Comparison of Short Set Disability Measures:

Mitchell Loeb
National Center for Health Statistics/
Washington Group on Disability Statistics

About this presentation:

The Disablement Process ca.1980

Measuring Disabilities: 1

Questions used to identify persons with disabilities:
Zambia Census 1990

1. Are you disabled in any way? Yes/No
2. What is your disability?

Blind	Yes/No
Deaf/dumb	Yes/No
Crippled	Yes/No
Mentally retarded	Yes/No

Disability prevalence = 0.9%

Global disability prevalence rates*

High-income countries			Low-income countries		
	Year	%		Year	%
Canada	1991	14.7	Turkey	1985	1.4
Germany	1992	8.4	Oman	1993	1.9
Italy	1994	5.0	Egypt	1976	0.3
Netherlands	1986	11.6	Morocco	1982	1.1
Norway	1995	17.8	Gaza Strip	1996	2.1
Sweden	1988	12.1	Iraq	1977	0.9
Spain	1986	15.0	Jordan	1994	1.2
UK	1991	12.2	Lebanon	1994	1.0
USA	1994	15.0	Syria	1993	0.8

*** Concepts, sources and methodologies are country specific**

Global disability prevalence rates*

High-income countries			Low-income countries		
	Year	%		Year	%
Canada	1991	14.7	Kenya	1989	0.7
Germany	1992	8.4	Namibia	1991	3.1
Italy	1994	5.0	Nigeria	1991	0.5
Netherlands	1986	11.6	Senegal	1988	1.1
Norway	1995	17.8	South Africa	1980	0.5
Sweden	1988	12.1	Zambia	1990	0.9
Spain	1986	15.0	Kenya	1989	0.7
UK	1991	12.2	Zimbabwe	1997	1.9
USA	1994	15.0	Malawi	1983	2.9

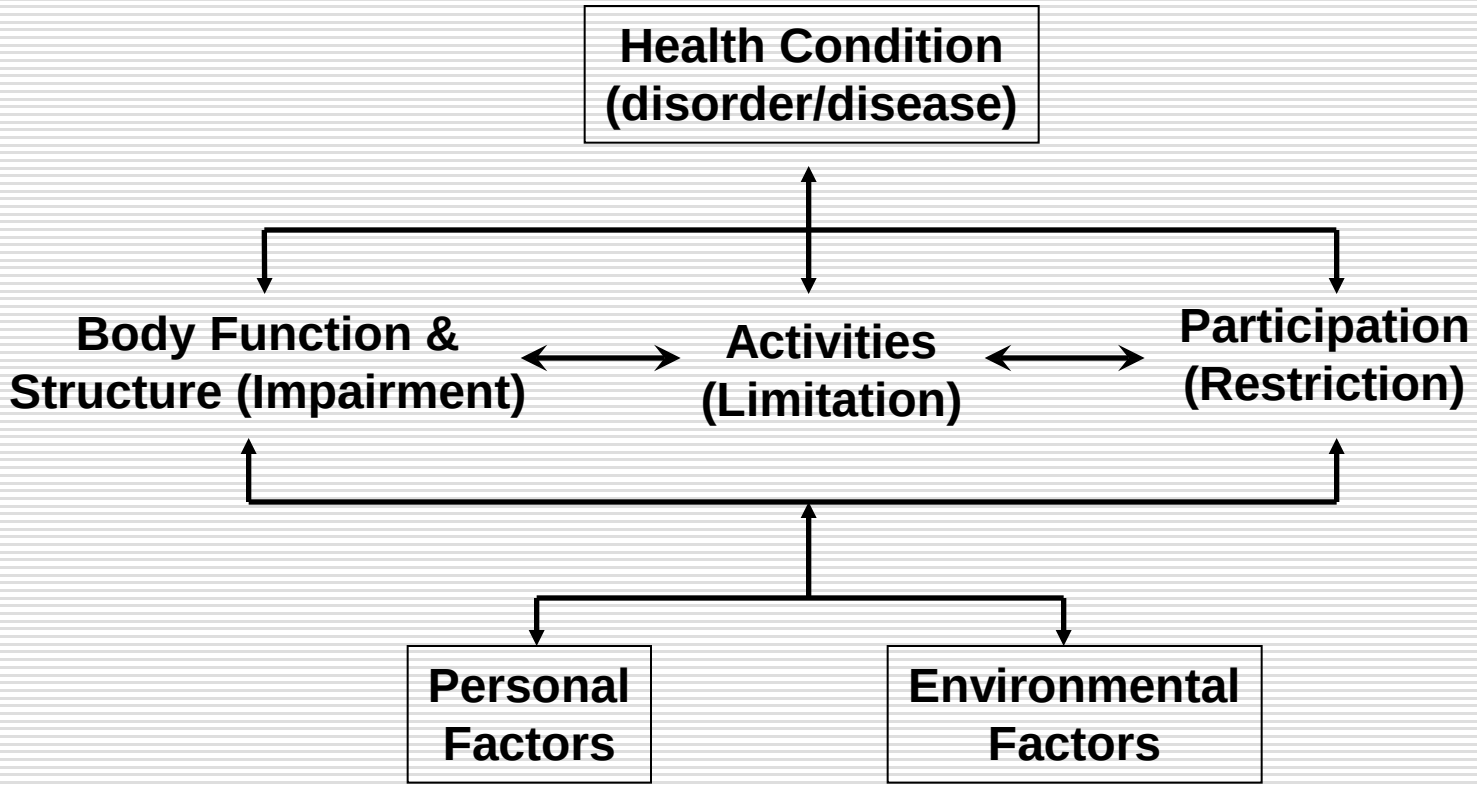
*** Concepts, sources and methodologies are country specific**

Global disability prevalence rates

ESCAP / The Sub-Continent

	Year	%	Questions used to identify persons with disabilities:
Bangladesh	1982	**0.8**	Blind, crippled, deaf/dumb, mentally handicapped, other
Pakistan	1981	**0.5**	Blind, crippled, deaf/dumb, mentally retarded, insane, other
India	1981	**0.2**	Is there a physically handicapped person in the household? If so, indicate the number of those who are totally (1) blind (2) crippled (3) dumb
Sri Lanka	1981	**0.5**	Blind, deaf/dumb, loss/paralysis of hand(s) or leg(s)
Thailand	1990	**0.3**	Blind, deaf/dumb, armless, legless, mentally retarded, insanity, paralyzed, other

The ICF Model - 2001



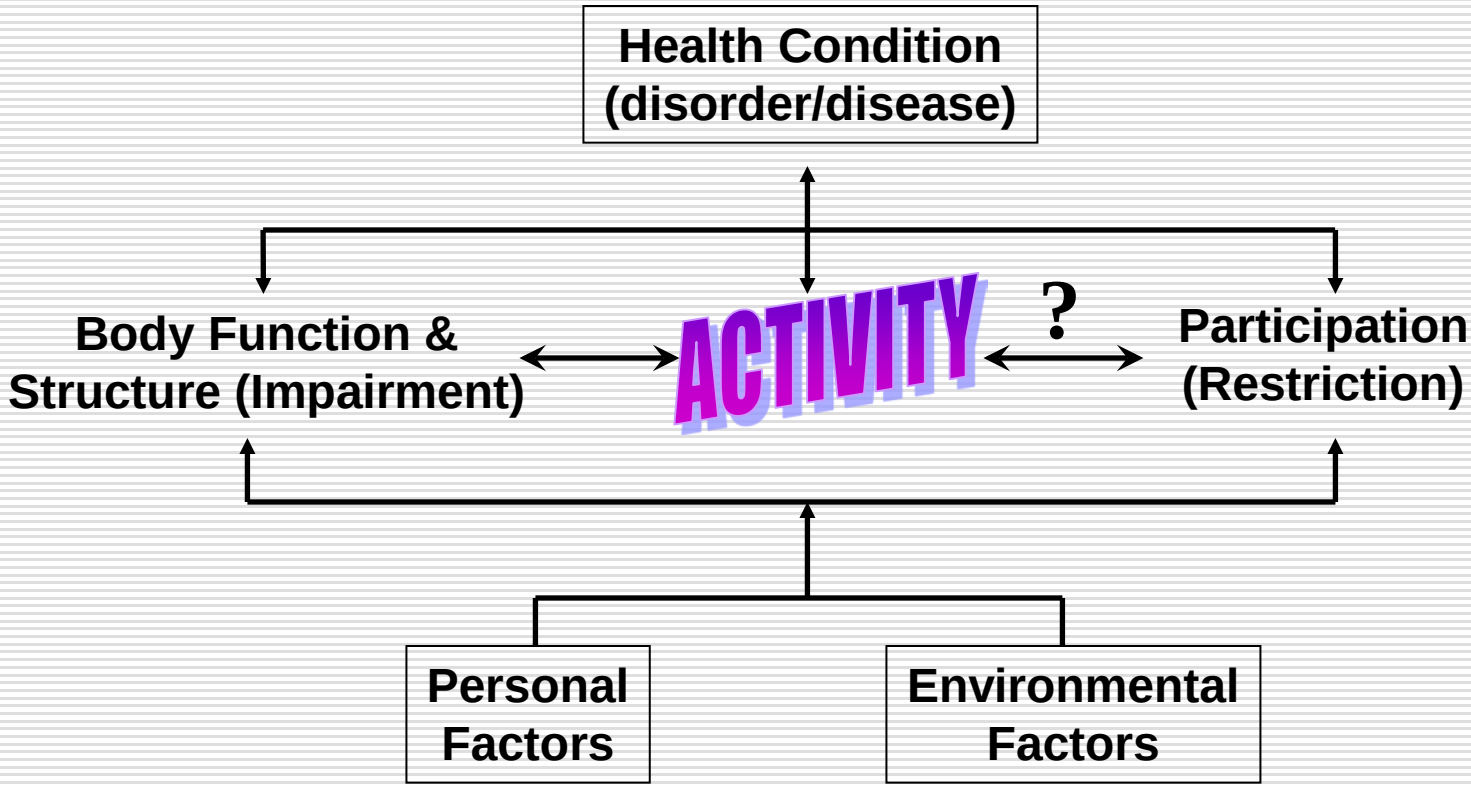
Source: World Health Organization, 2001

Measuring Disabilities: 2

An approach based on identifying those at greater **risk** than the general population for **limitations** in **participation**.

The development of questions based on **difficulties** doing certain **basic actions**.

Locating Risk in the ICF Model



Source: World Health Organization, 2001

Measuring Disability: 2

Because of a Health problem:

1) Do you have difficulty seeing even if wearing glasses?
2) Do you have difficulty hearing even if using a hearing aid?
3) Do you have difficulty walking or climbing stairs?
4) Do you have difficulty remembering or concentrating?
5) Do you have difficulty with (self-care such as) washing all over or dressing?
6) Using your usual (customary) language, do you have difficulty communicating (for example understanding or being understood by others)?

Response categories:

No - no difficulty; Yes - some difficulty;

Yes - a lot of difficulty; Cannot do at all

Measuring Disabilities: 3

- A survey of Living Conditions among People with Disabilities in Zambia (2006) used the WG short set.
- 4 Response categories
- Disability: at least one domain that is coded as a lot of difficulty or cannot do it at all.
  - prevalence 8.5%

Severity within Domains of Functioning

	At least:		
Core Domain	**Some difficulty**	**A lot of difficulty**	**Unable To do it**
Vision	4.7	2.6	0.5
Hearing	3.7	2.3	0.5
Mobility	5.1	3.8	0.8
Remembering	2.0	1.5	0.3
Self-Care	2.0	1.3	0.4
Communicating	2.1	1.4	0.5

Severity in Population (%)

Person with disability has:	N	%
at least 1 Domain is ‘some difficulty’	4053	14.5
at least 2 Domains are ‘some difficulty’	3090	11.0
at least 1 Domain is ‘a lot of difficulty’	2368	8.5
at least 1 Domain is ‘unable to do it’	673	2.4

WG Recommendation:

At WG-10 in Luxembourg, we presented a document: The Measurement of Disability: Recommendations for the 2010 Round of Censuses

The WG recommended the following cutoff be used to define the populations with and without disabilities:

- The sub-population *disabled* includes everyone with *at least one domain* that is coded as *a lot of difficulty* or *cannot do it at all*.

Objectives

- Identify persons with similar types and degree of limitations in basic actions regardless of nationality or culture
- Represent the majority (*but not all*) persons with limitations in basic actions
- Represent commonly occurring limitations in domains that can be captured in the Census context

Recently, about 30 countries indicated to the WG that they intended to use the short set of questions on this current (2010) round of censuses.

The WG routinely monitors the collection of disability data internationally, and annually requests detailed information from representatives from National Statistical Offices covering survey periodicity, sample size and frame, mode of data collection, language(s) used, the actual questions operationalized with response options and finally prevalence data.

Annually about 120 countries receive requests to report on national activities that relate to disability statistics.

Responses are voluntary – and in the last round, responses (including both those that provided data and those that did not) were received from 50 countries. This represents a response rate of about 42%.

Overview of disability data

Data supplemented with information provided by countries attending an Arab Institute for Training and Research in Statistics (AITRS) sponsored a disability seminar in held in Damascus, Syria, December, 2010.

Two countries (Zambia and South Africa) provided data independently of the WG request for information that was sent out.

Overview of disability data

34 countries are represented:

Middle East: 7 (Morocco, Oman, Israel, Jordan, Egypt, Palestine, Yemen)

North/South America: 8 (Canada, USA, Panama, Aruba, Dominican Republic, Mexico, Argentina, Peru)

Europe: 5 (Poland, Lithuania, Spain, Netherlands, Norway)

Asia/Pacific: 9 (Mongolia, Bangladesh, Australia, New Zealand, Cambodia, Maldives, Vietnam, Thailand, Japan)

Africa: 5 (Lesotho, Malawi, Mauritius, South Africa, Zambia)

Census results were reported by 16 countries while 20 countries reported survey results. Two countries (Israel, Peru) reported results from both census and survey.

Some countries reported census or survey data that pre-date the 2006 adoption of the WG short set of questions;

and there was a clear distinction between countries that took a more medical-model approach to identifying disability on their census or survey.

For census data:

Prevalence rates ranged from below 1% (0.4 and 0.6 recoded for the Dominican Republic and Egypt) to over 5% (6.4%, 6.9% and 8.4% recorded for Israel, Aruba and Panama).

For census data:

Lower rates predominated among censuses that pre-dated the WG, and relied on lists of impairments or types of disability in their questionnaires.

Censuses that took place post 2006 more often operationalized the social model of disability and used an activity limitation approach to measurement. Most of these reported disability prevalence rates in the range of 4-8%.

For census data:

Only Aruba (using 6 questions) and Israel (using 4 questions) used the WG questions as intended; with the recommended cut-off (Aruba – 6.9% / Israel 6.4%).

Several other countries employed modifications of the WG questions with varying results: Peru (household-based census), Malawi, Mexico and Panama all used the WG approach but used a dichotomous Yes/No response option and reported prevalence rates of 10.9 (HH), 4.0, 4.1 and 8.4 respectively.

For survey data:

Prevalence rates derived from surveys were generally higher than those from censuses but ranged from less than 5% (2.0% in Yemen; 2.9% in Thailand; and 2.6% in Lesotho) to greater than 10% (11.9% in USA, 13.8% in Poland, 14.3% in Canada, 15.0% in Israel and 16.6% in New Zealand).

For survey data:

Only three countries used an impairment-based approach to the measurement of disability on their surveys and all reported relatively low disability prevalence rates (Yemen 2.0%; Lesotho 2.6%; and Japan 5.4%).

Activity limitations: variations on a theme

17 countries presented various means of collecting disability data using an activity limitation approach.

4 countries Argentina, New Zealand, Spain and Australia included long lists of activities that generated prevalence rates that were higher than most: 7.1%, 16.6% 8.5%, and 7.4% respectively.

Activity limitations: variations on a theme

Peru (with 7 domains) and the US (with 6 domains) took somewhat similar approaches, operationalizing activity limitations and eliciting Yes/No responses – prevalence rates were 8.4% and 11.9% respectively.

Activity limitations: variations on a theme

Thailand, Norway, Poland and Netherlands all used approaches to measuring disability that could approximate the WG approach – but did not use the questions as written.

Activity limitations: variations on a theme

5 countries used the WG short set of questions in recent surveys: Maldives, Bangladesh, Israel, Zambia and South Africa.

Maldives (9.6%), Zambia (8.5%) and South Africa (ca. 4%) each used the WG short set as written and the response options as recommended.

We have found that while countries have reported disparate disability prevalence rates; with few exceptions, those that use the WG *as intended* (Israel [census/2008]; Aruba [census/2010]; Zambia [survey/2006]; and Maldives [survey/2009) have reported disability prevalence rates that are comparable: 6.4%, 6.9%, 8.5%, and 9.6% respectively.

So, is it half full, or half empty??