

# Road Traffic Injuries and Disability

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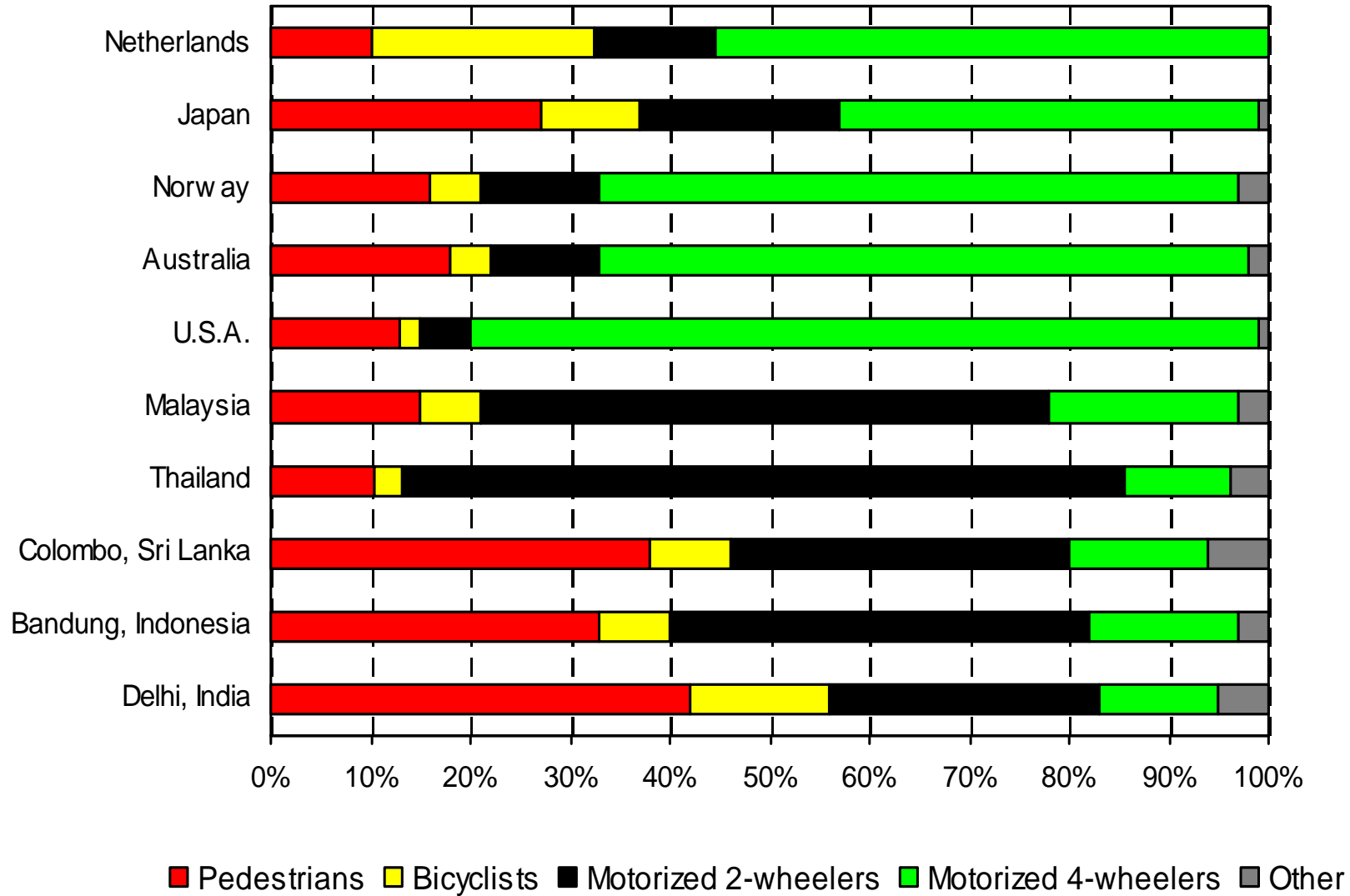
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# Disability after injury

- 1/3 of global injury burden accounted for by years lived with disability (YLD)<sup>1</sup>
- Preventing 'disability' after injury thus of great importance
- Important challenges to obtaining robust estimates of injury-related disability – in the global context

<sup>1</sup>Begg and Tomijima 2000

# Proportions of Road Crash Deaths by Type of Road User



**Vulnerable Road Users**

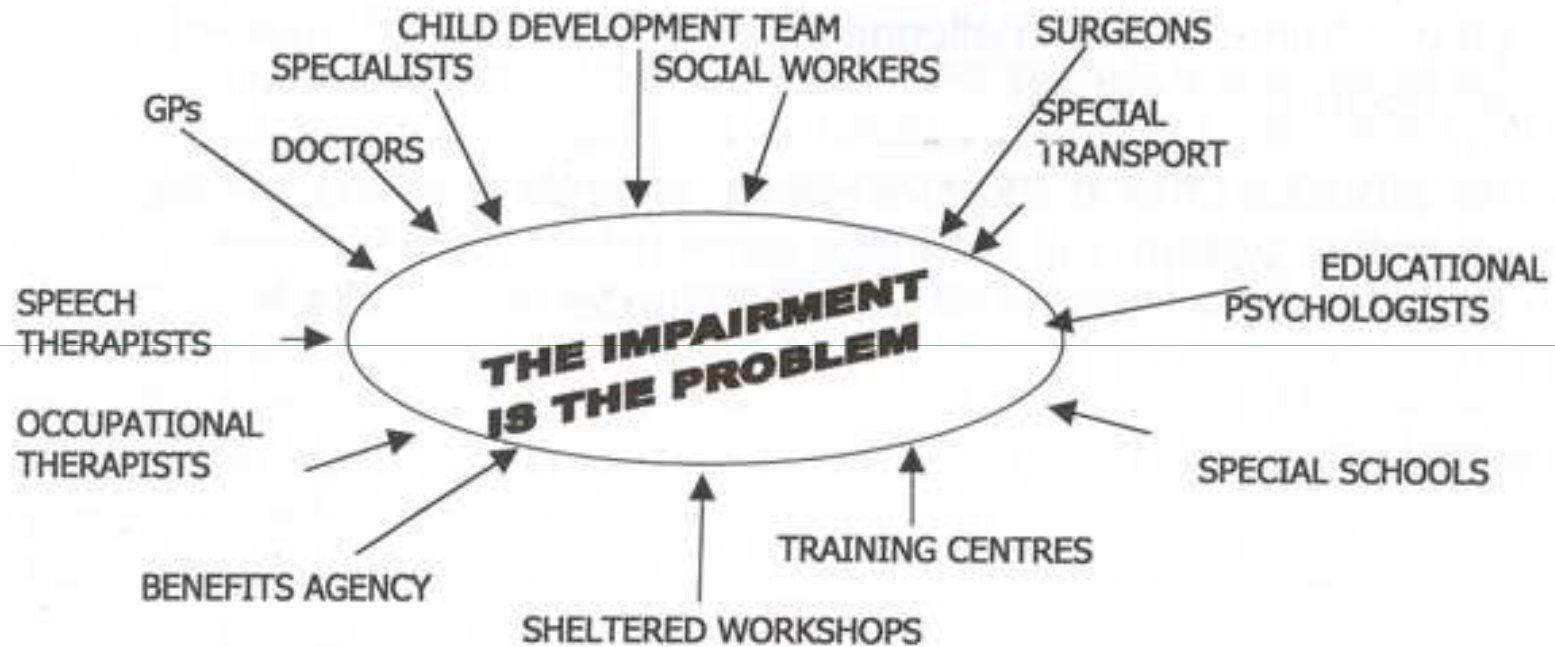
# Increasing recognition of the importance of RTI-related disability

- Head and spinal cord injuries, burns and limb injuries resulting in significant longer-term consequences
- Psychosocial effects and reduced quality of life
- Socio-economically disadvantaged groups and ethnic minorities face greater barriers accessing care and necessary support services following injuries
- Significant need for studies in low- and middle-income countries where environmental barriers can be particularly high, compounding the difficulties posed by physical aspects of injuries (Allotey, et al. 2003, World Report on Disability 2011)
- RTIRN April 2011 Newsletter profiles several studies in progress

# Approaches to measuring disability

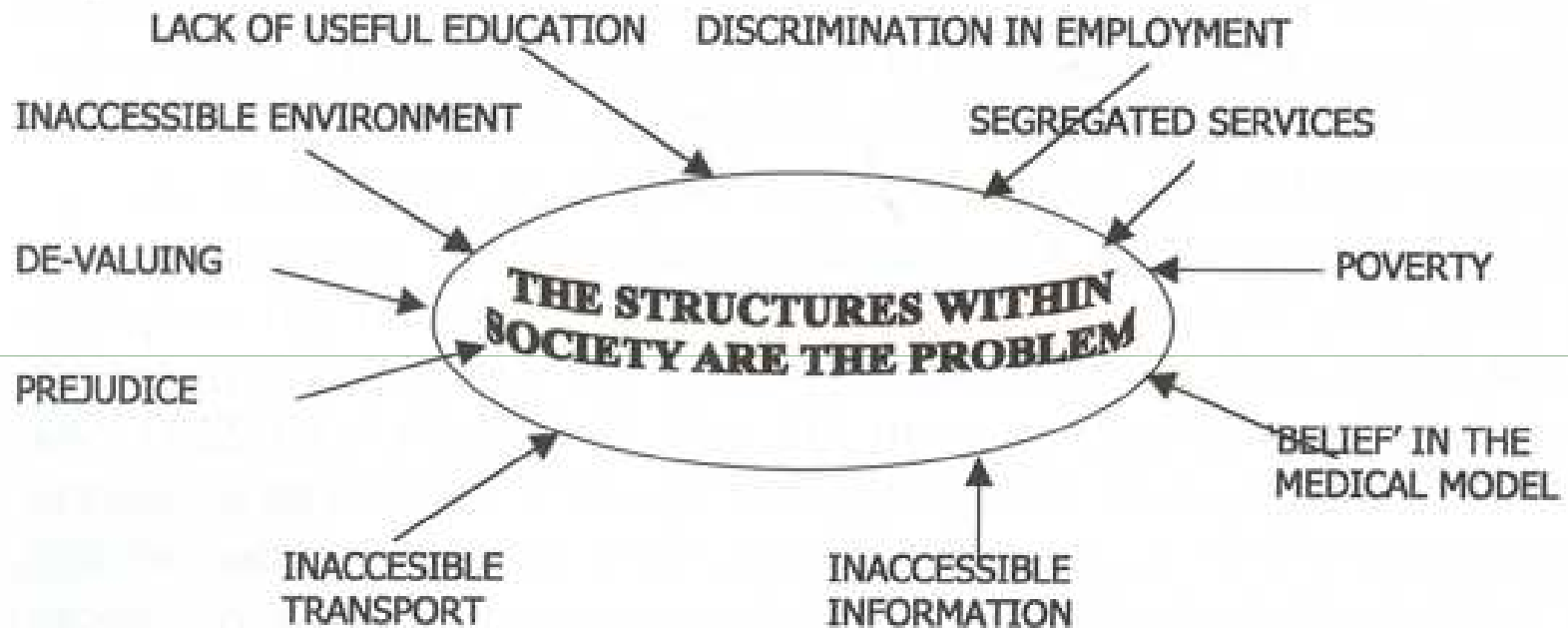
- Disability is a complex multidimensional experience.
- The way “disability” is conceptualised is a critical influence on estimates of disability. This is important to consider in addition to other methodological challenges noted in previous research
- Aspects of disability measured in research:
  - Impairments, activity limitations, participation restrictions, related health conditions, environmental factors
- “Impairment data are not an adequate proxy for disability information” - World Report on Disability

## The Medical Model.



DISABLED PEOPLE AS PASSIVE RECEIVERS OF SERVICES  
AIMED AT CURE OR MANAGEMENT

## The Social Model



DISABLED PEOPLE AS ACTIVE FIGHTERS FOR EQUALITY  
WORKING IN PARTNERSHIP WITH ALLIES.



## Paradigm shift in approaches to disability

- ▶ Move away from medical understanding towards social understanding.
- ▶ Disability arises from the interaction between people with a health condition and their environment.
- ▶ The CRPD focuses on removing environmental barriers which prevent inclusion.





# People with disabilities face significant barriers

- Inadequate policies and standards, lack of service provision, inadequate funding
- Negative attitudes
- Lack of access
- Inadequate information and communication
- Lack of participation in decisions that directly affect their lives



# Environmental factors influencing injury-related disability: Literature review

- 24 cross-sectional studies, five prospective
- All conducted in high-income settings
- Most studied people with SCI or TBI
- Outcomes: activities, participation, quality of life or multiple outcomes
- Most studied adults (very few included children)
- Major need for studies in LMICs where environmental barriers are likely to be highest <sup>1,2</sup>

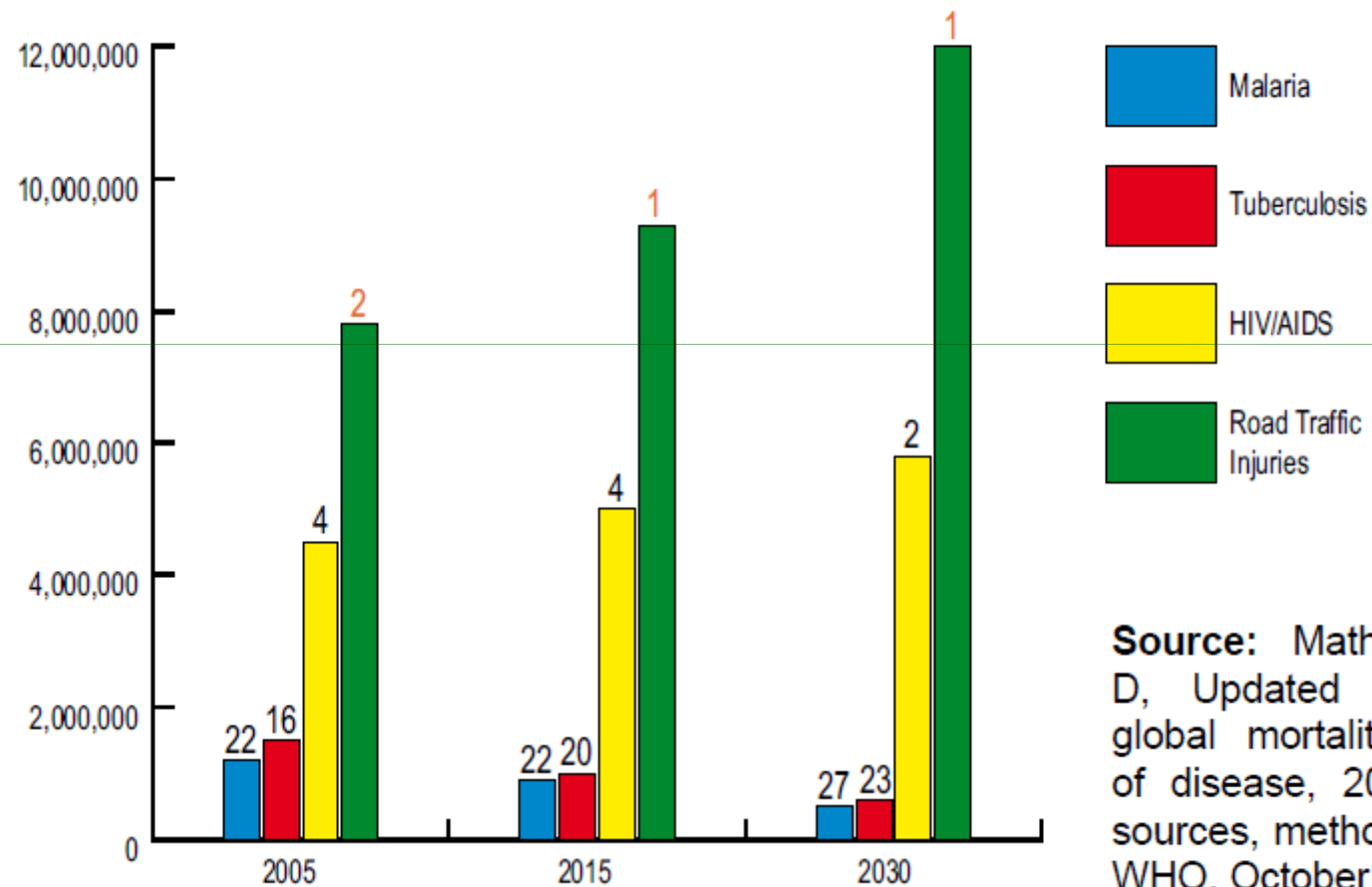


Most accessible toilet for people with paraplegia in a study from Cameroon (cf. Australia)  
-Allotey, Reidpath, et al, Soc Sci Med 2003

# Findings of included studies

- Factors associated with less disability included:
  - Fewer environmental barriers based on summary scores (9 studies found effect; 3 studies no effect)
  - More social support (6 studies found effect; 2 studies no effect)
  - More family support (3 studies found effect; 1 study no effect)
  - Better access to transport (3 studies found effect)
- Higher levels of participation may mean more opportunities to encounter barriers

## Projected DALYS in developing countries: (children aged 5 – 14)



**Source:** Mather C, Loncar D, Updated projections of global mortality and burden of disease, 2002-2030: data sources, methods and results, WHO, October 2005

# Disability prevalence is high & growing

- 15% global population and the prevalence is growing
  - due to ageing population
  - Increasing burden of chronic conditions
  - Increasing numbers of children living with disabilities surviving longer...



- RTI rates higher among disabled children and adults (Leff 2010; Sinclair 2008; Xiang 2006; Petridou 2005; Roberts 1995)
- Travel anxiety can become a significant issue (Mitullah 2009; Lundalv 2005)
- Inaccessible transport (eg, curb cuts, public transport, options taking account of wheelchairs and other assistive technologies) — a significant barrier to engagement in education, workforce, recreation and social participation (World Report on Disability)

- Environmental approaches can reduce barriers
- Engaging people living with disability in road infrastructure planning (Hersh 2010, Ohene-Dian 2010, PNG)
- World Report recommendations for access:
  - Curb cuts or ramps
  - Safe crossings with appropriate signalling and sufficient time
  - Accessible entries to buildings, public amenities, transport




# Opportunities to prevent post-RTI disability

- Prevent road traffic injuries!
- Effective treatment: pre-hospital, acute trauma, rehabilitation
- Enabling environments: physical, social and societal, institutional and technological
- Effective policies in many spheres (e.g., education, employment, transport, etc) that discourage violation of human rights among those who 'survive' injuries

# Challenges for research...

- Which environmental barriers will reduce the scale of injury-related disability, and the inequities in the between and within countries
- Need to know more about
  - how barriers vary between (and within) countries, which are most important and cost-effective to modify
  - perspectives of people living with disabilities, carers, service providers (consideration of research methods)
  - what actions and approaches will most influence policy and system changes?
  - ‘Missed opportunities’ and ‘tipping points’



What is the picture that people living with disability would want to see incorporated in the Decade of Action?

- “No pessimist ever discovered the secret of the stars, or sailed to an uncharted land, or opened a new doorway for the human spirit.”