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## **Driver licensing and health: A social ecological exploration of the impact of licence participation in Australian Aboriginal communities**

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## Driver licensing and health: A social ecological exploration of the impact of licence participation in Australian Aboriginal communities

### Abstract

**Introduction:** Reduced licence participation in Aboriginal and Torres Strait Islander communities contributes to transport disadvantage, higher rates of transport-related morbidity and mortality. This study will incorporate a social ecology framework to better understand the economic, social inclusion and cultural impacts of licensing at all levels of the system from individuals, families, communities and the socio-political environment. **Methods:** Qualitative methods underpinned by a social ecology approach triangulates in-depth interviews (n = 17) and community discussion groups (n = 21). Analysis was inductive and deductive. **Results:** The impacts of licence participation were evident at multiple levels of the social ecology and it emerged that licensing greatly impacts the mobility of individuals, families and communities. Beyond mobility, the data amalgamated into four main themes: 1) Social and economic opportunity; 2) Access to services; 3) Cultural identity; and 4) Autonomy and the justice system. **Discussion:** Reduced driver licensing is impacting individuals, families and communities with an immense cost to multiple levels of the social ecology. This study has highlighted the value of licence participation for cultural identity and community well-being. Further, licence participation interacts with persistent inequity in the licensing and justice system and impacts on the capacity of individuals, families and communities to function autonomously within the parameters of the law. Accordingly, policy should be directed at facilitating equitable access to driver licensing to promote social inclusion. Licensing is not simply a "Transport" problem; addressing this complex issue of health and social justice is a prime example of the need for an intersectoral approach that targets change at the socio-political level to improve the equity, health and wellbeing of Aboriginal and Torres Strait Islander people.

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## 1 **ABSTRACT**

### 2 **Introduction**

3 Reduced licence participation in Aboriginal and Torres Strait Islander communities  
4 contributes to transport disadvantage, higher rates of transport-related morbidity and  
5 mortality. This study will incorporate a social ecology framework to better understand the  
6 economic, social inclusion and cultural impacts of licensing at all levels of the system from  
7 individuals, families, communities and the socio-political environment.

### 8 **Methods**

9 Qualitative methods underpinned by a social ecology approach triangulates in-depth  
10 interviews (n= 17) and community discussion groups (n= 21). Analysis was inductive and  
11 deductive.

### 12 **Results**

13 The impacts of licence participation were evident at multiple levels of the social ecology and  
14 it emerged that licensing greatly impacts the mobility of individuals, families and  
15 communities. Beyond mobility, the data amalgamated into four main themes: 1) Social and  
16 economic opportunity; 2) Access to services; 3) Cultural identity; and 4) Autonomy and the  
17 justice system.

### 18 **Discussion**

19 Reduced driver licensing is impacting individuals, families and communities with an  
20 immense cost to multiple levels of the social ecology. This study has highlighted the value of  
21 licence participation for cultural identity and community well-being. Further, licence  
22 participation interacts with persistent inequity in the licensing and justice system and impacts  
23 on the capacity of individuals, families and communities to function autonomously within the  
24 parameters of the law. Accordingly, policy should be directed at facilitating equitable access

25 to driver licensing to promote social inclusion. Licensing is not simply a “Transport”  
26 problem; addressing this complex issue of health and social justice is a prime example of the  
27 need for an intersectoral approach that targets change at the socio-political level to improve  
28 the equity, health and wellbeing of Aboriginal and Torres Strait Islander people.

29 **Keywords**

30 Aboriginal; injury; health equity; policy; driver licensing; transport disadvantage

## 1 **1. INTRODUCTION**

2 Access to safe, reliable and legal transport is central to social inclusion and economic  
3 participation. The capacity to access transport to maintain employment, education, socialise  
4 and access healthcare impacts the health and well-being of individuals, families and  
5 communities (Currie & Senbergs, 2007; Rosier & McDonald, 2011). Globally, Indigenous  
6 populations are known to be vulnerable to transport injury and transport disadvantage, for  
7 example Maori populations in New Zealand experience significant transport disadvantage,  
8 which has been described as ethnically mediated transport disadvantage (Pollack, Frattaroli,  
9 Young, Dana-Sacco, & Gielen, 2012; Raerino, Macmillan, & Jones, 2013). In Australia,  
10 Aboriginal and Torres Strait Islander people are more likely to experience transport  
11 disadvantage and there is an emerging focus on the relationship between transport, social  
12 inclusion, health and well-being (Delbosc & Currie, 2011; Rosier & McDonald, 2011;  
13 Scrimgeour & Scrimgeour, 2008; Ware, 2013). Despite this progress, there is still a gap in the  
14 dialogue around transport disadvantage, which focuses on access to public transport and  
15 ownership of private cars, with little consideration of the impact that licence participation has  
16 on the mobility of individuals and families. This is particularly salient for Aboriginal  
17 communities as Aboriginal people are underrepresented in the licensing system, yet little is  
18 known about the direct impacts of licensing-related transport disadvantage on social inclusion  
19 and well-being in Aboriginal communities. To address this, the present study will incorporate  
20 a social ecology framework to explore the impacts of licence participation at all levels of the  
21 system from individuals, families, communities and the socio-political environment.

### 22 **1.1 Social ecology framework**

23 A social ecological framework used in this study has been previously used to better  
24 understand the social and environmental inequalities that underlie health disparities (Kok,  
25 Gottlieb, Commers, & Smerecnik, 2008). The social ecological approach asserts that health is

26 a function of the interrelationship between individual, interpersonal, community, socio-  
27 political and environmental influences (Richard, Potvin, Kishchuk, Prlic, & Green, 1996).  
28 Further, this approach allows for examination of the complexities and connections between  
29 each level and is inherently suited to exploring public health issues that require an  
30 intersectoral approach.

### 31 **1.2 Intersectoral approach to licensing participation**

32 In the last decade, an intersectoral approach to public health has been endorsed and  
33 implemented globally to improve population health and reduce complex health inequities  
34 (Baum et al., 2013; Lawless et al., 2012). This approach recognises that tackling complex  
35 health inequities requires a commitment to action across multiple sectors of government and  
36 services to generate policies that systematically consider the implications and impact on  
37 population health. The South Australian (SA) government applied this approach to improve  
38 the health and wellbeing of Aboriginal people, which was driven by SA Thinker in Residence  
39 Professor Ilona Kickbusch (Kickbusch & Buckett, 2010; Kickbusch, McCann, & Sherbon,  
40 2008). Among Kickbusch's (2008) recommendations was the assertion that driver licensing  
41 should be prioritised across policy sectors to positively impact mobility, access,  
42 opportunities, identity and autonomy within Aboriginal communities; this is reflected in  
43 Figure 1. This model of driver licensing participation echoes calls for research globally with  
44 Indigenous peoples to move beyond socioeconomic consequences to also consider the  
45 broader impacts of transport disadvantage on health and wellbeing.

### 46 **1.3 Transport disadvantage and social inclusion**

47 Due to the vastness of Australia, travel frequently involves private transport. For example in  
48 2011 among employed people 15 years and over, almost two thirds travelled by private car as  
49 either a driver or passenger to work (Australian Bureau of Statistics, 2011). In terms of access  
50 to private transport, the Australian Institute of Health and Welfare (2014) reports that non-

51 Aboriginal households had considerably higher car access (85%) compared with Aboriginal  
52 households (51%). Public transport is a viable alternative to private transport, particularly in  
53 urban areas, however outside of urban centres public transport is limited and costly; for  
54 example, the ABS reports that 71% of Aboriginal adults in remote areas had no public  
55 transport compared to 18% in non-remote areas (Australian Bureau of Statistics, 2010).  
56 Correspondingly, public transport use was lower for Aboriginal people in remote areas (13%)  
57 than non-remote areas (30%) due to the lack of public transport options in remote areas  
58 (Australian Institute of Health and Welfare, 2014). Such difficulties accessing both public  
59 and private transport impact on the capacity of individuals and families to attend education,  
60 employment and essential services, which can have far reaching consequences on social  
61 inclusion and well-being. In terms of access to healthcare services, 16% of Aboriginal people  
62 cited lack of transport or excessive distance as a barrier, which was considerably higher in  
63 remote areas (22%) than non-remote areas (15%) (Australian Institute of Health and Welfare,  
64 2014). While this is evidence that transport disadvantage is impacting Aboriginal  
65 communities, these figures do not reveal the extent to which licensing-related transport  
66 disadvantage is impacting the wellbeing and social inclusion of Aboriginal people.

#### 67 **1.4 Licensing-related transport disadvantage**

68 Prior research demonstrates that Aboriginal people are underrepresented in the licensing  
69 system and overrepresented in licensing related incarceration and road injury (Cullen,  
70 Chevalier, Hunter, Gadsden, & Ivers, 2017; Cullen, Clapham, Byrne, et al., 2016; Edmonston  
71 et al., 2003; Elliot and Shanahan Research, 2008; Helps et al., 2008; Henley & Harrison,  
72 2013; Ivers, Clapham, Senserrick, Lyford, & Stevenson, 2008; Ivers et al., 2016; Ivers et al.,  
73 2011; Naylor, 2010; NSW Auditor General, 2013; Somssich, 2009). It is estimated that in  
74 NSW in 2011, Aboriginal people comprised only 0.4% of licence holders in NSW despite  
75 being 1.9% of the eligible population (NSW Auditor General, 2013).

76 A 2012–13 survey that was conducted with 625 people 16 years or older in four Aboriginal  
77 Community Controlled Health Services in NSW and SA reported that licensing rates varied  
78 between the sites 51-77%, with one of the lowest rates reported in the urban location of  
79 Redfern (Ivers et al., 2016). The authors concluded that this may relate to the availability of  
80 public transport in urban areas. These results also highlighted that licence participation can be  
81 low even in populations that reside in well-serviced locations as community members still  
82 encounter substantial barriers to licensing. Ivers et al. (2016) reported that having a driver  
83 licence was significantly associated with higher odds of full-time employment and post-  
84 secondary education; those who held a driver licence (provisional or full) were four times  
85 more likely to be in full-time employment and two to four times more likely to have higher  
86 levels of formal education. The authors suggested that driver licensing can be viewed as a  
87 cause and consequence of socioeconomic disadvantage and that licensing inequality has far  
88 reaching impacts on the health and wellbeing of Aboriginal people. Evidently, low levels of  
89 licensing in both urban and non-urban communities is a barrier to education, employment and  
90 social inclusion, which can be particularly detrimental in non-urban locations where access to  
91 viable public transport can be limited (Elliot and Shananhan Research, 2008; Helps et al.,  
92 2008; Ivers et al., 2016). Given the far reaching consequences of licensing-related transport  
93 disadvantage, addressing the underlying causes requires a cross-government intersectoral  
94 approach. Despite this, the role of licence participation in Aboriginal communities has not  
95 been explored and little is known about the role that licensing may play in social inclusion.  
96 Accordingly, the present study seeks to explore the economic, social inclusion and cultural  
97 impacts of licence participation and the consequences for the health and wellbeing of  
98 Aboriginal people in NSW.

## 99 **2. METHODS**

100 Qualitative methodology has been employed to triangulate data from in-depth interviews and  
101 small community discussion groups.



## 102 **2.1 Participants and context**

103 In accordance with the social ecological approach, purposive sampling was used to identify  
104 key informants from government agencies, community service organisations and community  
105 members (Table 1). Additionally, snowball sampling was used with all informants asked to  
106 recommend other potential informants with useful insights or unique perspectives; the  
107 number of interviews was determined by thematic saturation. Participants from government  
108 agencies (n=5) were drawn from Transport for NSW, Attorney-General's Department, Legal  
109 Aid, Aboriginal Affairs. Service providers (n=12) included managers and staff of licensing,  
110 employment and community support programs. Community members (n=21) were drawn  
111 from two communities in NSW; Wagga Wagga and Taree. Wagga Wagga is a regional centre  
112 and the largest inland city in NSW, with a population of approximately 62,000, of which  
113 4.6% of people identify as Aboriginal and/or Torres Strait Islander (Australian Bureau of  
114 Statistics, 2015b). Taree is a regional centre situated on the Mid North coast of NSW, with a  
115 population of approximately 49,000 of which 5.4% of people identify as Aboriginal and/or  
116 Torres Strait Islander (Australian Bureau of Statistics, 2015a). In both of these locations,  
117 travel by private car is the main form of transport and accordingly a substantial proportion of  
118 residents travel to work by car; Wagga Wagga, (88%) and Taree (89.5%) (Australian Bureau  
119 of Statistics, 2015a, 2015b). Both Wagga Wagga and Taree have identified that licence  
120 participation is an issue for Aboriginal people in the community and have implemented a  
121 community-based driver licensing support program *Driving Change*, which is aimed at  
122 assisting young Aboriginal people to access the licensing system (Cullen, Clapham, Byrne, et  
123 al., 2016).

## 124 **2.3 Data collection and analysis**

125 Interviews were conducted by telephone or face-to-face by the first author, while the  
126 community discussion groups were moderated by an Aboriginal researcher and observed by  
127 the first author. Participants were encouraged to share stories and/or their experiences of

128 licensing, transport and the social ecological impacts on individuals, families, communities  
129 and the socio-political environment. These were voice recorded and transcribed either by a  
130 professional company or the first author; analysis of the transcribed data was managed using  
131 Nvivo 10 software (QSR International Pty Ltd, 2012). The data analysis was concurrent with  
132 data collection to facilitate an iterative process. Initial codes were generated during data  
133 collection and transcription, which were then explored and developed in subsequent  
134 interviews. All transcripts were read through and the data assigned codes independently by  
135 two authors. Coding was reviewed and amalgamated into themes; discrepancies were  
136 resolved with consensus-based discussion. The thematic analysis was both inductive  
137 (emergent) and deductive (pre-determined) guided by Kickbusch (2008) model of licence  
138 participation. As part of this process, we derived the initial concepts for our analysis from the  
139 following components of Kickbusch's model: mobility, identity, opportunity and access. We  
140 used these overarching concepts to explore specific themes (e.g. mobility) within the data  
141 while not restricting the emergence of unanticipated or divergent themes. The analysis was  
142 conducted through the lens of the social ecological framework in order to explore the  
143 meaning at the individual, family, community and socio-political levels.

#### 144 **2.4 Ethics**

145 This study was approved by the Aboriginal Health and Medical Research Council (AH &  
146 MRC) of NSW. Aboriginal people have led or been involved at all stages of the study from  
147 design of interview guides, data collection, data analysis and interpretation. This has involved  
148 collaboration, capacity building and learning for Aboriginal and non-Aboriginal co-authors.

### 149 **3. RESULTS**

150 The impacts of licence participation were evident at multiple levels of the social ecology and  
151 it emerged that licence participation greatly impacts the mobility of individuals, families and  
152 communities. The issue of mobility was related to challenges that were specific to urban and  
153 non-urban communities. Beyond mobility, the data amalgamated into four main themes that

154 were largely consistent with Kickbusch (2008): Social and economic opportunity; Access;  
155 Cultural identity; Autonomy and the justice system.

### 156 **3.1 Mobility**

157 Mobility was identified as fundamental to all aspects of participation and within this a driver  
158 licence was a conduit to mobility. There was consensus among informants that licence  
159 participation was essential in Australian communities due to the vastness of the geography  
160 and the necessary reliance on private transport. Informants identified the road safety benefits  
161 of licence participation and were emphatic that a licence was an enabler to multiple forms of  
162 social inclusion.

163 *'There's all that stuff, getting to school, getting shopping, getting a job most importantly....*  
164 *getting economic independence (that) having a licence enables'*

165 *'And the tree just gets bigger by getting them their licence, not only are you stopping them*  
166 *from being injured or killed in road accidents due to just getting in a car or stuff like that,*  
167 *their job prospects, young mothers, they can actually do things for their children'*

168 Several informants asserted that the impact of low licence participation and subsequent  
169 transport disadvantage is significantly worse in regional and remote communities.

170 *'Not having a licence is a huge barrier to participation in everyday life activities, and that*  
171 *becomes more intense in regional and remote areas where a car is a fundamental necessity'*

172 *'Like having your licence, particularly in Taree, in a country town where public transport is*  
173 *lacking, having your licence is a big difference of just being able to function in this town'*

174 *'I think in the city we just don't see it as an issue, because you can just hop on a bus, you've*  
175 *got options but you don't have those transport options in those remote communities, so it's*  
176 *much more of a direct effect'*

177 While other informants highlighted that it was a common misconception that people living in  
178 urban communities were not impacted by licence participation.

179 *'People just outside of Sydney in urban areas have more transport disadvantage than people*  
180 *in regional towns..... transport disadvantage and licensing is something that I am really*  
181 *passionate about, and the fact that we can't just say that this is something that exists in*  
182 *remote or regional communities'*

183 *'There's a view that it's more of a remote issue but disadvantage doesn't live in one location'*

184 While informants expressed differing views on the extent to which licence participation  
185 impacts urban settings that have alternative transport options, it was evident that reduced  
186 mobility is not simply an issue for regional and remote communities. There was consensus  
187 among informants that mobility and licensing are essential to the broader goals of  
188 participation.

### 189 **3.2 Social and Economic Opportunity**

190 Reduced capacity to pursue opportunities was strongly related to licence participation by  
191 informants, with employment and education being the most frequently cited opportunities.  
192 This was considered to be having an intergenerational impact at the individual and family  
193 level but also at a community level whereby reduced community capacity, educational  
194 outcomes and workforce participation was considered detrimental.

195 *'Driver licensing came up as a barrier to employment ... this was one of the examples that*  
196 *someone gave me, we can get this girl a job at McDonalds after school but we can't get her*  
197 *home safely after work at night to take up that role, .... I see it as being really important,*  
198 *especially for young people getting them started in their career'*

199 *'It's like TAFE, we've got all these TAFEs in regional areas that no one can get to because*  
200 *they can't drive there'*

201 Informants who were unlicensed reinforced this association between employment and  
202 licensing, describing employment prospects as the primary motivation for pursuing a licence.

203 *'It makes it easier to find a job. For me that's probably the only real reason, because a lot of*  
204 *the work that I want to do is – I need to be able to travel a lot'*

205 One informant related the issue of reduced opportunity to apathy in individuals, families and  
206 communities and felt that this contributed to substance misuse and tendency toward illegal  
207 activities.

208 *'I do a bit of work up in Toomelah and Boggabilla, which is up about an hour north of*  
209 *Moree, on the border of Queensland and is largely an Aboriginal community, I think there is*  
210 *one school bus which goes from Toomelah to Goondiwindi, which is the local town where*  
211 *you can do shopping, which is actually in Queensland, but there's no other way of getting in*  
212 *or out of Toomelah otherwise. So you might turn up at Toomelah in the morning and there*  
213 *will be about 3 or 4 stolen cars, I'm not saying the lack of a licence leads to crime but the*  
214 *lack of opportunity means that people will do what they can to get home. They do what they*  
215 *have to get home'*

216 *'It all relates back to not being able to get employment. Then it has a spiralling effect that*  
217 *I've witnessed. If young people aren't working then they're getting into things that they've*  
218 *got time to get into, which is drugs and alcohol.... people have nothing to do because they*  
219 *can't get work because you need a licence in our town and even one of the Aboriginal*  
220 *organisations in town don't accept applications for positions unless you've got a licence.....*  
221 *If they're not working then they're on Centrelink they're limited in what they can get and*  
222 *where they live and to escape that reality you look to drugs and alcohol and everything else*  
223 *that's wrapped up in it.'*

224 Indeed, reduced opportunity was specifically highlighted by several informants as an acute  
225 concern in regional and remote communities, as was the limited availability and cost of  
226 public transport.

227 *'The issue of not having a licence in rural communities is the lack of opportunity that goes*  
228 *with it'*

### 229 **3.3 Access**

230 Licence participation was identified as essential to accessing services including healthcare,  
231 shopping, social and cultural activities. Informants related this to the need for private  
232 transport and this was most frequently described as an issue in non-urban communities again  
233 due to the limited access and prohibitive costs of public transport.

234 *'Sometimes it is a bit difficult to get down into town..... the buses come every hour, and*  
235 *sometimes if you miss it, you can't get in there unless you've got to catch a taxi, which is \$13*  
236 *– \$14'*

237 Access to health services emerged as one of the main issues with direct impacts of licensing  
238 on health independently identified by informants. Further, informants expressed concern that  
239 the burden of chronic disease was greater if people did not have transport access to essential  
240 health services.

241 *'It comes up as a barrier with health, access to medical appointments and things like that'*

242 *'Being able to take someone to hospital when they need to. The incidence of chronic disease*  
243 *in remote communities is very well documented so the ability to take people to the treatment*  
244 *that they require, or people might not get the treatment they require – so long term the cost-*  
245 *benefit is lost as the sicker people get the harder they are to treat'*

### 246 **3.4 Cultural Identity**

247 In terms of identity, informants recognised that Aboriginal people have strong cultural and  
248 kinship responsibilities that are difficult to meet without access to licensing and transport.

249 Identity emerged as 'cultural identity', encompassing family and kinship connections,  
250 whereby everyone belongs to both a people and a place or 'Country'. In particular,  
251 connection to Country and community were seen as important to Aboriginal peoples' sense  
252 of cultural identity and concept of health. Accordingly, respondents cited that access to a  
253 licence and transport was essential to meet cultural priorities, which are central to the health

254 and well-being of individuals, families and communities. Cultural identity priorities included  
255 caring for Country, caring for family, transporting family and attending funerals.

256 *'To conduct sorry business.... there are a whole lot of issues that are addressed just by*  
257 *having a licence'*

258 Cultural identity was strongly connected to family, with licensing viewed as a means to  
259 provide and care for family. Community informants related that licence participation was  
260 important as it helped to provide transport for their family.

261 *'She's like "I'm gonna take mum for a drive" .... Her mum has some real mental health*  
262 *issues, so for her to be able to help look after her mum because mum can't jump on buses'*

263 In terms of cultural identity, respondents also identified that there is a burden on licensed  
264 drivers in communities who are frequently called upon to provide transport to meet cultural  
265 and kinship responsibilities. Respondents felt that having few licensed drivers in a family or  
266 community can place a heavy burden on both the driver and passengers.

267 *'You can understand, if someone can't give you a lift because they're running around doing*  
268 *things and that person's usually not only giving you lifts, they're probably giving other*  
269 *people lifts and they've got their own things'*

### 270 **3.5 Autonomy and the Justice System**

271 In different cultures, autonomy can refer to individuals, family or community and assumes  
272 the right to exercise self-determination or self-governance. The autonomy of individuals or  
273 communities must function within the parameters of the justice system. In terms of licence  
274 participation, it emerged that increased contact with the justice system was a frequent impact  
275 of reduced access to licensing. Further, informants elaborated that the relationship between  
276 contact with the justice system and reduced licence participation was impacting the capacity  
277 of individuals, families and communities to function autonomously. Government informants  
278 lamented that exercising the right to autonomy and operating within the parameters of the law

279 was discordant due to inequity within the justice system. This inequity primarily related to  
280 lengthy licence disqualifications and the fines enforcement system, which were identified as  
281 preventing equitable and autonomous participation.

282 *'Fines is huge, we see people with 20000 dollars in fines, I think I've only seen one person*  
283 *with 40000, and then disqualifications until 2048 – massive disqualification periods is*  
284 *another issue'*

285 *'We have a fines system that isn't means tested – so if I forget to register my car, and I am*  
286 *fined for driving an unregistered car, well I'm employed so I can address that. But a \$500*  
287 *fine for someone who is in receipt of benefits is completely crippling – so the fine you get is*  
288 *the same regardless of your means.....getting a fine, can't afford to pay the fine, then lose*  
289 *licence because the fine is unpaid, then they drive anyway because they have to, then get*  
290 *picked up for unauthorised driving, which just feeds into this cycle of secondary offending – I*  
291 *really believe that that secondary offending that comes from poverty or disadvantage is just a*  
292 *direct pathway into the criminal justice system. Then in NSW we have the Habitual Traffic*  
293 *Offenders scheme, which puts people off the road for years and years and years, with these*  
294 *crippling periods of disqualification..... Sometimes people can't drive for 15-20 years'*

295 Further, informants reported that the system was creating apathy as licence participation was  
296 seen as unattainable, which combined with the need for transport, led to increased risky  
297 behaviours and unauthorised driving.

298 *'A high crime rate, I believe, because they've got nothing to lose really. If they don't have a*  
299 *licence and stuff, well, that would give them incentive to not do anything bad because they*  
300 *may lose it'*

301 *'But what do you do if you live in Wilcannia, which is two hours til Broken Hill where the*  
302 *nearest supermarket is and that costs \$15 in a bus, you get in the car. People take risks, we*  
303 *see this in our work all the time – people have to get their kids to school, they have to get*



304 *their partner to a doctor's appointment, they take the risk because they just don't have other*  
305 *transport options'*

306 In terms of community autonomy, one informant related the following story, which highlights  
307 the impact that reduced licence participation can have on communities' autonomous capacity  
308 to simply avoid harm and function within the parameters of the law.

309 *'There's a small community in Northern NSW and some floods were coming so the police*  
310 *came into town and said the floods will be here within 48 hours, you might want to think*  
311 *about moving on because this won't be a safe place to be. They came back a day later and no*  
312 *one had moved and they thought 'what's the story'? And they were told that there is all these*  
313 *cars here but none of them are registered and no one has a valid licence. So they were scared*  
314 *that because the police had come and told them to move that if they drove they'd be done for*  
315 *driving unregistered and unlicensed – the fines for that are a couple of thousand dollars and*  
316 *if that's your second or third offence you go to gaol. So the police said we're just going to*  
317 *drive and we're not going to look back, so then the community packed up and moved. But this*  
318 *is the kind of level we are talking about, it's extraordinary really, almost third world, and this*  
319 *is only a matter of a few years ago it's not in the 1950s'*

320 Individual and communities' right to autonomy assumes a fair and equitable system of  
321 justice. Informant perspectives however revealed that there is inherent inequity within both  
322 the licensing and justice system that impedes autonomous participation.

323 The impacts of licence participation were evident at all levels of the social ecology and had  
324 far reaching consequences beyond transport mobility. While licensing was an important  
325 conduit to accessing healthcare and services, the impact of licensing on health was also  
326 related to the underlying social determinants of health. Accordingly, licence participation  
327 was seen to positively impact social and economic opportunity, cultural identity and  
328 autonomy within the justice system. The benefits of licence participation for individuals,

329 families and communities generates a bottom-up effect that positively impacts and alleviates  
330 burden across multiple Government departments and agencies; this association is depicted  
331 below (Table 2).

#### 332 **4. DISCUSSION**

333 While much of the previous research on licence participation in Aboriginal communities has  
334 focused on the barriers to licensing, this study has explored the impacts of licence  
335 participation within the context of NSW from the perspective of government, service  
336 provision and community. The use of a social ecological approach revealed direct impacts of  
337 licence participation at all levels of the system including socioeconomic, health and justice  
338 impacts. Informants described the benefits of having a licence on individuals' mobility and  
339 also the impact of licence participation on communities and the broader goals of social  
340 inclusion. Further, it emerged that licence participation in Aboriginal communities has far  
341 reaching effects that benefit all levels of the social ecology from individuals and families  
342 through to Government departments and agencies.

343 The study was also informed by the Kickbusch (2008) model of licensing that depicts the  
344 benefits derived from licensing-related mobility. The themes that emerged from the present  
345 study closely aligned with Kickbusch (2008) particularly in terms of access and opportunity.  
346 The present results confirm that licensing is conducive to pursuing opportunities, with  
347 informants at all levels of the system emphasising that licensing is a facilitator to engaging  
348 with education and employment opportunities. This reinforces Ivers et al. (2016) that reported  
349 a strong association between licensing, and social determinants of health including education  
350 and employment. The present study extends these results to elaborate on other impacts of  
351 licence participation, including cultural identity and access to services.

352 In terms of access, previous research has reported that reduced licence participation in both  
353 urban and non-urban communities is a barrier to mobility and access to services; however this  
354 form of transport disadvantage is considered particularly detrimental in non-urban locations

355 where access to viable public transport can be limited. (Currie & Senbergs, 2007; Elliot and  
356 Shanahan Research, 2008; Helps et al., 2008; Ivers et al., 2011). While this was confirmed  
357 in the current study, the results were less emphatic than previous studies that the impacts of  
358 licence participation in urban communities is mitigated. This study presents a compelling  
359 picture of urban transport disadvantage due to reduced licence participation that has far  
360 reaching consequences for social inclusion, access to services, health and wellbeing. Further,  
361 residing in an urban location does not restrict the need to travel to distant locations of cultural  
362 or personal significance. This can be particularly important for Aboriginal people to fulfil  
363 cultural or family responsibilities, yet without access to a licence and/or private transport this  
364 can be impracticable, particularly in areas not well serviced by other forms of transport.  
365 The importance of licensing to cultural identity is consistent with previous research that has  
366 shown that transport is essential to Aboriginal peoples' sense of cultural identity,  
367 responsibility and wellbeing (Currie & Senbergs, 2007; Elliot and Shanahan Research,  
368 2008; Helps et al., 2008; Raerino et al., 2013). Further, cultural and kinship responsibilities  
369 can involve distant travel to locations that may not be easily accessible without private  
370 transport. According to the Australian Institute of Health and Welfare (2015) in 2012–13,  
371 approximately 70% of Aboriginal adults identified an area as their homelands or traditional  
372 Country, however only one quarter (25%) of Aboriginal adults lived on their homelands or  
373 traditional Country, which was most likely among those in remote (36%) and very remote  
374 areas (52%). While Aboriginal people may not reside in their traditional homelands, the  
375 connection to Country is enduring and considered different to that of other Australians, and  
376 the capacity to both travel and transport family to these locations therefore fulfils an  
377 important aspect of cultural identity.

378 Culturally, there are differing views on autonomy, which can refer to an individual, family or  
379 communities' autonomy. Autonomy implies the right to self-determination and self-

380 governance, which in accordance with the 2007 United Nations Declaration on the Rights of  
381 Indigenous Peoples is a fundamental human right and also a right to Indigenous peoples as a  
382 collective (United Nations, 2008). Yet the present results indicate that individual and  
383 community autonomy may be at risk due to inequity within the licensing and justice system.  
384 In particular, the fines enforcement system has been identified by previous research as  
385 markedly inequitable and culpable for creating and entrenching poverty (Cullen, Clapham,  
386 Byrne, et al., 2016; Cullen, Clapham, Hunter, Treacy, & Ivers, 2016; Golledge, 2006; Naylor,  
387 2010; NSW Auditor General, 2013). Further, there is growing concern that such systemic  
388 inequity is contributing to an over-representation of Aboriginal people in prison (Anthony &  
389 Blagg, 2012; NSW Auditor General, 2013). Autonomous individuals and communities must  
390 function within the parameters of the justice system, yet aspects of this system have been  
391 identified as unjust for vulnerable groups. This raises the question of autonomy, and to what  
392 degree can we truly be autonomous in the face of inequitable public policy? It is seemingly  
393 contradictory to expect communities to function autonomously and within the parameters of  
394 the law when the sociopolitical environment has been shown to disadvantage vulnerable  
395 sectors of those communities. While these are complex issues of social justice, of which  
396 driver licensing is one component, the present results support previous research that has  
397 identified inequity inherent within the licensing and justice system that is barrier to licence  
398 participation for vulnerable populations including but not limited to Aboriginal people  
399 (Cullen, Clapham, Byrne, et al., 2016; Cullen, Clapham, Hunter, et al., 2016; Elliot and  
400 Shanahan Research, 2008; Helps et al., 2008; Naylor, 2010; NSW Auditor General, 2013).  
401 Taken together this means that participation in licensing is not equitable and the impacts of  
402 reduced participation are having devastating consequences for individuals, families and  
403 communities but also far reaching consequences across the health, human service and justice  
404 systems.

405 This study has several strengths and limitations. While this study sought to obtain a rich  
406 understanding of the impact licence participation, it focuses on Aboriginal communities in  
407 NSW and thereby does not explore generalisability to other cultural groups or populations  
408 (e.g. other Australian states). A limitation of the current study was the small sample of  
409 informants from government agencies, however the stories shared by these participants were  
410 detailed and gave a rich understanding of the socio-political context. The present results  
411 could be extended to include additional key policy makers to further explore the policy  
412 implications of licence participation across sectors. A final limitation of the present study is  
413 that it does not explore the impact of alternative transport options including ride sharing,  
414 which may be a viable form of transport and warrants further exploration within Aboriginal  
415 community contexts. Similarly, there is scope for future research to explore whether access to  
416 healthcare could be addressed by increased investment in mobile healthcare solutions, which  
417 could potentially reduce the reliance on private transport. Nevertheless, the current results  
418 indicate that reduced licence participation is impacting individuals, families and communities  
419 with an immense cost to multiple levels of the social ecology. Accordingly, policy should be  
420 directed at providing equitable participation in licensing to improve participation and  
421 alleviate burden. Licence participation cannot be relegated to simply a ‘Transport’ problem;  
422 given the multi-faceted nature of this issue, a collaborative intersectoral policy approach is  
423 recommended to achieve change. Future research in other Australian jurisdictions and other  
424 diverse contexts (e.g. remote communities) is advised to explore the benefits of licence  
425 participation at all levels of the social ecology in these contexts. Finally, future research  
426 incorporating an economic analysis of the health, justice and social inclusion costs of reduced  
427 licence participation in Aboriginal communities may provide policy makers with impetus to  
428 target change at improving access to licensing.

429 **5. CONCLUSION**

430 There is growing recognition of the need for a strengths-based approach to Aboriginal health  
431 and well-being that incorporates intersectoral collaborative change to addressing underlying  
432 inequity. While previous research has revealed the barriers to licence participation, the  
433 present study explores the impacts of licence participation to individuals, families,  
434 communities and the socio-political environment. This has reinforced the importance of  
435 driver licensing to accessing services, employment and educational opportunities, which are  
436 known determinants of social inclusion, health and well-being. The present results extend  
437 previous research by demonstrating the impact of licence participation on cultural identity  
438 and community well-being. Further, reduced licence participation interacts with persistent  
439 inequity in the licensing and justice system and impacts on the capacity of individuals,  
440 families and communities to function autonomously within the parameters of the law.  
441 Addressing this complex issue of social justice is a prime example of the need for an  
442 intersectoral approach that targets change at the Health, Human Service and Justice systems.

443

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447 Committee and the Driving Change communities.

448 **TABLES**

449 Table 1 Description of participant characteristics (N=38)

Characteristic	N (%)
Gender (Female)	27 (71)
Identifies as Aboriginal and/or Torres Strait Islander	31 (82)
Urban	9 (24)
Licensed	17 (45)
Government agency	5 (13)
Community member	21 (55)
Service delivery	12 (32)
In-depth interview	17 (45)
Discussion group	21 (55)

450

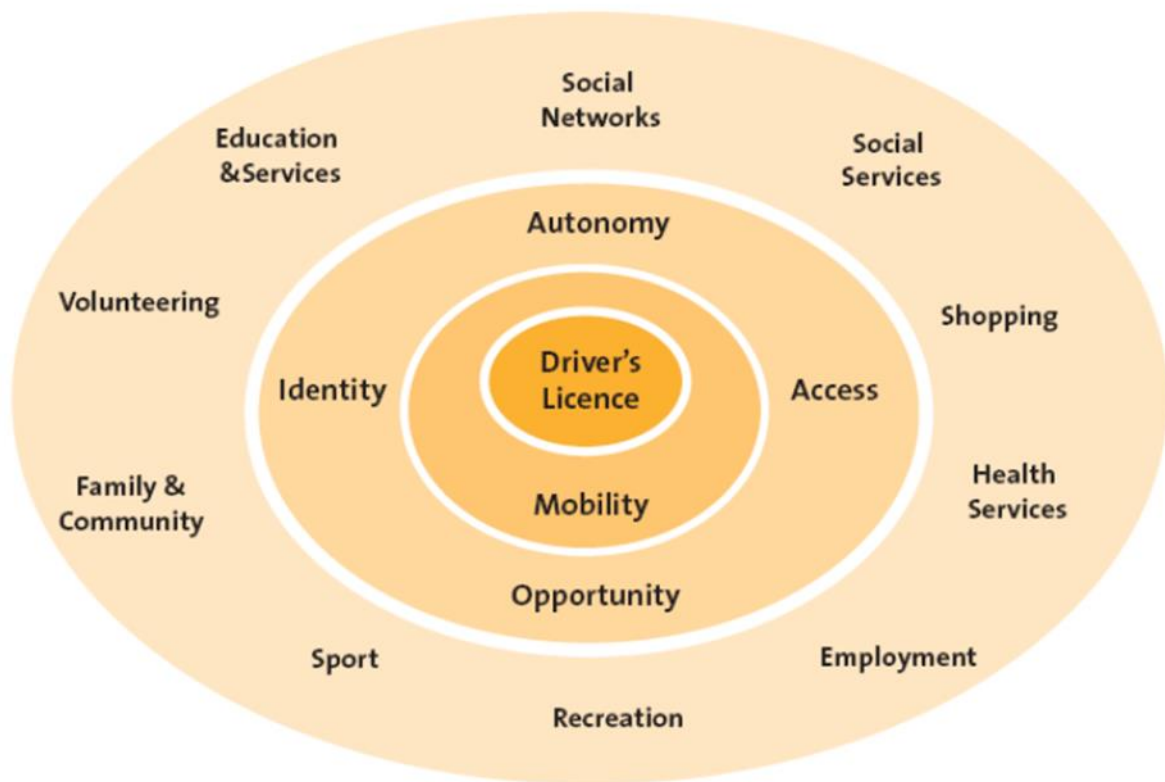
451 Table 2 Impact of licence participation at all levels of the social ecology

Benefits of licence participation	Direct impact to individuals, families and communities	Departments and Agencies <sup>A</sup> impacted
Increase access to essential services e.g. food, health	Reduce the burden of chronic disease, reduce reliance on community transport particularly in areas with limited or no public transport options	Health, Human Services, Transport
Increase access to education	Improve literacy, numeracy, employment skills. Associated with improved outcomes for health, employment and reduced participation in crime	Education, Human Services, Justice
Improve employability	Health and financial benefits associated with employment and reduced participation in crime	Human Services <sup>B</sup> , Justice
Improve social inclusion	Improve wellbeing and opportunities to participate in sporting, social and cultural events with associated health benefits and reduced participation in crime	Health, Human Services, Justice
Reduce unauthorised driving offences and secondary offending	Reduce fines, sanctions, incarceration rates and contact with the justice system	Justice <sup>C</sup> , Transport
Reduce transport-related morbidity and mortality	Reduce burden of injury and premature death, reduce contact with the justice system	Health, Transport, Human Services, Justice

452 <sup>A</sup> Government (federal, state, local) departments and private agencies453 <sup>B</sup> Including private job service providers454 <sup>C</sup> Including Attorney-General's Department, corrective services, Police, State-debt Recovery  
455 Office



456 Figure 1 Benefits of licensing-related mobility



457

458 Source Kickbusch (2008, p. 51)

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