

Epidemiology of Disability

Wim van Brakel
KIT Leprosy Unit
Medical Advisor Netherlands Leprosy Relief

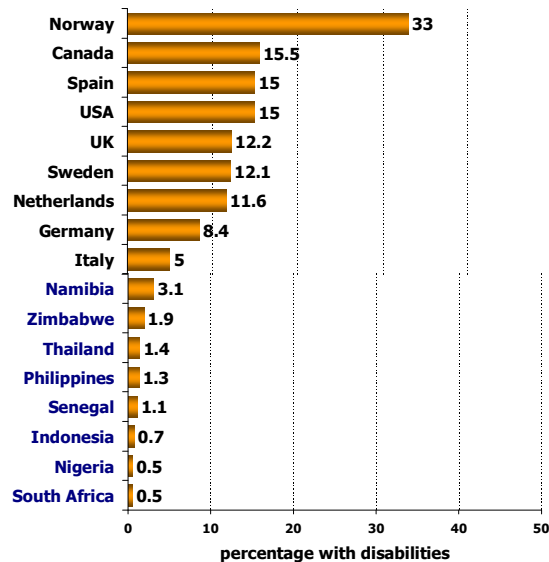


Disability – the issues

- Estimated 600 million people with disability world-wide
- Widespread poverty
- Social exclusion
- Poor access to education and employment
- Only small % have access to rehabilitation and other services.



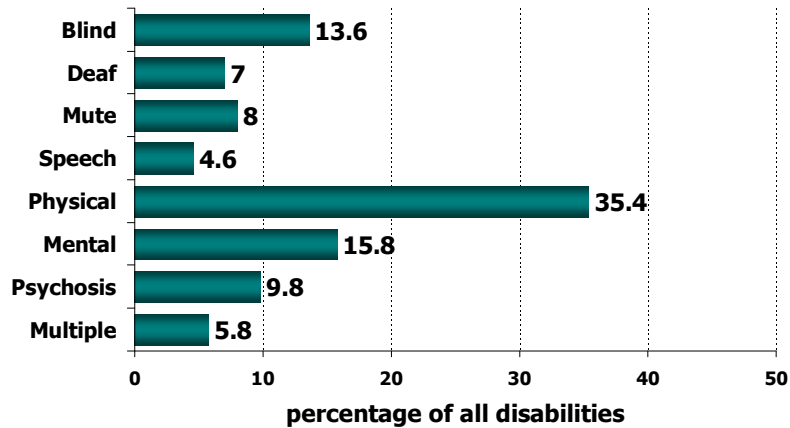
Prevalence of disability in different countries (1980-2003)



Why these differences?

- Lack of a common definition
- No standard methods to measure disability
- Demographic profiles of countries differ
- Attitudes (stigma) towards disability
- Socio-cultural determinants
 - Is Euro-American desire for equality a global desire?
 - Meaning of disability in given culture
- Disability awareness of population.

Distribution of types of disability, Indonesia (2003, n=1.36 million)



National Social and Economic Survey (SUSENAS, 2003)

Recent data – overall disability

Country	Year	N	% disability	Type
Zambia	2006	30,000	11	ICF
Indonesia	2006	7,100	4.6	ICF
Marocco	2006	54,241	5.1	ICF

Components of functioning and disability (ICF)

- Body functions & structures (impairments)
- Activities (limitations)
- Participation (restrictions)
- Personal factors
- Environmental factors (stigma!)



Assessing participation (n=282)



Factors reducing risk of participation restriction

Factor	Adjusted OR
Education	
Illiterate	1
Primary school	0.34 (0.17-0.70)
Marital status	
Never married	1
Married	0.50 (0.24-1.0)

Factors increasing risk of participation restriction

Factor	Adjusted OR
Type of house	
Stone/concrete	1
Temporary shelter	6.1 (1.1-33)
Activity limitation	
No	1
Yes	8.5 (4.5-16)
Stigmatisation	
No	1
Yes	3.2 (1.4-7.3)

Leprosy-related disability

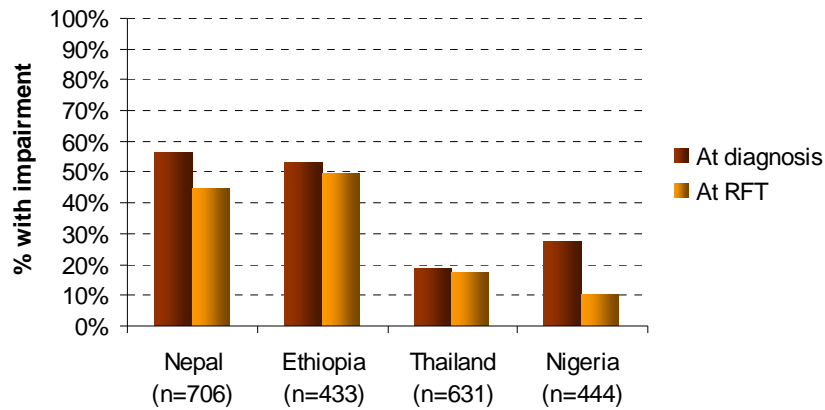


Recent data – impairment

Country	Year	N	%G1	% G2	Type cases
Global	2006	265,661	??	4.7	New
Myanmar	2004	1,702	3.3	29.0	Post-RFT
Myanmar	2004	4,347	2.9	37.0	Post-RFT



Changes in impairment over time



Facts related to magnitude of leprosy-related impairment

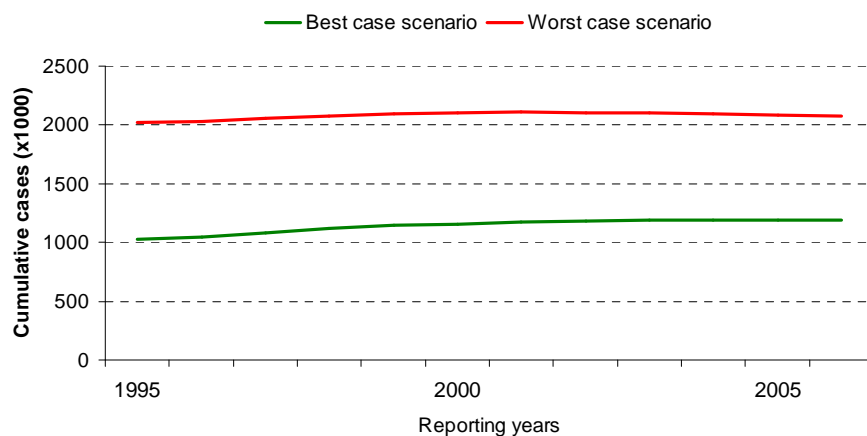
- No accurate estimates (data) yet
- Patients RFT up to 1995: ~6.7 million
- Registered cases in 1995: 924,000
- New cases since 1995: ~6.9 million, among which 327,646 with disability (G2)
- Number with grade 1 unknown.

Assumptions related to magnitude of leprosy-related impairment

- Registered cases in 1995: 924,000
 - Best case scenario: **20%** grade 2 impairment
 - Worst case scenario: **40%** grade 2 impairment
- Surviving cases with disability up to 1995: 990,000 – 1.98 million
- Annual mortality rate 10/1,000
(double for pre-1995 RFT group)
- Number at detection = number at RFT
- % improving = % worsening.



Estimated cumulative cases with grade 2 impairment since 1985



Current estimate of magnitude of leprosy-related impairment (G2)

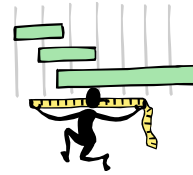
- **Best** case scenario: 1.2 million
- **Worst** case scenario: 2.1 million
- Note: only impairment => may be under-estimate of actual disability magnitude



Recent data – activity limitations and participation restrictions

Country	Year	N	% PR	Instrument
Activity				
Brazil	2006	247	78	Salsa
Participation				
Nepal	2006	103	40	P-scale
Brazil	2006	247	32	P-scale

Conclusions



- No reliable estimates of disability prevalence
- Impairment estimate: 1.2-2.1 million; will be slowly declining
- Focus too much on impairment
- New tools available, based on ICF
- Activity limitations and participation restrictions common among people with disability
- More data and rehabilitation services urgently needed!



Royal Tropical Institute



With thanks to several colleagues
who provided me with some of the
data shown!



Royal Tropical Institute

