

# The relationship between transport and disadvantage in Australia

Kate Rosier & Myfanwy McDonald

This Resource Sheet is designed to provide practitioners and policy-makers who plan and/or deliver services to children and families, especially within disadvantaged communities, with an understanding of how transport and disadvantage intersect and why some groups are especially vulnerable to transport disadvantage.

#### Key messages

- Ongoing difficulties associated with access to transport are commonly referred to as "transport disadvantage". As Australia has comparatively high levels of car ownership, difficulties associated with maintaining private transport (e.g., financial stress related to initial cost of purchase, as well ongoing costs such as petrol, insurance, car purchase and maintenance) could also be included in the overall definition of transport disadvantage.
- The proportion of Australians who feel they cannot or often cannot get to places they need to visit is fairly small (4%). However, Australians in the bottom income quintile are much more likely to experience transport difficulties than those in the top income quintile (9.9% and 1.3% respectively) (Australian Bureau of Statistics [ABS], 2006).
- Transport disadvantage is experienced by specific sub-groups in the population, for example, families with young children, people with a disability and Indigenous Australians. Transport disadvantage is also common in specific geographical locations such as outer-urban (or "fringe") areas, rural and remote Australia.
- In outer-urban areas transport disadvantage is the result of a range of intersecting factors including poor public transport infrastructure, a higher proportion of low-income households and the need to travel further distances in order to get to places of employment, services and activities.
- Rural and remote areas of Australia have low levels of public transport access. Some remote areas have relatively low levels of vehicle ownership.
- Transport options for Indigenous Australians in remote communities and communities located in fringe urban areas are limited. A significant proportion of Indigenous Australians living in remote areas have no access to public transport and one-third have no access to a car. Cars in remote Indigenous communities are heavily used and, due to the fact that they are often purchased second hand and used in rough terrain, maintenance is expensive and they often have a short lifespan. Even outside of non-remote areas a significant proportion of Indigenous Australians have no access to public transport.
- Young mothers and sole parents are particularly vulnerable to transport disadvantage. For these groups, transport difficulties can play a key role in social exclusion.
- Public transport can be difficult for people with a disability. Factors such as accessibility, communication about changes or cancelled services and malfunctioning equipment (e.g., lifts to train platforms) can all contribute to transport disadvantage for people with a disability.



# Why is it important to understand the relationship between transport and disadvantage?

Transport difficulties are consistently identified as a factor that restricts Australian families' capacity to access services and participate in activities (Carbone, Fraser, Ramburuth, & Nelms 2004; Cortis, Katz, & Patulny, 2009). These difficulties include limited or no access to public transport, non-family friendly transport options, and not being able to afford—or experiencing stress as a result of—the cost of transport. The phenomenon of transport difficulties is commonly referred to as transport disadvantage (or "transport poverty") (Wadiwal, 2005).

Both socially advantaged and socially disadvantaged people can experience transport disadvantage, however the nature of this disadvantage differs. For socially disadvantaged groups transport difficulties tend to relate to the ability to access transport and the costs of travel whereas for socially advantaged groups transport difficulties tend to relate to traffic congestion and time availability (Currie et al., 2010). For low-income families living in outer-urban, remote and rural communities in Australia transport difficulties can be especially problematic.

Extensive research has been conducted in the United Kingdom regarding the relationship between transport and social exclusion (Stanley, Stanley, Vella-Brodrick, & Currie, 2010). However, in Australia, issues surrounding transport tend to be integrated into broader studies about disadvantage rather than being the primary focus (Dodson, Burke, Evans, Gleeson, & Sipe, 2004). There is emerging research regarding the relationship between transport and disadvantage and transport and social exclusion in Australia (Currie et al., 2009, 2010; Dodson et al, 2010, Stanley et al., 2010) however this research focuses exclusively upon the eastern states/territories. In the field of policy, the links between public transport and social policy goals—such as employment, child welfare and education—in Australia have not been thoroughly explored. Rather, transport has traditionally been viewed from an economic rather than a social paradigm (Dodson et al., 2004).

This Resource Sheet provides an overview of research that investigates the relationship between transport and disadvantage in Australia. There is a specific focus on transport disadvantaged areas, Indigenous Australians, families with young children and people with a disability. It concludes with some comments on the implications of this body of research for practitioners and policy-makers.

# What is transport disadvantage?

Transport disadvantage is typically defined as a difficulty accessing transport as a result of cost, availability of services or poor physical accessibility. However, recent research suggests that in Australia transport disadvantage does not only concern difficulty *accessing* transport but also, in a country that is highly dependent on cars, difficulties associated with *maintaining private transport* (e.g., financial stress related to the cost of petrol, car insurance, car purchase, maintenance and repairs) (Currie et al., 2009). Hence, for the purposes of this Resource Sheet, transport disadvantage is defined as difficulties accessing transport (both public and private transport) and/or difficulties associated with maintaining private transport (i.e., cars).

# How prevalent is transport disadvantage in Australia?

The 2006 General Social Survey reported that 84% of Australians find it comparatively easy to get to places they needed to visit, 12% felt they sometimes had difficulty and 4% of Australians felt they could not or often could not get to places they needed to visit (ABS, 2006).

Although the proportion of Australians who feel they cannot or often cannot get to the places they need to visit is fairly small, there are two significant points to make in relation to these statistics. Firstly, this data does not indicate the proportion of families that are experiencing difficulties as a result of the cost of maintaining private transport. In other words, even if someone reports they find it comparatively easy to get to where they want to go they may be experiencing financial stress as a result of being able to do that.

Research conducted in Australia suggests that rather than go without transport, individuals living in areas with poor levels of public transport are more likely to use a car despite the costs associated with car ownership (Currie et al., 2009; Stanley et al., 2010). Although there are no Australia-wide figures available on "transport stress", a study conducted in Melbourne suggests that transport costs were a "major issue" for low-income households with two or more cars in the outer urban areas of Melbourne (Currie et al., 2009). For these households, operating two or more cars represented "as much as 50% (or more) of total income" (Currie et al., 2009, p. 99).

Secondly, it is important to note that the experience of transport disadvantage is more common for Australians on a low income. Australians in the bottom income quintile are much more likely to experience transport difficulties compared with those in the top income quintile (9.9% and 1.3% respectively) (ABS, 2006).

Addressing the problem of transport disadvantage is not only important to assist individuals to become more mobile for the purposes of employment, education, relationships and so on, it is also an important step towards a more equitable society, in line with the Australian Government's principles of social inclusion.

## Transport disadvantaged areas and transport disadvantaged groups

To fully understand transport disadvantage, it is necessary to recognise the difference between transport disadvantaged areas, and transport disadvantaged groups (Hurni, 2007). Some groups within the community are more likely to experience transport disadvantage more than others, for example: young people, women, unemployed people and those on low incomes (Currie & Senbergs, 2007; Currie, Stanley & Stanley, 2007).

In addition to being more prevalent amongst some groups, transport disadvantage is also more prevalent in some geographical locations. For example, households in outer-urban areas of Australia typically have less frequent, less available (e.g., nights and weekends) and less accessible (i.e., stops and stations are not in a convenient location) public transport than urban areas. Because of their location, residents living in these areas are often required to travel longer distances to work or access services than residents in inner and middle suburbs. These areas are described as transport disadvantaged areas (Hurni, 2007).

The following discussion considers transport disadvantage in urban and then rural and remote Australia. This is followed by a consideration of transport difficulties for three specific sub-groups in the population: families with young children, people with a disability, and Indigenous Australians.

### Transport disadvantage in urban Australia

Transport disadvantage in urban Australia areas has been exacerbated by major social structural changes. Limited housing affordability in Australian cities, for example, has forced low-income households out of inner-city areas into outer-urban locations (Burke & Hayward, 2000). These outer-urban locations were developed after World War II when there was a shift towards carbased urban planning. As a result, outer-urban areas in Australia often have the most inadequate public transport services (Currie et al., 2009, 2010; Mees, 2000).

The majority of transport difficulties in urban areas appear to be concentrated in outer-urban areas. Although some groups may experience difficulties accessing transport in other urban



areas (i.e., inner-city and "middle-suburban" areas) outer-urban areas stand out as areas that are characterised by transport disadvantage on a community wide scale. In other words, as a general rule, transport difficulties in these areas are not limited to individual characteristics (e.g., old age, young families)—as tends to be the case in inner-city and middle suburbs—but are a characteristics of the geographical areas themselves.

A concentration of low income households in outer-urban areas, coupled with poor public transport infrastructure, means that those least able to afford private transport are also those living in the areas with the most inadequate public transport services. However, this has not led to lower levels of car ownership in these areas. Research has demonstrated that in both Sydney and Melbourne, car ownership in outer-urban areas is higher than inner urban locations (Currie et al., 2010; Dodson, Gleeson, & Sipe, 2004). Although car ownership is a choice, some researchers suggest that in some regions in Australia—especially outer-urban areas—there is a phenomenon of "forced car ownership", defined as:

[an] involuntary choice low-income families have when owning and operating cars because no other transport options are available but they need the accessibility which a car brings. (Currie et al., 2009, p. 99)

It is theorised that forced car ownership results in financial stress and there is some evidence to support this claim. For example, Currie et al.'s (2009) research in Melbourne showed that low-income households with two or more cars spent a higher share of their income on costs such as registration and insurance and less on car expenditure. Their cars are also likely to be on average, almost 2 years older that other households in outer Melbourne, suggesting that their cars are more expensive to maintain. These households also travelled more often and considerably further in their cars than Melbourne residents in middle suburban areas, suggesting higher travel financial costs.

Forced car ownership would appear to be an especially significant issue for young families, as Currie et al.'s (2010) research showed that a typical low-income household with two or more cars is a young family with children. These families often comprise of at least one employed person and a high proportion is yet to pay off their mortgage.

Interestingly, despite the figures suggesting high levels of financial stress as a result of car ownership, subsequent research undertaken by Currie et al. (2010) showed that only 35% of low-income households in the urban fringe of Melbourne reported that "transport costs were a substantial portion of their income" (p. 290).

In Currie et al.'s (2010) recent research the authors contested the concept of forced car ownership. In a survey of households in Melbourne (535 households in total) researchers found that low income households living in outer-urban areas who had two or more cars had made a deliberate choice about home location, none regretted this decision and a strong majority reported that the benefits of living where they did outweighed the cost of running a car. Nevertheless, that does not exclude the possibility that if better public transport options were available to them the stress associated with owning and maintaining a car would decrease (as they have an alternative option for travel).

Currie et al.'s (2009) research in Melbourne demonstrated that for those households in outer-urban areas that do not have a car, the dominant form of transport is walking (represents 54% of all trips made by "zero car" households). Typically, low-income households with no car living in outer-Melbourne are older, living in a single person household with a high share of rented accommodation and on a pension. A sub-group of these households comprise of unemployed single mothers living in rented accommodation (Currie et al., 2010).

<sup>1</sup> For low-income households in outer-urban areas the choice to have a car appears to be highly dependent on their distance from activity centres (Currie et al., 2009). In other words, if the household is within walking distance from activity centres these households are less likely to own a car. This supports the theory that car ownership for low-income households in outer urban areas is not a choice but a result of a lack of other options (e.g., walking).

Not surprisingly, low-income zero car households make significantly fewer trips than households with high car ownership (two or more cars) and have greater difficulties with travel. However, in Currie et al.'s 2010 research, these households reported that they believed they were more able to participate in activities as a result of not having to spend money on car ownership and upkeep and that "alternative options met all of their transport needs" (p. 294).

#### Transport disadvantage in rural and remote Australia

Transport in rural areas, with scattered populations trying to access necessary services based in far-off places, is a worldwide challenge (Nutley, 2003). Some countries have rural populations that are sufficiently large enough, and distances that are short enough, to justify rural public transport services (e.g., Japan and the United Kingdom) (Nutley, 2003). However, a small number of countries (i.e., US, Canada, Australia and New Zealand) have low-density rural populations and long distances. In these countries, rural public transport is often not viable (Nutley, 2003).

Low levels of public transport access and use outside urban areas is reflected in the statistics from the 2006 census. The proportion of Australians outside capital cities who travel to work or study via public transport is only 1.7%, compared to 19.1% of Australians living in capital cities (ABS, 2008).

Although in some medium sized rural towns public transport (e.g., buses) may be available, "higher-order services" (i.e., services for very long journeys) are often limited (Nutley, 2003). Although air travel may be an option in some cases, in 2003 Nutley noted that no research has been conducted into who uses air travel, or inequities in access in rural areas (as a result of, for example, the high cost of air travel to and from rural areas).2

Public transport in rural and remote areas of Australia has been overlooked in the research and policy domains, as it has typically been assumed that transport is not a significant problem because of high levels of car ownership (Nutley, 2003). Nutley's research in South-East Australia challenges this assumption as it relates to remote areas. Nutley's (2003) research investigated transport-related problems in rural and remote areas of NSW, Victoria and South Australia by looking at patterns of vehicle ownership. The research showed that there is relatively low vehicle ownership in the most remote areas of South-East Australia.<sup>3</sup>

# Transport disadvantaged groups

Some groups are more likely to experience transport disadvantage than others (Currie & Senbergs, 2007; Currie, Stanley, & Stanley, 2007). These groups are:

- young people;
- women;
- families with young children;
- unemployed people;
- those on low incomes;
- senior citizens;
- culturally and linguistically diverse (CALD) people;
- Indigenous Australians; and
- people with a disability.

<sup>2</sup> Some international research has been undertaken on air travel and accessibility for people with a disability (Chean, 2010; Frye, 2010; Kwan, 2010). A preliminary search of Australian research since 2003 that has addressed inequities in access to air travel did not identify any relevant studies.

<sup>3</sup> Nutley (2003) found that non-car households were more prominent in the north-west and far west of NSW and relatively high in other interior parts of NSW and Northern South Australia. Amongst rural areas, the highest levels of car ownership are in the rural fringes of Adelaide, Melbourne and Sydney, along with the more settled parts of South Australia and most of rural Victoria.



The following sections look at research pertaining to three key groups who experience transport disadvantage:

- families with young children;
- Indigenous Australians; and
- people with disabilities.

Transport disadvantage for families with young children

Low-income, dual and single parent, as well as young parent families may experience transport disadvantage (Currie & Senbergs, 2007; Fritze, 2007; Currie et al., 2007). For some families, lack of car ownership and poorly provided public transport may mean that walking is a prime source of transport. Walking however, whilst beneficial to health when practiced regularly, may also have negative effects on families if it is the primary source of transport (Bostock, 2001).

In her study of walking as a mode of transport amongst low income mothers, Bostock (2001) found that compulsory walking with young children may be detrimental to families in three ways:

- the psycho-social pressures of managing the demands of children who are tired from walking long distances;
- the physical fatigue the mothers themselves feel; and
- the lack of motorised transport resulting in mothers and their children being confined to areas which may or may not provide all the required health, retail and other services.<sup>5</sup>

For young mothers who are reliant on public transport, difficulties in access and use may create significant barriers to necessary services, social networks and community participation (Fritze, 2007). In a study of 45 young Victorian mothers (67% of whom were largely dependent on public transport), high rates of difficulty in using public transport led to 70% or more not able to attend social activities or visit family and friends. Furthermore, 56% had difficulty getting to medical appointments, and 30% found accessing local shops, study and Centrelink problematic (Fritze, 2007).

Physical inaccessibility proved to be the most significant barrier, with policies such as having to fold prams before boarding buses and lack of assistance from public transport staff contributing to the difficulty. The young mothers participating in Fritze's (2007) research provided an insight into their experiences and the impact of transport disadvantage, especially in relation to bus travel:

It's just too hard for us to fold up the prams and get on the bus with a baby and bags and shopping, with them looking at you like a twit and the bus starts driving before you even get to pack up. (Participant, in Fritze, 2007, p. 11)

Where I live, the buses are the old ones, and I actually had to buy a stroller that was skinny enough to get up the steps, because bus drivers only help sometimes. If I have anyone helping, I still have to lift the stroller over the bar in the middle of the steps. (Participant, in Fritze, 2007, p. 11)

Sole parents may also be particularly vulnerable to transport disadvantage. Hurni (2007) recently conducted a study into the role that transport plays as a factor in contributing to social exclusion of single parents in Western Sydney, an area with a high proportion of low income households, one-parent families, unemployed people, Indigenous people and recent humanitarian immigrants. By applying a measure of transport disadvantage, it was discovered

<sup>4</sup> Anecdotal evidence suggests that families with large numbers of children (e.g., 4 or more) may also experience transport disadvantage if they do not have a car that is large enough to carry all their children and especially if they do not have access to private transport.

<sup>5</sup> As a result of being confined in areas that are not within walking distance of services, children and parents may miss out on important social and educational opportunities. For example, Fritze's (2007) research involving 45 young mothers living in Victoria, found that more than 20% had difficulties getting to a playgroup.

that 33% of sole parents in Sydney were living in transport-disadvantaged areas, and 73% of this number were living in Western Sydney (Hurni, 2007).

Sole parent transport needs in Hurni's (2007) study included shopping, child related activities such as playgroups, support groups for families with children with special needs, school and after school activities as well as part-time employment and/or study. As well as these needs for transportation, parents have specific requirements of transport such as the capacity for prams, car seats, a number of children, larger quantities of groceries and other space requirements (Hurni, 2007).

Poorly connected services (rail, bus or both) were very taxing for those travelling with young children and the limited number of taxis with infant capsules was also prohibitive. In some jurisdictions, travelling in taxis is difficult as the onus is on parents to provide an infant capsule, which is often impossible (e.g., when getting a taxi home from an appointment after missing the last bus) (Fritze, 2007).

Safety may also be an issue for families with young children using public transport, especially for those families living in neighbourhoods experiencing multiple issues relating to socio-economic disadvantage such as crime, drug and alcohol abuse (Australian Social Inclusion Board [ASIB], 2011). Safety is also likely to be more of an issue for women, especially when they are travelling at night.

Sole parents trying to incorporate work or study into their lives in Hurni's (2007) study found unreliable or infrequent public transport was also a barrier to accommodating children's school times and other routine requirements. Cost was also found to be a factor particularly if a number of children were involved.

These barriers all contributed to an increase in the cessation of employment or study and/ or a reduction in the take-up of these activities by sole parents (Hurni, 2007). Furthermore, children of the sole parents in the study missed out on opportunities for social, sport and recreational activities, as using public transport to attend these events was often rendered "impossible" by infrequent timetables, other children's requirements, sick children and time constraints (Hurni, 2007).

#### Transport disadvantage for Indigenous Australians

For those Indigenous Australians who do not own a car and live in remote communities or communities located in fringe urban areas, transport options are often extremely limited (Currie & Senbergs, 2007). For example, in 2008, 71% of Aboriginal and Torres Strait Islander adults living in remote areas had no public transport, with 15% unable to reach places when needed due to lack of transport (ABS, 2010). Moreover, in the most recent survey conducted by the Australian Bureau of Statistics, nearly one-third (32%) of Indigenous people in remote areas had no access to a motor vehicle (ABS, 2010).

These circumstances are primarily due to problems associated with transportation (both public and private) in remote locations and/or areas of low population (Currie & Senbergs, 2007; Nutley, 2003). These transportation problems often then serve to increase other areas of disadvantage suffered by Indigenous communities such as employment and access to health and other services (Currie & Senbergs, 2007). Hence Indigenous people often experience reduced access to transport due to various areas of disadvantage, and are often further disadvantaged by this lack of access.

Cars in remote Indigenous communities are both highly valued and heavily used and, due to the fact that they are often purchased second hand and used in rough terrain, maintenance is expensive and they often have a short lifespan (Currie & Senbergs, 2007). There is often a shortage of vehicles and, given the importance of access to combat long distances to services, tensions may arise within the community over who should have rights to use shared vehicles (Currie & Senbergs, 2007).



Similarly, in non-remote locations, car access may be a concern for Indigenous people who typically have much lower access rates than non-Indigenous people (Currie & Senbergs, 2007). Nationally, over one-quarter (26%) of Indigenous people cannot access a vehicle when needed. Furthermore, in non-remote areas, 18% reported having no public transport and 2% were unable to reach places when needed (ABS, 2010).

#### Transport disadvantage for people with a disability

Using public transport can be problematic for people with a disability (Victorian Council of Social Service [VCOSS], 2011). A recent forum in Victoria found that barriers to effective usage of public transport include:

- stability concerns;
- access to designated spaces; and
- lack of effective communication of facilities and services for transport users with disabilities (VCOSS, 2011).

Where communications indicate that accessible services are available, problems arise if these services are cancelled or replaced by inaccessible services (VCOSS, 2011). Also, many announcements about changes or cancellations to train services are announced audibly but not visually, impacting on hearing impaired people (VCOSS, 2011).

Access is also of primary concern for people with a disability (VCOSS, 2011).<sup>6</sup> Disabled people can experience a range of difficulties accessing public transport including:

- difficulties accessing train platforms due to malfunction, vandalism or cleanliness (VCOSS, 2011);
- boarding and de-boarding from buses (De Boer, 2010);
- accessing tram stops that are not wheelchair accessible (Wang & Winn, 2010); and
- accessing trams that do not have a low floor (Wang & Winn, 2010).

Furthermore, many train stations are not adequately signed as to which way a train will approach, making it difficult for people with a disability to know which end to board. Furthermore, assistance provided by staff has been found to be inconsistent (VCOSS, 2011). People with a disability have also reported problems using air travel, including discrimination, careless or undignified treatment and damage to wheelchairs during transit (Frye, 2010).

#### Implications for policy and practice

For practitioners and policy-makers planning and/or delivering services to children and families on low incomes in outer-urban areas, it is important to note that clients who come from a family where at least one parent is employed, and they are paying off a mortgage, are more likely to own a car than not.

For these families the transport difficulties they experience are more likely to relate to the stresses associated with owning a car, rather than the stress of not having a car at all. In some instances, these families will be more restricted than other families who live within walking distance of venues/activities and *don't* have a car. It is important to note, however, that some families who are reliant on public transport, especially sole parent families and families with young mothers, are likely to be especially prone to transport disadvantage.

"Going to where families are" is typically viewed as an effective way of engaging "hard to reach" families because it helps services to connect with families and develop relationships with their community (McDonald, 2010). However, going to where families are in outer-urban areas can

<sup>6</sup> The accessibility of public transport in Australia is mandated under national human rights legislation of the *Disability Discrimination Act* 2002. This Act applies in all jurisdictions (Hodge, 2007).

also be an extremely practical way of reducing the limitations placed upon families as a result of transport disadvantage—whether that be lack of access to suitable public transport or transport stress associated with maintaining a car.

However, in rural and remote areas, "going to where families are" may be more difficult because of the sparsely populated nature of these communities. Nevertheless, there are examples of innovative approaches to service delivery in remote communities, such as The Rural Beginnings Project (<www.aifs.gov.au/cafca/ppp/profiles/itg\_rural\_beginnings\_hub.html>). It is important to note also that Indigenous families in these areas are likely to experience greater difficulties with transport than non-Indigenous families.

#### Conclusions

The complex relationship between transport and disadvantage in Australia has previously been overlooked in both the research and policy sectors. Emerging research paints a picture of the complex relationship between transport difficulty and social disadvantage.

Anyone living in an outer-urban, rural or remote region of Australia, regardless of their "level of advantage", can experience difficulties with transport. Whereas those individuals without cars are typically seen as the most transport disadvantaged, there is some research to suggest that owning a car in an outer urban area and living on a low income can be financially disadvantageous and create significant levels of financial stress.

#### Further resources

The Social Research in Transport (SORT) Clearinghouse (<www.sortclearinghouse.info/>) provides access to a vast range of publications relating to social issues and transport. Some of the topics they cover include social inclusion, single parents, children, Indigenous people and unemployed people.

#### **Authors**

Kate Rosier is a Research Officer in the Communities and Families Clearinghouse Australia. At the time of writing Myfanwy McDonald was the Coordinator of the Communities and Families Clearinghouse Australia.

# Acknowledgements

Many thanks to Judi Gray (Broadmeadows UnitingCare) and Cindy Tarczon for valuable ideas, comments and suggestions.

#### References

Australian Bureau of Statistics. (2008). Public transport use for work and study. Canberra: Australian Bureau of Statistics. Retrieved from <www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Chapter10102008>

Australian Bureau of Statistics. (2010). The health and welfare of Aboriginal and Torres Strait Islander Peoples. Canberra: Australian Bureau of Statistics. Retrieved from <www.abs.gov.au/AUSSTATS/abs@.nsf/lookup/4704.0Chapter960Oct+20 10#Transport>

Australian Social Inclusion Board. (2011). Addressing barriers for jobless families. Canberra: Australian Government. Retrieved <www.socialinclusion.gov.au/sites/www.socialinclusion.gov.au/files/publications/pdf/addressing-barriers-for-</p> jobless-families.pdf>

Bostock, L. (2001). Pathways of disadvantage? Walking as a mode of transport amongst low-income mothers. Health and Social Care in the Community, 9(1), p. 11-18.

- Burke, T., & Hayward, D. (2000). Housing past, housing futures: Melbourne metropolitan strategy technical report 4. Melbourne, Department of Infrastructure.
- Carbone, S., Fraser, A., Ramburuth, R., & Nelms, L. (2004). Breaking Cycles, Building Futures. Promoting inclusion of vulnerable families in antenatal and universal early childhood services: A report on the first three stages of the project. Melbourne: Brotherhood of St Laurence.
- Chean, S. (2010, June). Accessibility of persons with disabilities in air transport. Paper presented at the 12th International Conference on Mobility and Transport for Elderly and Disabled Persons (TRANSED), Hong Kong. Retrieved <www.sortclearinghouse.info/research/662/>
- Cortis, N., Katz, I., & Patulny, R. (2009). *Engaging hard-to-reach families and children*. Canberra: Department of Families, Housing, Community Services and Indigenous Affairs.
- Currie, G. & Senbergs, Z. (2007). Indigenous communities: Transport disadvantage and Aboriginal communities. In G. Currie, J. Stanley, & J. Stanley (Eds.), *No way to go: Transport and social disadvantage in Australian communities* (pp. 09.1–09.12). Melbourne: Monash University Press.
- Currie, G., Stanley, J., & Stanley, J. (2007). No way to go: Transport and social disadvantage in Australian communities. Melbourne: Monash University Press.
- Currie, G., Richardson, T., Smyth, P., Vella-Brodrick, D., Hine, J., Lucas, K., Stanley, J., Morris, J., Kinnear, R., & Stanley, J. (2009). Investigating links between transport disadvantage, social exclusion and well-being in Melbourne Preliminary results. *Transport Policy*, 16, 97–105.
- Currie, G., Richardson, T., Smyth, P., Vella-Brodrick, D., Hine, J., Lucas, K., Stanley, J., Morris, J., Kinnear, R., & Stanley, J. (2010). Investigating links between transport disadvantage, social exclusion and well-being in Melbourne Updated results. *Research in Transportation Economics*, 29, 287–295.
- De Boer, E. (2010, June). *The accessibility of bus stations*. Paper presented at the 12th International Conference on Mobility and Transport for Elderly and Disabled Persons (TRANSED 2010), Hong Kong. Retrieved <www.sortclearinghouse.info/research/618>
- Dodson, J., Gleeson, B., & Sipe, N. (2004). *Transport disadvantage and social status: A review of methods* (Research Monograph 5). Brisbane: Urban Policy Program, Griffith University. Retrieved from <a href="www.griffith.edu.au/\_data/assets/pdf\_file/0006/48642/urp-rm05-dodson-et-al-2004.pdf">www.griffith.edu.au/\_data/assets/pdf\_file/0006/48642/urp-rm05-dodson-et-al-2004.pdf</a>
- Dodson, J., Burke, M., Evans, R., Gleeson, B., & Sipe, N. (2010). Travel behaviour patterns of different socially disadvantaged groups: Analysis of Household Travel Survey data for a dispersed metropolitan area. *Journal of the Transportation Research Board*, 24–31.
- Fritze, J. (2007). You might as well just stay at home: Young mums and transport in Victoria. Melbourne: (VCOSS) Victorian Council of Social Service.
- Frye, A. (2010). Air passenger rights for disabled people. Conference Paper delivered at the 12th International Conference on Mobility and Transport for Elderly and Disabled Persons (TRANSED), Hong Kong. Retrieved from <www.sortclearinghouse.info/research/664/>
- Hodge, M. (2007). Consultation with Australians with Disabilities as a means of evaluating public transport. Conference Paper delivered at the 11th International Conference on Mobility and Transport for Elderly and Disabled Persons (TRANSED), Montreal, Canada. Retrieved from <a href="https://www.tc.gc.ca/eng/policy/transed2007-pages-1188-1856.htm">www.tc.gc.ca/eng/policy/transed2007-pages-1188-1856.htm</a>
- Hurni, A. (2007). Marginalised groups in Western Sydney: The experience of sole parents and umemployed young people. In Currie, G., Stanley, J. & J. Stanley (Eds.), *No way to go: Transport and social disadvantage in Australian communities* (pp. 10.1–10.11). Melbourne: Monash University Press.
- Kwan, J. (2010, June). Access to the skies. Paper presented at the 12th International Conference on Mobility and Transport for Elderly and Disabled Persons (TRANSED), Hong Kong. Retrieved from <a href="www.sortclearinghouse.info/research/657/">www.sortclearinghouse.info/research/657/</a> Mees, P. (2000). A very public solution: Transport in the dispersed city. Melbourne, Melbourne University Press.
- Nutley, S. (2003). Indicators of transport and accessibility problems in rural Australia. *Journal of Transport Geography*, 11, 55–71.
- Stanley, J., Stanley, J., Vella-Brodrick, D., & Currie, G. (2010). The place of transport in facilitating social inclusion via the mediating influence of social capital. Research in Transport Economics, 29, 280–286.
- Victorian Council of Social Service (VCOSS). (2011). Free to move. VCOSS accessible transport forum: Summary report. Melbourne: Victorian Council of Social Service.
- Wadiwal, D. (2005). Understanding transport poverty. NCOSS News, September.
- Wang, F., & Winn, R. (2010, June). Making public transport services more accessible Lessons learned in Victoria, Australia.

  Paper delivered at The 12th International Conference on Mobility and Transport for Elderly and Disabled Persons (TRANSED), Hong Kong. Retrieved from <a href="https://www.sortclearinghouse.info/research/731/">www.sortclearinghouse.info/research/731/</a>>



ISSN 1838-7349

The Australian Institute of Family Studies is committed to the creation and dissemination of research-based information on family functioning and wellbeing. Views expressed in its publications are those of individual authors and may not reflect Australian Government or Institute policy. The information in this Resource Sheet does not constitute legal advice.

The relationship between transport and disadvantage in Australia by Kate Rosier

Australian Institute of Family Studies Level 20, 485 La Trobe Street, Melbourne VIC 3000 Australia Phone: (03) 9214 7888 Fax: (03) 9214 7839 Internet: <www.aifs.gov.au>

& Myfanwy McDonald, published August 2011.

© Commonwealth of Australia 2011

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced by any process without prior written permission from the Australian Institute of Family Studies, Level 20, 485 La Trobe Street, Melbourne VIC 300.