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Title: Road Crashes and Long Term Disabilities: Implications for Policy and Its Implementation in Cambodia

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Name of University: Queensland University of Technology

Country : Australia

Major : Health

Degree : PhD

Type of document : Conference Paper

Year : 2013

Key words : road safety, disability, Cambodia, road accident, policy, implication

Road crashes and long term disabilities: Implications for policy and its implementation in Cambodia

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Abstract

The number of road crashes leading to disabilities is increasing alarmingly and constitutes a significant public health problem in many countries. So far, very few studies have been conducted to explore the impacts on persons with disabilities due to road crashes, and their families. This gap in the literature is especially large for low income countries such as Cambodia. This review explored relevant publications to provide background on persons in Cambodia with disabilities due to road crashes and their families. The review adds to the limited knowledge base in this area and has the potential to provide information on contextual issues relevant to the experience of disability in other developing countries, such as poverty, stigma and lack of resources. The findings of this review form the first part of a PhD study that will contribute to the development of informed policy change leading towards a safer system for all road users, including persons with disabilities.

Introduction

Road crashes and injuries have become a growing issue worldwide, as evidenced by the publication of WHO reports in 2004, 2009 and 2013, and the launch of the UN Decade of Action for Road Safety in 2011 (Guillen, Ishida, & Okamoto, 2012; WHO, 2004, 2009, 2013). Similarly, there has been growing concern about disability in terms of its scale and impact on individuals, families and society, as evidenced by United Nations (2006), WHO and WorldBank (2011), and Biyanwila (2011). Less attention has been focused on the intersection of these areas of concern, i.e. disability as the result of a road traffic crash. Although treatment is mentioned under the fifth pillar (post-crash response) in the Decade of Action for Road Safety framework, it only addresses post-crash care, not the long term effects of disabilities (WHO, 2011). Both road safety and disability are important public health issues for developing countries such as Cambodia, and both policy and action would benefit from a clearer picture of the impacts of disability as a result of road traffic crashes and the gaps in current approaches across the spectrum.

The purpose of this review is to use existing sources of statistics and research to build up a picture of the scale and nature of disability due to road traffic crashes in Cambodia. As will be noted below, one challenge is the general lack of research in this area in general, and for developing countries in particular. As a consequence we have drawn on a range of sources from outside Cambodia, while remaining aware of the constraints on generalisation from one context to another, since disability varies according to complex mix of factors, such as culture and environmental risks (WHO & WorldBank, 2011). The information collected is intended to inform further PhD study, aimed at developing an in-depth understanding of the disability issue due to road crashes in Cambodia.

Results

Definitions and terminology

In both road safety and disability, definitions and terminology can vary. In this paper the following terms will be used:

- “Impairments” refer to injuries or other conditions that cause or are likely to cause a loss or difference of physiological or psychological function of an individual (Oliver, 2009).

- 44 • “Disability” results from the interaction between persons with impairments and attitudinal
 45 and environmental barriers that hinder their full and effective participation in society on an
 46 equal basis with others (United Nations, 2006). According to WHO and WorldBank (2011),
 47 disabilities can include:
- 48 - *activity limitations*: difficulties in executing activities of daily living – for example,
 49 walking or eating;
 - 50 - *participation restrictions*: problems with involvement in any area of life – for example,
 51 facing discrimination in employment or transportation.
- 52 • “Road crash” refers to a collision involving at least one vehicle in motion on a public or
 53 private road that may or may not lead to injury (WHO, 2004).

54 The focus of this paper is disability as a result of road crashes, however there are some implications
 55 of the above definitions that need to be elaborated. While they establish impairment as an inherent
 56 characteristic of an individual, which is readily captured in medical diagnoses and terminology,
 57 disability is essentially a response of society to that characteristic (Mertens, Sullivan, & Stace,
 58 2011). Disabilities are articulated in the widely used Social Model (often placed in opposition to the
 59 “medical model”) as an exclusion of impaired people from political, economic, social, cultural
 60 organisations and communities (Mertens et al., 2011). Mertens et al. (2011) considered disability as
 61 a social problem, which requires an adjustment from both abled and disabled persons. The World
 62 Report on Disability (WHO & WorldBank, 2011) promotes both the medical and social
 63 perspectives on disability, however in the past decade the Rights Based Model has gained more
 64 international prominence, i.e. the establishment of an agreed set of rights for persons with
 65 disabilities, enshrined in international instruments as a basis for advocacy, legislation and action. A
 66 framework is provided by the United Nations Convention on Rights of Persons with Disabilities
 67 (UNCRPD), which asserts the rights of persons with disabilities to access services and systems in
 68 the same way as people without disabilities, as part of an inclusive society (United Nations, 2006).
 69 This is directly relevant to developing countries, as Biyanwila (2011) highlights the concept of
 70 disability as a potential focus for development aid, to mainstream and empower disabled people to
 71 allow their full participation in policy development and practices towards real inclusion.

72 An important implication for road safety (discussed further below) is that the characteristics of the
 73 road system are relevant to disability in two ways: through causation of disability, and as potential
 74 barriers to inclusion.

75 ***Overview of road crashes and disabilities worldwide***

76 Every year, around the world, 1.24 million people die due to road traffic injuries in addition to 20-
 77 50 million non-fatal injuries occurring (WHO, 2013). Road traffic injury is also recognized as a
 78 major contributor to disability (WHO & WorldBank, 2011), ranging from brief short-term
 79 impairments to serious lifelong conditions. In 2010, road traffic injuries ranked as the 10th highest
 80 cause of the loss of Disability Adjusted Life Years (DALYs) worldwide (Murray et al., 2012).
 81 Importantly, it was the 5th ranked cause in Southeast Asia (Murray et al., 2012). This constitutes a
 82 marked increase in rank from 12th in 1990, and a 34% increase in numerical value (Murray et al.,
 83 2012). The figures alerted decision-makers at national and global levels to emphasize the need for
 84 more research in this area to inform policies and action (WHO & WorldBank, 2011).

85 Official statistics on disability due to road crashes suffer from the same problem as statistics on
 86 disability in general, i.e. a wide variation from country to country. For example, the World Report
 87 on Disability (WHO & WorldBank, 2011) cites a range of surveys which suggest that low income
 88 countries have very low levels of disability, and high income countries the highest, whereas the
 89 World Health Survey puts high income country rates as lowest and middle income country rates as
 90 highest, while the Global Burden of Disease estimates are roughly equivalent across high, middle
 91 and low income countries. It is therefore not surprising that, due to the limitations and difficulties in

92 measuring non-fatal outcomes of injuries, the prevalence estimates of post-crash disability vary
93 dramatically - from 2% to 87% (WHO & WorldBank, 2011). More detailed and focused studies in
94 Thailand, the Netherlands and South Africa showed that long-term disabilities due to road crashes
95 accounted for 68-76% of all years lived with a disability, even though only 1-2% of injuries result
96 in lifelong impairment (Haagsma et al., 2012). People who become disabled through road crashes
97 may experience inequality in accessing health care, education, job opportunities and disability
98 assistance (WHO & WorldBank, 2011). For example, the employment rate among persons of
99 working age with disabilities (44%) is much less than for people without disabilities (75%) across
100 27 developed countries in the list of the Organisation for Economic Co-operation and Development
101 (OECD) member countries (WHO & WorldBank, 2011).

102 While quantitative information on disability due to road crashes is patchy, qualitative information is
103 even more difficult to find. Unfortunately most of the research, case studies and examples of
104 interventions in the World Report on Disability, which is the most comprehensive source available,
105 relate primarily to developed countries. WHO and WorldBank (2011) have highlighted the need for
106 more qualitative research, which can inform larger quantitative research programs. Given the
107 tendency to conduct more research in developed than in developing countries, there is a need for
108 more research to be conducted in low income countries, such as Cambodia.

109 *Overview of the institutional structures in Cambodia*

110 Road safety and disability in a particular country are best understood in their context, including the
111 institutions which both constrain and facilitate policy, legislation, advocacy and action. This section
112 gives a brief overview of the Cambodian context.

113 Cambodia is located in the southwest of the Indochinese peninsula, bordered by Vietnam to the
114 east, Lao PDR to the north, and Thailand to the west. It is one of the poorest countries in the world,
115 being ranked 136th out of 179 countries in the UN's Human Development Index; 35% of the
116 population live below the national poverty line, with a higher rate among the rural population
117 (Handicap International France, 2009). The total population is 14.3 million, and estimates by
118 several institutions of the prevalence rate for disabilities give figures ranging from 1.4% to 15% of
119 the population (Secretariat of Disability Action Council, 2012; Thomas, 2005).

120 The Ministry of Social Affairs, Veterans and Youth Rehabilitation (MoSVY) has been tasked by the
121 Royal Government of Cambodia to oversee the disability sector in the country, through its
122 coordinating body, the Disability Action Council (DAC) (Royal Government of Cambodia, 2009).
123 The responsibilities of the DAC are mainly to provide technical advice, assist relevant stakeholders
124 to develop and implement policies and strategies, and monitor implementation (Royal Government
125 of Cambodia, 2009). There is another semi-governmental organization, the National Centre of
126 Disabled Persons (NCDP), supported by the MoSVY, which aims to provide services and
127 opportunities to persons with disabilities to enable them to fully participate and develop their
128 capacity in social, economic and political activities (National Centre of Disabled Persons, 2012).
129 Although the responsibility for ensuring wellbeing and welfare of persons with disabilities lies with
130 the MoSVY, it has been recognized that disability is a cross-cutting issue and requires the
131 cooperation of other government ministries, especially Ministry of Health, Ministry of Education,
132 Youth and Sports, Ministry of Women's Affairs, Ministry of Labour and Vocational Training and
133 Ministry of Planning (Secretariat of Disability Action Council, 2012). Additionally, around 50 non-
134 governmental organizations are currently working in the disability sector (Secretariat of Disability
135 Action Council, 2012). This diversity of actors suggests the need for a strong coordinating role and
136 cooperation among related stakeholders in providing support to the persons with disabilities.

137 In 2005, the government developed a National Road Safety Action Plan, which aimed to prevent
138 road crashes and promote safer behaviours among road users. Two years later, the National Road

139 Safety Committee was established with the specific task of coordinating and implementing the
140 national plan. One of the important milestones was the approval of a traffic law in 2009, for the first
141 time allowing persons with disabilities to drive vehicles in the road system with special driving
142 licences (General Secretariate of the National Road Safety Committee, 2013).

143 ***Road Traffic Injuries in Cambodia***

144 The Cambodian Road Crash and Victim Information System (RCVIS) was established in 2004 and
145 is managed by the National Road Safety Committee. It is considered to be the only system in
146 Cambodia that provides good information on road crashes and casualties, reported by traffic police
147 and health facilities. In 2011, RCVIS recorded 1,905 fatalities and at least 14,749 injuries due to
148 road crashes (National Road Safety Committee, 2012). The overall cost of these road crashes in
149 Cambodia was estimated at around US\$310 million, 2.4% of the gross domestic product (Sann, Ear,
150 Morrison, & Jong, 2012). The crashes affected mostly young road users and especially students,
151 workers and farmers, who play important roles in the country's economic development (National
152 Road Safety Committee, 2012). According to this report, at least 1% of patients discharged from
153 hospital and health centres after a road crash have life-long impairments, which can lead to social
154 discrimination, exclusion and disability (National Road Safety Committee, 2012). This percentage
155 is similar to the findings in Thailand, the Netherlands and South Africa (Haagsma et al., 2012),
156 although there are some doubts about whether the real figure is higher, as there are limitations on
157 the capacity of hospital staff in assessing the severity of injuries and following up the patients
158 beyond emergency treatment. Almost 40% of those with long term impairment were 20-24 years
159 old, who would either have been, or would have been expected to become, breadwinners in their
160 families (National Road Safety Committee, 2012). Their disability may therefore have a huge
161 negative impact on their family in terms of both loss of income and requirement for additional
162 expenditure on ongoing treatment and costs of access.

163 Moving from the level of the individual and their family, there is evidence to support the view that
164 road traffic injuries will have a significant impact on progress towards the majority of the
165 Millennium Development Goals: poverty, primary education, gender, income gap, child health and
166 mortality (Ericson & Kim, 2011). Ericson and Kim (2011) identified a sample of households in
167 Cambodia where a member had been injured in a road crash, and measured the impact of the crash
168 on individual and household characteristics directly related to the achievement of the Millennium
169 Development Goals. As an example, they found that 21% of the households lost income and that the
170 school dropout rate was 8 times higher than the average after a family member was injured a road
171 crash (Ericson & Kim, 2011).

172 Although the RCVIS reports provide some details on the context of road crashes via brief
173 descriptions of some casualties with lifelong impairment, detailed characteristics of crashes among
174 those with long term injuries have never been further explored. The system does not provide follow
175 up information on those discharged from hospitals, as the data collection forms are completed in the
176 emergency rooms only. This gap in information has led to limited understanding of the contexts of
177 the long-term impairment related crashes in Cambodia.

178 ***Disabilities due to Road Traffic Injuries***

179 Several studies in low and middle income countries have shown significant impacts of road crashes
180 in leading to disabilities. This in turn can reduce quality of life with limited access to support
181 services and often leads to a lack of inclusion within society generally. A study conducted in
182 Nigeria illustrated the consequences of traffic injuries including long-term impairments which have
183 led to difficulties in daily activity performance, cost of treatment, loss of jobs and reduction of
184 earnings (Juillard, Labinjo, Kobusingye, & Hyder, 2010). For example, 67% of the interviewees
185 who suffered long-term impairments due to a crash, had difficulties in performing daily activities

186 and almost 90% reported job loss and income reduction in their families (Juillard et al., 2010). The
187 study also highlighted similar findings in Ghana (Juillard et al., 2010). Since these two countries are
188 also in the “developing country” stage, similar to Cambodia, similar significant impacts of road
189 crashes and disabilities are more than likely to be found in Cambodia.

190 A study in Thailand demonstrated the burden of traffic crash-related spinal cord injuries on
191 individuals and their families (King & King, 2011). The study illustrated the social and cultural
192 value of the Buddhist concept of Karma as a contributing factor in the stigmatisation of the persons
193 with disabilities and as a barrier to the effectiveness of road crash prevention messages. This is one
194 of few studies that considers and highlights societal barriers for road crash victims with a disability,
195 such as access to public transport, job opportunities, and isolation from the communities in Thai
196 rural areas (King & King, 2011). The findings of the study might have some relevance to cultural
197 and social values in Cambodia and their impacts on persons with disabilities, as the two countries
198 have similar culture, beliefs and traditions related to the Buddhist religion.

199 *Disability Prevalence in Cambodia*

200 In Cambodia, definitions and classifications of disabilities vary with the different organizations that
201 have worked in the disability sector and conducted disability related studies. This has led to
202 different figures on the prevalence of disability in Cambodia. For example, the Cambodia Socio-
203 Economic Surveys estimated the prevalence rate at 4% in 2004 and 8.1% in 2009, while the most
204 the recent national census showed 1.4%, which is very low compared with other countries
205 (Secretariat of Disability Action Council, 2012). The actual rate probably lies between 10% and
206 15%, as estimated by the Asian Development Bank (Thomas, 2005).

207 Based on the 2004 Cambodia Socio-Economic Survey, higher prevalence rates were observed
208 among the rural population (5%), compared with the capital city and urban areas (3.3% and 4.1%
209 respectively) (Handicap International France, 2009). However, Thomas (2005) provided a differing
210 view on disability rates among rural and urban areas. He demonstrated that higher rates of disability
211 were found in wealthier households because of their ability to look after their elderly parents with
212 age related disabilities. Additionally, wealthier people were more aware of minor impairments, and
213 their disabled children had higher survival rates due to their ability to pay more for better health
214 care (Thomas, 2005). Another potential factor is that wealthier people in urban areas can afford
215 more vehicles, in particular motorbikes. This in turn leads to more exposure to the risk of road
216 crashes leading to disability (Thomas, 2005). This factor aligns with the finding that motorbike
217 riders are at very high risk of road crashes. Motorbikes comprise 84% of the vehicle fleet in
218 Cambodia and the majority of road crash fatalities are motorbike riders (67%) (National Road
219 Safety Committee, 2012). Additionally, 90% of persons with long-term injuries due to road crashes
220 are motorbike riders (National Road Safety Committee, 2012).

221 In the age group most likely to be supporting a family (25-54 years old), young men were more
222 likely to have long-term impairment, compared to women (Handicap International France, 2009).
223 National Road Safety Committee (2012) also showed that men accounted for 80% of overall road
224 traffic fatalities. The majority of the long-term impairments involved physical difficulties (moving,
225 hearing and seeing), accounting for 74% of all impairments (National Institute of Statistics, 2009).
226 This information is limited, and raises questions about the severities of the impairments and the
227 level of participation of the persons with those long term impairments in their societies.

228 DAC has recognized road traffic injuries as one of the main causes of disabilities in Cambodia,
229 along with landmines, work accidents, diseases, poverty and malnutrition (Secretariat of Disability
230 Action Council, 2012). Road crashes caused 46% of all kinds of recorded injuries and led to almost
231 7% of physical impairment and disability in Cambodia in 2004 (National Institute of Statistics,
232 2006). This low percentage might be due to the fact that the study was conducted in 2004, when

233 motorisation was at a lower level. Road traffic injuries probably make a greater contribution now,
234 as their numbers have been increasing significantly, compared to other factors such as landmines.
235 Over the last 7 years (2005-2011), the number of fatalities due to road crashes has doubled, in part
236 due to a population increase of 10% and a 231% increase in registered motorized vehicles (of which
237 motorbikes made up 84%) (National Road Safety Committee, 2012).

238 *Experiences of being disabled in Cambodia*

239 In Cambodia the poverty and disability cycle is evident. Poverty increases the chance of disability
240 and disability increases the chance of poverty, making the attainment of the Millennium
241 Development Goals difficult. In a country such as Cambodia this can lead to greater risk of
242 marginalisation, lack of resources and lack of access to services such as medical care and education
243 which makes it difficult for families to escape poverty when a member of the family is disabled.
244 This is supported by data from Handicap International France (2009) that found that the household
245 wealth of persons with disabilities is half of the wealth of non-disabled people. Additionally,
246 persons with disabilities generate 65% less average income than persons without disabilities
247 (Handicap International France, 2009). Although the overall cost of disability related crashes
248 comprised only 5.2% of the total road crash cost in 2011, individual cost related to disability
249 (included loss of output and medical cost) was double the cost of a fatality and 10 times higher than
250 a serious injury from which the person recovered (Sann et al., 2012).

251 As noted above, there is a paucity of qualitative studies that explore the long-term impact of
252 disability in Cambodia. Only two such studies could be found and they addressed disability due to
253 landmines and unexploded ordinance among poor communities. Taksdal (2011) demonstrated the
254 challenges of being disabled, such as less access to healthcare, the negative impacts on the person's
255 whole family and especially on the next generation. Children can be at risk of dropping out of
256 school to work to help the family survive when the breadwinner becomes disabled (Taksdal, 2011).
257 Additionally, Thapa (2011) presented similar findings, which included being socially isolated and
258 losing their rights after being disabled. Both studies highlighted the need to improve assistance for
259 persons with disabilities, especially for those in poorer communities. However, the studies tended to
260 explore only the individual impairment and limitations, and did not clearly demonstrate the societal
261 barriers in their communities.

262 Handicap International France (2009) highlighted the key issues raised by persons with disabilities
263 and their representative organizations on the lack of access to employment, education and health
264 care. A small study in Kandal province illustrated a higher rate of illiteracy among persons with
265 disabilities (43%), compared to non-disabled people (9%) (Handicap International France, 2009). It
266 illustrates the lack of education for persons with a disability with UNESCO (2012) stating that 80%
267 of children in developing countries with disability do not go to school.

268 *Road safety and disability related policies in Cambodia*

269 The introduction of the United Nations Convention on the Rights of Persons with Disabilities
270 (UNCRPD) in 2006 has served as an important framework in the disability sector. The UNCRPD
271 aims "to promote, protect and ensure the full and equal enjoyment of all human rights and
272 fundamental freedoms by all persons with disabilities, and to promote respect for their inherent
273 dignity" (United Nations, 2006, p. 4). In addition to the promotion of rights of persons with
274 disabilities, the Convention also clearly highlights the need for interconnected networks and
275 disability mainstreaming across different development sectors and has seen the rise of Disability
276 Inclusive Development practice often using a Twin Track Approach which includes disability
277 mainstreaming and disability specific approaches working side by side.

278 Although Cambodia is one of the 130 countries that have signed and ratified the Convention,
 279 cooperation and policy development and implementation across different sectors have not been
 280 adequate in addressing the rights of persons with disabilities within the UNCRPD framework.
 281 Following the signing of the Convention, the Cambodian government approved its first Law on the
 282 Protection and the Promotion of the Rights of Persons with Disability (Royal Government of
 283 Cambodia, 2009). The law defined the roles of relevant government sectors in supporting persons
 284 with disabilities and reducing environmental barriers (Royal Government of Cambodia, 2009).
 285 However, implementing mechanisms for the law are not yet in place. For example, one of the clear
 286 links between the Cambodia's Road Safety Action Plan and the disability law is the accessibility of
 287 driving licences for persons with disabilities. Although the law has been clear in stating the rights,
 288 the mechanisms and procedures needed to license persons with disabilities have not yet been set up.

289 In addition, in the law, persons with disabilities are defined as “any persons who lack, lose, or
 290 damage any physical or mental functions, which result in a disturbance to their daily life or
 291 activities, such as physical, visual, hearing, intellectual impairments, mental disorders and any other
 292 types of disabilities toward the insurmountable end of the scale” (Royal Government of Cambodia,
 293 2009, p. 1). This definition tends to draw only on the medical model of disability, while the social
 294 model has been overlooked. This gap is further illustrated in the government official policy in
 295 classifying different types of impairment (Handicap International France, 2009):

- 296 1. Seeing difficulties or seeing impairment
- 297 2. Hearing difficulties or hearing impairment
- 298 3. Speaking difficulties or speaking impairment
- 299 4. Moving difficulties or moving impairment
- 300 5. Feeling difficulties or feeling difficulties
- 301 6. Psychological difficulties
- 302 7. Learning difficulties
- 303 8. People who have fits
- 304 9. Others

305 This definition and classification focuses more on an inherent characteristic of an individual or the
 306 impairment and not on the impact of that impairment which leads to disability, such as the response
 307 of society to that characteristic. They do not take into account the level of participation of persons
 308 with disabilities, i.e. how inclusive their society is.

309 Furthermore, the government has also been in the process of developing its National Road Safety
 310 Action Plan 2011-2020, in accordance with the Global Decade of Action Framework (National
 311 Road Safety Committee, 2013). The new plan consists of eight pillars, which are:

- 312 • Pillar 1: Road safety management
- 313 • Pillar 2: Infrastructure
- 314 • Pillar 3: Safe vehicles
- 315 • Pillar 4: Safe road user behaviour
- 316 • Pillar 5: Post-crash care
- 317 • Pillar 6: Traffic legislation and enforcement
- 318 • Pillar 7: Driver licensing
- 319 • Pillar 8 : Management and evaluation of passengers and goods transport services

320 This new Action Plan has not really integrated the concepts of disability prevention and victim
 321 assistance into this framework.

322 As noted earlier, a better qualitative understanding of the impact of disability resulting from road
 323 crashes is lacking in developing countries in general, and especially in Cambodia. The lived

324 experiences of persons with disabilities can provide rich contextual information to help identify the
325 gaps in national policies, such as in prevention and transport system design and treatment as well as
326 full inclusion and assistance (King & King, 2013). King and King (2013) provide some examples of
327 how information on the lived experiences of persons with disabilities can contribute to the
328 development of road safety management, infrastructure, transportation and advocacy that provide
329 benefits for all road users as well as persons with disabilities.

330 **Conclusion**

331 Road traffic injuries have become an emerging issue in Cambodia and a burden to public health
332 development. They also have a significant impact on progress towards the Millennium
333 Development Goals and contribute to reduced quality of life of persons with disabilities with
334 limited access to support services. It is also important to note the linkage between the disability and
335 poverty in the Cambodia, where social networks and assistance exist to only a limited extent and
336 exacerbate the disability-poverty loop. Better statistics have led to increased attention from the
337 government on this emerging issue, but further information is needed to guide appropriate and
338 effective interventions and to get a clear picture of the lives of persons with disabilities.

339 Although road traffic injury has been recognized as a contributor to disability, very few studies have
340 been conducted to analyse the patterns of long-term injury crashes and their consequences on
341 injured persons, who become disabled, and their families, especially in low income countries such
342 as Cambodia. At the same time, although the institutional structures and policies are in place, they
343 have not addressed the needs of persons with disabilities effectively, in addition to their limited
344 implementation. As a consequence of signing and ratifying the United Nations Convention on the
345 Rights of Persons with Disabilities, Cambodia has an obligation to update its national policies,
346 legislation, and evaluate its current system and services to ensure it is abiding by the UNCRPD.

347 Therefore, it is crucial to have a more in-depth understanding of disability after a road crash and
348 how it is experienced by the persons themselves and by their families. Currently there is a gap in
349 knowledge of the long-term impact and this PhD study will contribute to filling this gap. It is
350 essential that studies in low income countries such as Cambodia are undertaken to ensure that there
351 is an understanding of the contextual factors that would impact on this issue in similar countries.
352 While differences in context limit the generalisability of this study, some extrapolation of results
353 will be possible on common contextual issues such as poverty, stigma and lack of resources. This
354 will in turn inform better policy and contribute to sustainable and targeted implementation of
355 services. The findings from this PhD study have the potential to contribute to all pillars in the
356 current National Road Safety Action plan.

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