Understanding Injury-related Disability in Non-Western Societies can Contribute to More Effective Road Safety Policies and Programs

Julie King  School of Public Health and Social Work, QUT
Mark King  CARRS-Q (Centre for Accident Research and Road Safety – Queensland), QUT
Chariya Ear  Handicap International, Cambodia
Ahsan Kayani  CARRS-Q/National Highways and Motorways Police, Pakistan

ICTCT2012, 8-9 November 2012, Hasselt University, Belgium
Overview

• Road crashes as a cause of disability
• Disability in the study of road safety
• Thai spinal injury study
  – Contextual information – beliefs and community
  – Transport system and hidden safety costs
  – Cambodia experience
  – Pakistan fatalism study
• Feedback to policies and programs
Road crashes as a cause of disability

- 90% of road fatalities occur in low and middle income countries
- There are up to 50 road crash injuries for every fatality
- One in eight injury crashes leads to a disability
- People who are already poor suffer most:
  - More likely to be killed and injured
  - Less able to cope with financial burden of care
  - Families less able to cope with loss of income earning members
- Contributes to disability/poverty cycle

Source: WHO, 2009
Long term disability due to injury

- Study in the Netherlands, Thailand and South Africa:
  - 1-2% of injuries result in lifelong impairment
  - This accounts for 68-76% of all years lived with a disability
- Therefore the majority of the lived experience of disability through injury is the experience of people with lifelong impairment

Source: Haagsma, Polinder, Lyons et al, 2012
Disability through road crashes impacts on development

- Millennium Development Goals

Goal 1: Eradicate extreme poverty and hunger
Goal 2: Achieve universal primary education
Goal 3: Promote gender equality and empower women
Goal 4: Reduce child mortality
Goal 5: Improve maternal health
Goal 6: Combat HIV/AIDS, malaria and other diseases
Goal 7: Ensure environmental sustainability, and
Goal 8: Develop a global partnership for development

Source: Ericson and Kim, 2011
Cambodia household study

100 households (542 people) randomly sampled from road traffic crashes in a district near Phnom Penh

MDG1 (poverty): 21% income loss, worse for poorest, serious injury
MDG2 (education): drop-out rates 8 times average
MDG3 (gender): income gap 28% worse, women 88% burden of care
MDG4 (child health): 31% deterioration
MDG5 (maternal health): 24% deterioration
MDG6 (priority diseases): rates twice the national average
MDG7 (environment): increased wood fuel use, water access no better
MDG8 (global partnership): none to address negative welfare impacts

Source: Ericson and Kim, 2011
Disability in the study of road safety

- Focus of road safety is typically:
  - Primary safety: prevention
  - Secondary safety: reduction of harm during crash

- Post-crash care typically focuses on the immediate crash aftermath

- Feedback loop:
  - Information on crashes and injuries informs policies and programs
  - Long term disability may appear among costs – if the data are reliable
Information from:
- police reports
- hospital records
- official road and vehicle databases
- automated data collection
- routine surveys
- specialised research and evaluation
- etc
Question

• Can information about longer term disability inform road safety policy and practice?
• Yes:
  – Rich contextual information
  – More specific transport-related information
  – Advocacy and awareness
  – Safety campaigns
Information from:
• police reports
• hospital records
• official road and vehicle databases
• automated data collection
• routine surveys
• specialised research and evaluation
• etc

Source: WHO, 2011
Information from:
- police reports
- hospital records
- official road and vehicle databases
- automated data collection
- routine surveys
- specialised research and evaluation
- etc

Source: WHO, 2011
Thai spinal injury study

• Northeast Thailand – medical anthropology approach (King and King, 2011)
• Former breadwinners who had suffered a spinal injury resulting in paraplegia or quadriplegia from a road traffic crash:
  – Repeated interviews
  – Urban and rural
• Also interviewed:
  – Family carers
  – Bio-medical informants, traditional healers and monks
• Focus groups with villagers

Source: King and King, 2011
Thai spinal injury study (continued)

• Shared cultural and social values contributed to:
  – Stigmatisation of victims
  – A lack of connection between behaviour and consequences via Buddhist concepts
  – Animistic beliefs - *Phii*
  – Popular beliefs not appreciated by elite

• Therefore: a breakdown in the presumed feedback loop which should link road traffic crash outcomes with prevention initiatives

Source: King and King, 2011
Thai spinal injury study (continued)

- Information also provided on transport context:
  - Cheap for non-disabled people, prohibitively expensive for those with a disability
  - Lack of vehicles capable of transporting people with a disability
  - Led to injured people “disappearing” from records
  - Conceals scale of the problem
  - Reduces the likelihood that their experiences can influence road safety policies and programs

- Relevance: addressing their needs can address wider problems – “iceberg principle”
Information from Cambodia

- Road crashes contribute significantly to disability (Sann, Ear, Morrison and de Jong, 2012).
- About 1% of road crash victims have life-long impairments (RCVIS, 2011), similar to Netherlands/Thailand/ South Africa study:
  - 71% were motorcyclists (similar to all injuries)
  - 65% had a mobility disability
- Anecdotal information gives similar picture to Thailand re culture and response to safety messages
Cambodia approach

• Disability an explicit category in reporting
• Historical reasons

Source: RCVIS, 2011
Information from Pakistan

- Different cultural context to South East Asia
- Fatalism a major issue (Kayani, King and Fleiter, 2012; Kayani, Fleiter and King, 2012)
- Qualitative research with a police as well as drivers, policy makers, etc
- Cultural concepts and their interpretation interfere with crash reporting (and hence the feedback loop) and receptiveness to preventive measures
Pakistan implication

- Example of cultural issues having an effect on road safety management

Source: Kayani, Fleiter and King, 2012
Implications

- Long term disability from road crashes is very high in non-Western countries and has a range of impacts that are more severe than in the West.
- The experiences of people with these long term disabilities provides rich contextual information that can inform policy, prevention and transport system design/treatment.
- This enables the loop to be closed between the long term impacts of crashes and the policies and programs aimed at addressing them.
References


Together we can save millions of lives.

DECADE OF ACTION FOR ROAD SAFETY 2011-2020

www.decadeofaction.org

Mark your Diaries!

International Council on Alcohol, Drugs and Traffic Safety Conference (ICADTS T2013)

August 2013, Brisbane Convention and Exhibition Centre