability were barriers in the pedestrian environment rather than on the vehicles. This highlights the ongoing need of effective transport policies and the implementation of local government DAIPs in order to continue to improve pedestrian features of the built environment and the social inclusion of people with disability.

The current transport policy focuses on minimising single occupant car use in order to reduce traffic congestion, air pollution, noise and greenhouse gas production, and promote alternative forms of transport which also have the capacity to improve health, such as public transport, walking, cycling and car-pooling. People with disability are implicitly included in this policy; however, a socially responsible transport system would also recognise that some people with disability require access to

a private vehicle, as either a passenger or driver, in order to prevent transport disadvantage and implement appropriate services and subsidies to facilitate this. Potential measures to maintain or augment car use for people with disability include expansion of ACROD parking, minimising costs of private vehicle use (e.g. provision of Fuel Card, rebates on registration, subsidies for vehicle modification, parking concessions), modifying road conditions for disabled drivers (e.g. reducing speeds in residential areas which also incidentally improves community liveability), enhancing driver abilities (whether it is the person with disability or their carer), providing ongoing driver training, and the production of vehicles suited for people with disability (e.g. good access features such as wide doors, reversing and parking aids, cruise control, power steering, seats which can pivot and rotate, easy park brake operation and easy to operate control buttons and levers) (Rosenbloom 2007). Similarly, measures should be adopted for people with disability to travel as a passenger (e.g. swing-out passenger seats, wheelchair racks) and for private vehicles to be accessible to those who cannot transfer from their wheelchair. Additional measures could include car sharing and a volunteer driver scheme. As the population ages and disabilities become more severe, policy measures to ensure that people with disability who need access to private vehicles can achieve this will become more important.

Effectively addressing the transport needs of the heterogenous group of 'people with disability' by formulating further appropriate policies and programs will require cooperation between professions and agencies, including transport planners, land-use planners, urban designers, community services, public transport authorities, peak disability organisations and engineers, to name a few. The barriers to car use and pedestrian travel for people with disability should be an important focus in formulating future transport policies which aim to minimise transport disadvantage for people with disability.

## **5.0 Conclusion**

The major transport mode utilised by people with disability is the use of a private vehicle, whether as a passenger or a driver, followed by walking. In order to prevent transport disadvantage for people with disability, therefore, the policy focus should be on not only improving public transport but also keeping those people with disability who require a private vehicle able to access this mode for as long as possible. Further, the capacity for people with disability to access local facilities and public transport through walking can be augmented by improving the pedestrian environment. Improving transport options for people with disability will require collaboration across agencies, policies and programs and extensive liaison with people with disability themselves.

## **6.0 Further research**

The pilot survey has highlighted further areas for research, including:

- An in-depth investigation of the reasons for private vehicle use by people with disability
- Determination of the proportion of people with disability who own or have access to a private vehicle and the specific transport issues for those who do not
- A more detailed exploration of the barriers in the pedestrian environment for accessing public transport by people with disability (e.g. footpaths, bus shelters)

- A closer examination of the barriers to using public transport by people with disability (e.g. height of SmartRider machines) and the extent to which they deter public transport utilisation
- Analyse the transport options available in regional areas for people with disability
- A detailed comparison of trips and trip choices between people with and without a disability
- Investigation of travel choices by age, gender, severity and type of disability, household income, car ownership and licensing status.

“The odds are pretty good that many ‘normal’ people reading these words will become disabled within twenty or thirty years, and many readers with disabilities will become people with multiple disabilities” (LJ Davis 1995).

## 7 References

Australian Bureau of Statistics 2012, *Australian social trends, March quarter 2012*, Cat. No. 4102.0, Author, Canberra

Australian Bureau of Statistics 20011, *Disability Australia 2009*, Cat. No. 4446.0, Author, Canberra

Australian Bureau of Statistics 2009a, *Caring in the community, Australia*, Cat. No. 4436.0, Author Canberra

Australian Bureau of Statistics 2009b, *Survey of Disability, Aging and Carers*, Cat. No. 4430.0, Author, Canberra

Australian Bureau of Statistics 2007, *Western Australian statistical indicators, general social survey*, Cat. No. 1367.5, Author, Canberra

Australian Institute of Health and Welfare 2003, *Disability: the use of aids and the role of the environment*, AIHW Cat. No. DIS 32, Author, Canberra

Capability Scotland 2004, *The influence of public transport provision on the social exclusion of disabled people in Scotland*, Author, Edinburgh

Department for Planning and Infrastructure 2006, *Perth and regions travel survey: key findings report*, Author and Data Analysis Australia, Perth

Disability Rights Commission 2003, *An overview of the literature on disability and transport*, [www.leeds.ac.uk/disability-studies/archiveuk/wilson%20louca/DRCTransportLitreview.pdf](http://www.leeds.ac.uk/disability-studies/archiveuk/wilson%20louca/DRCTransportLitreview.pdf)

Field MJ & Jette AM (eds) 2007, *The future of disability in America*, The National Academies Press, Washington

Goggin, G & Newell, C 2005, *Disability in Australia: exposing a social apartheid*, University of New South Wales Press, Sydney

Hill, E 2010, *Transportation of people with disabilities in New York State*, Report 33, Burton Blatt Institute, Syracuse University

Rosenbloom, S 2007, 'Transportation patterns and problems of people with disabilities', In Field, MJ & Jette, AM (eds) 2007, *The future of disability in America*, National Academies Press, Washington

Rosier, K & McDonald, M 2011, *The relationship between transport and disadvantage in Australia*, Communities and Families Clearinghouse Australia, Australian Institute of Family Studies, Melbourne

Schmöcker, JD, Quddus, MA, Noland, RB & Bell, MGH 2008, 'Mode choice of older and disabled people: a case study of shopping trips in London', *Journal of Transport Geography*, vol. 16, no. 4, pp. 257-267.

The Allen Consulting Group 2009, *Review of the Disability Standards for Accessible Public Transport*, Report to the Minister for Infrastructure, Transport, Regional Development and Local Government and the Attorney General, Author, Canberra