

Development of innovative training solutions in the field of functional evaluation aimed at updating of the curricula of health sciences schools



MODULE FUNCTIONAL EVALUATION

Didactic Unit C:

Classification of functional impairments and disability



INDEX

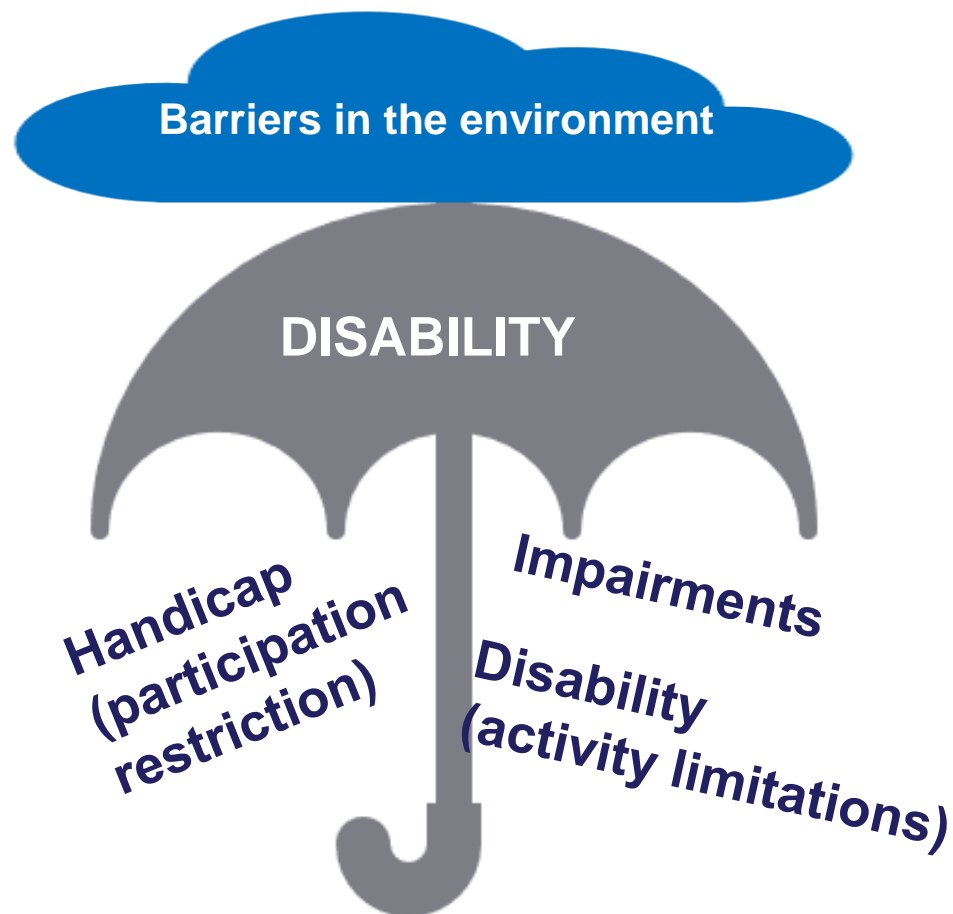
- Definition of "disability"
- ICF - International Classification of Functioning, Disability and Health
- Model of Functioning and Disability
- ICF model
- Classification of functional impairments and disability
- WHODAS 2.0
- Access City Award
- Key facts

Development of the definition of „DISABILITY”



Development of the definition of „DISABILITY“

Disability as the umbrella term for the negative aspects of functioning that arise in interaction with barriers in the environment



Development of the definition of „DISABILITY“

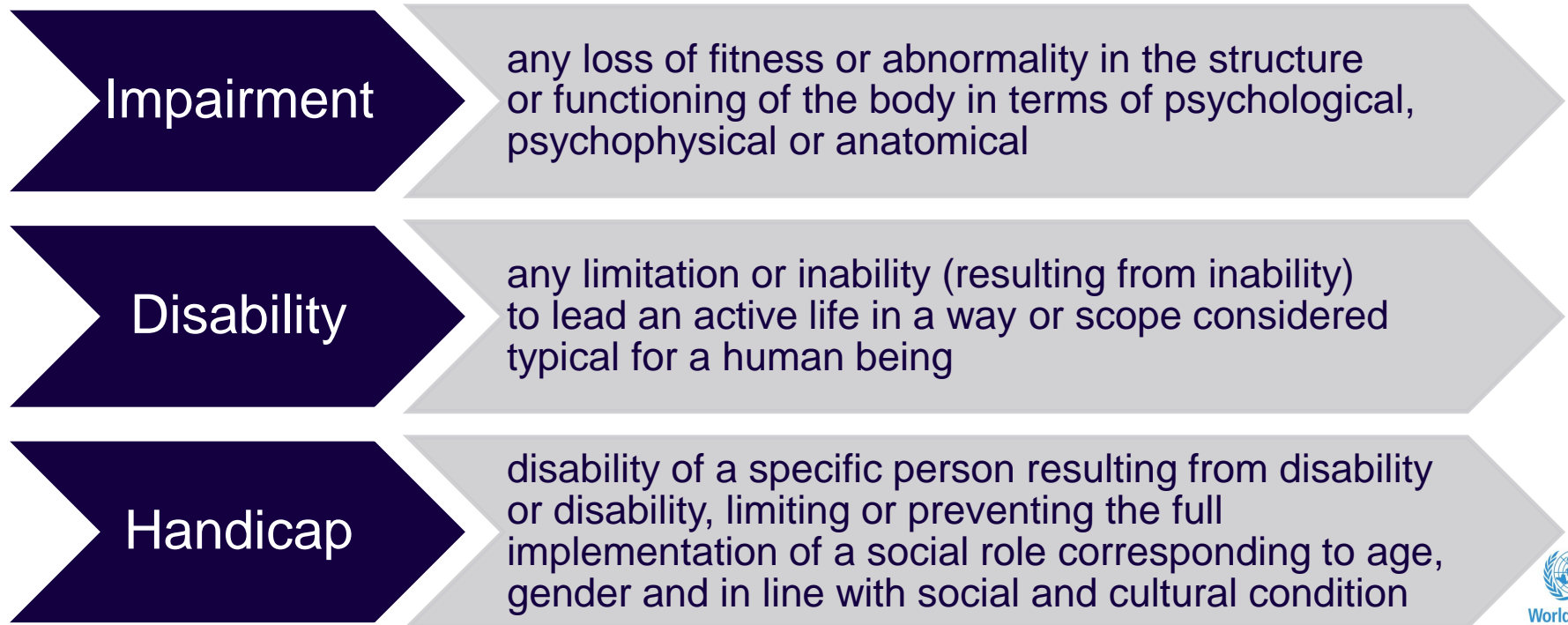
"Disabilities is an umbrella term, covering impairments, activity limitations, and participation restrictions. An impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. Disability is thus not just a health problem. It is a complex phenomenon, reflecting the interaction between features of a person's body and features of the society in which he or she lives."

World Health Organization, 2001

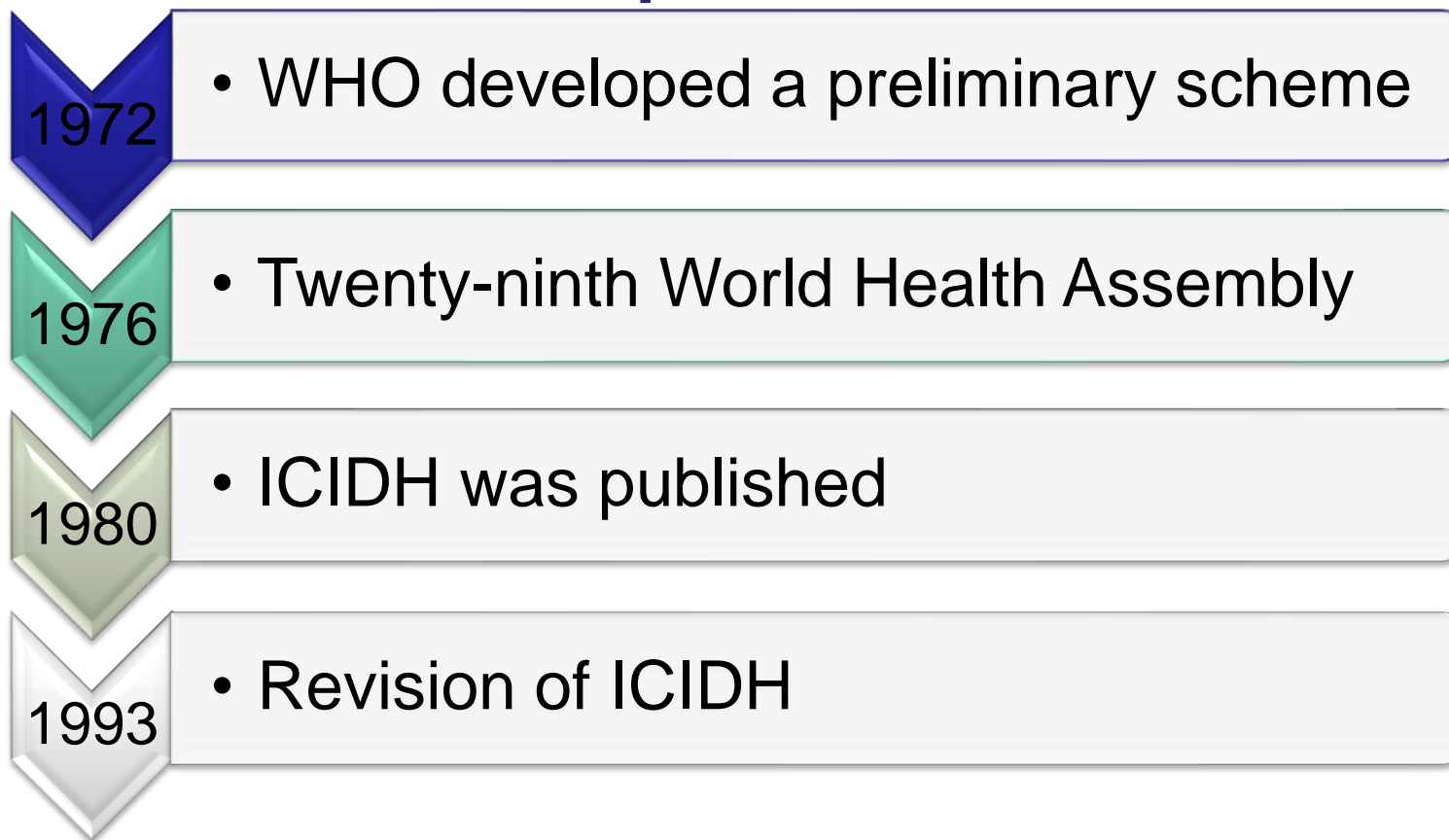


Development of the definition of „DISABILITY“

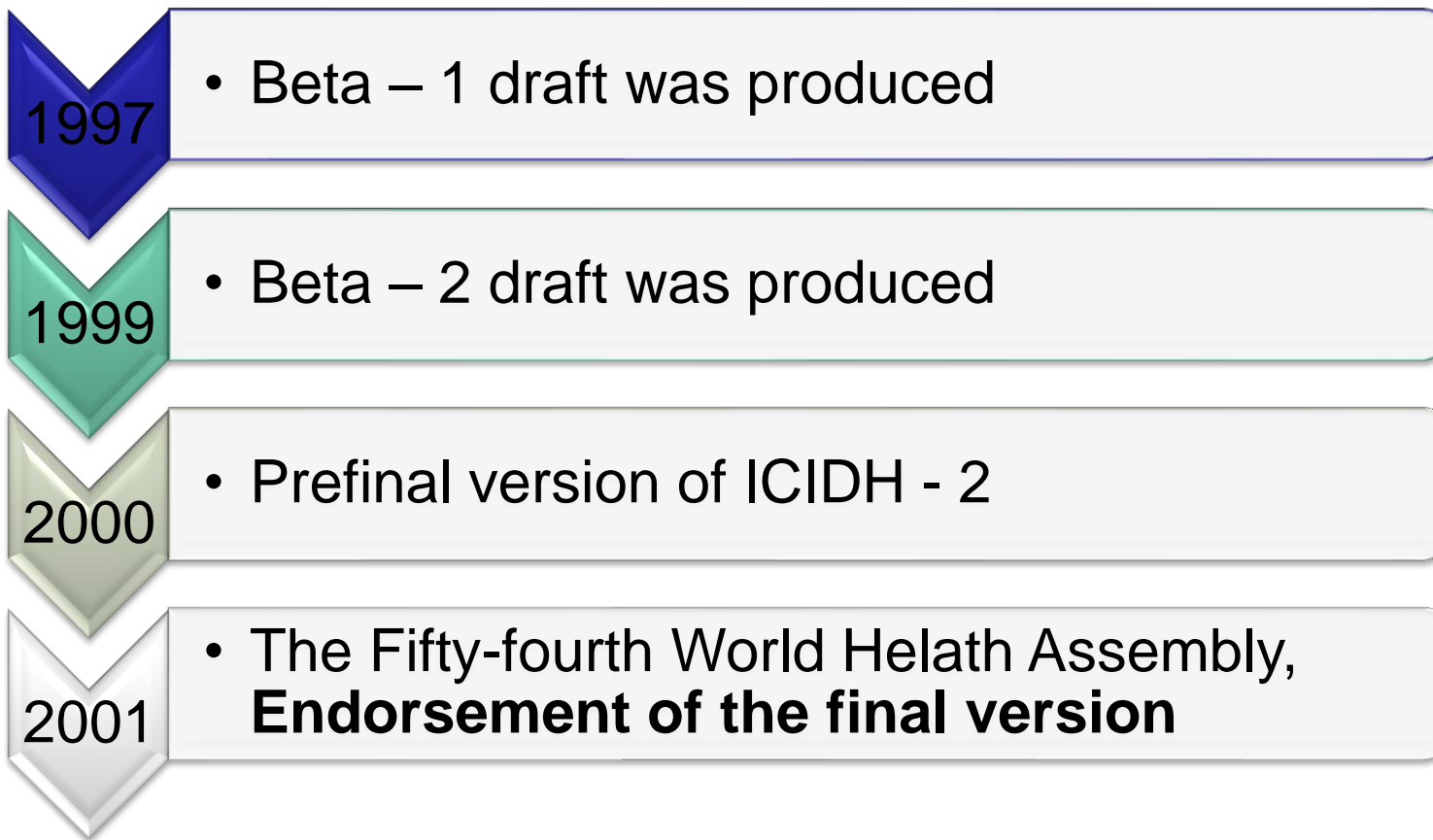
According to the World Health Organization, disability has three dimensions:



Development of ICF



Development of ICF



ICF - International Classification of Functioning, Disability and Health

Introduced in 2001

World Health Organization (WHO)

United Nations (UN)



Coding system for functioning and disability

ICD-10 International Statistical Classification of Diseases and Related Health Problems

Introduced in 1990

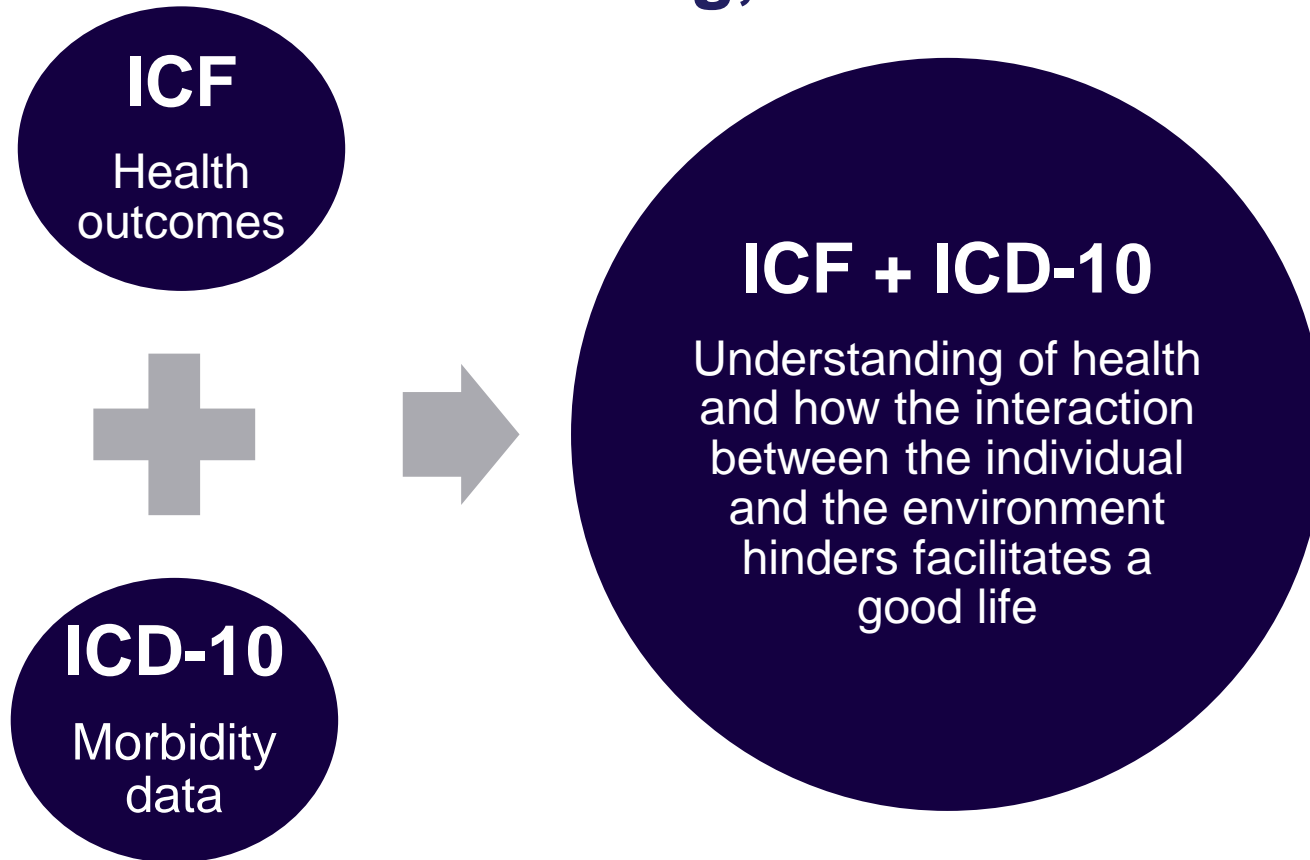
World Health Organization (WHO)

Diagnosis of diseases and health disorders

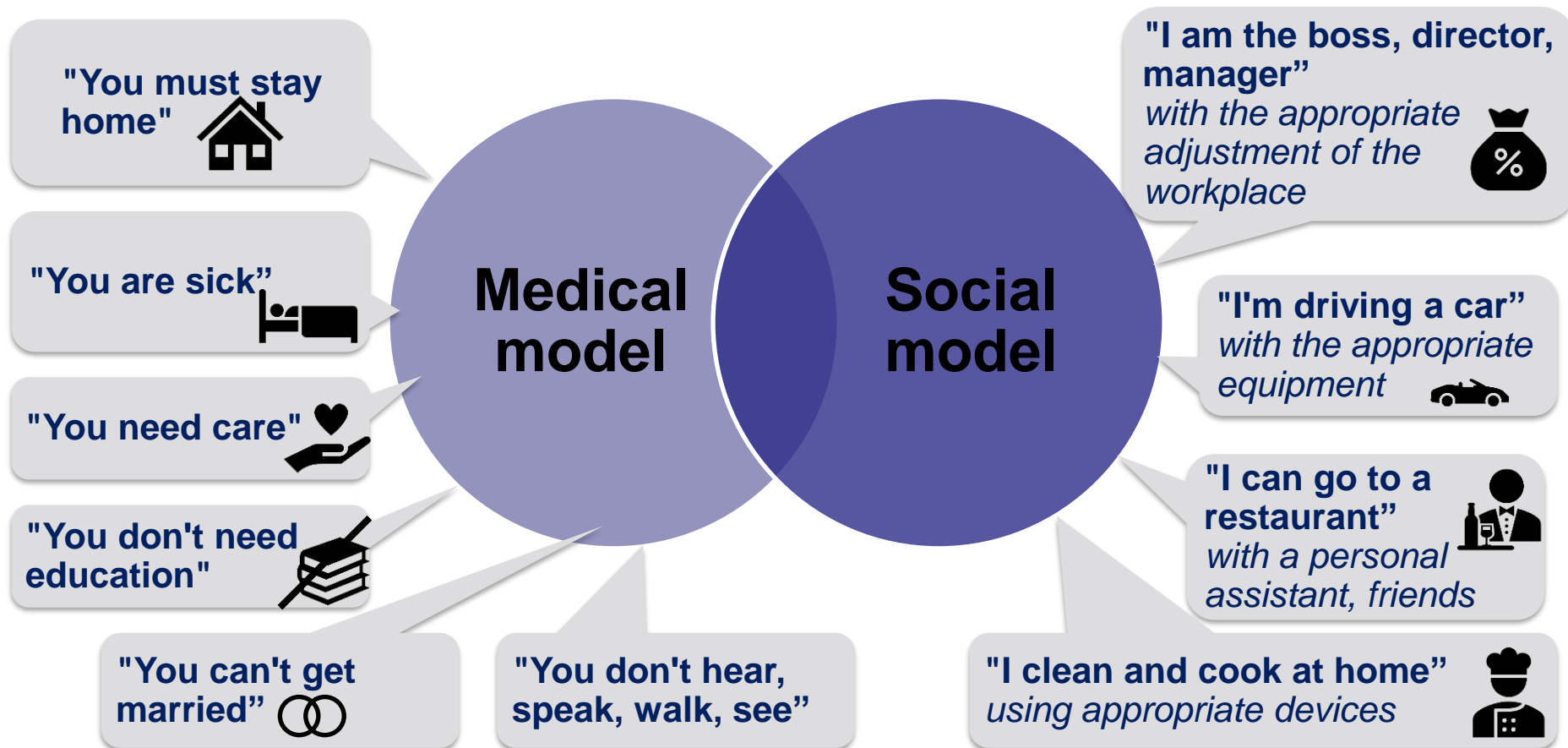


Current until 01.01.2022, it will be replaced by **ICD-11**

WHO's international classifications of health and functioning, ICD and ICF

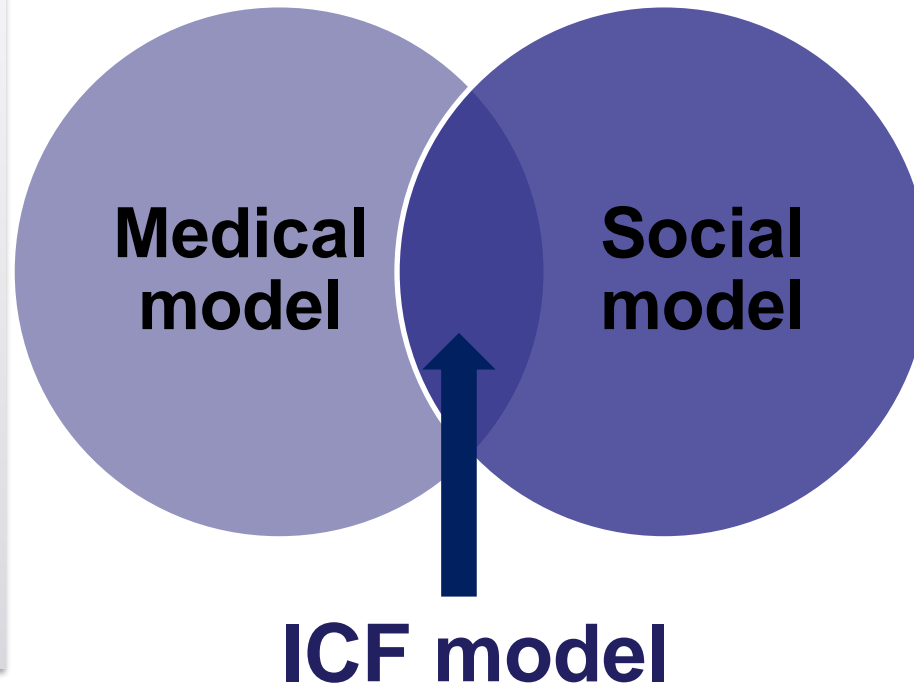


Medical and social models



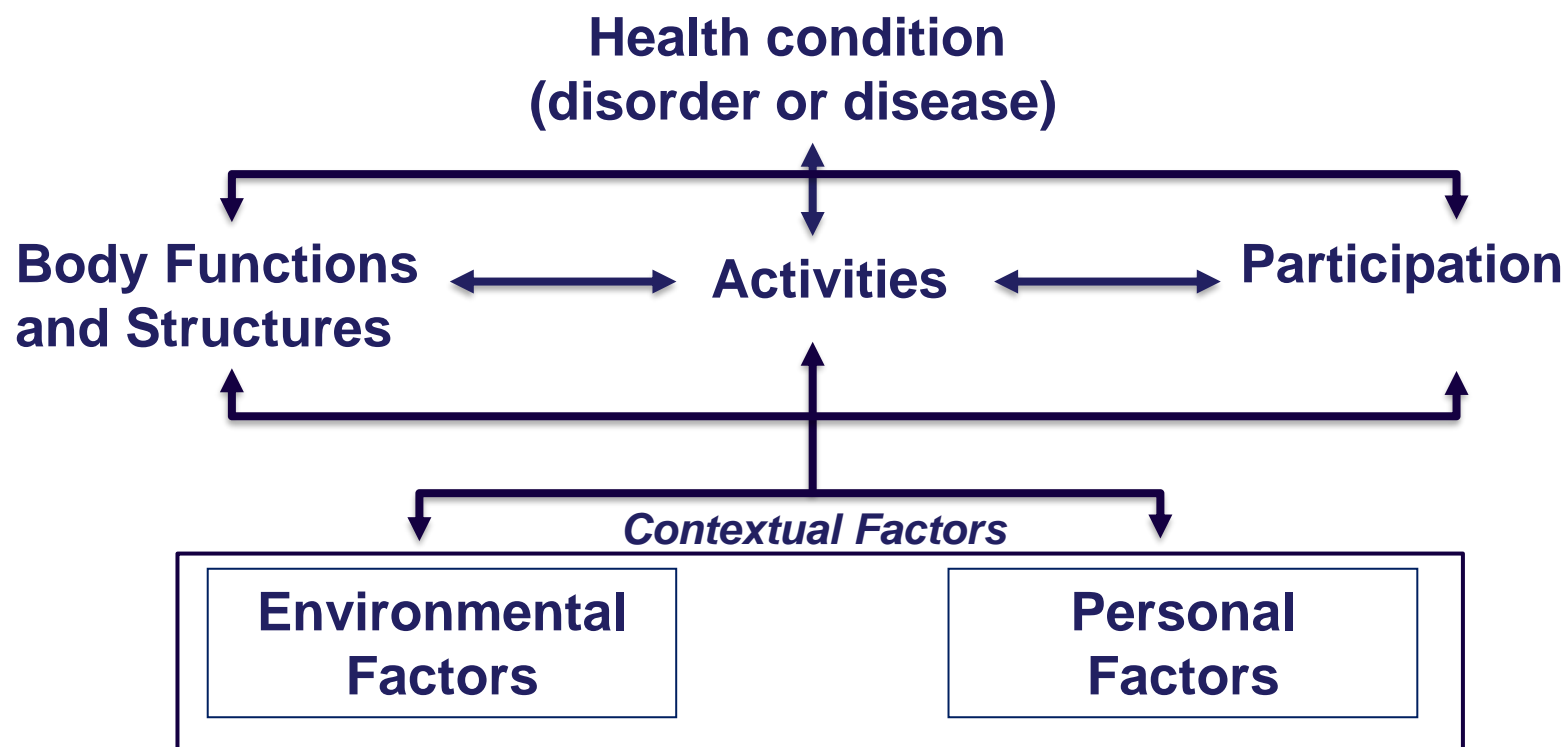
Medical and social models

The medical model views disability as a problem of the person, directly caused by disease, trauma or other health condition, which requires medical care provided in the form of individual treatment by professionals. Management of the disability is aimed at cure or the individual's adjustment and behaviour change. Medical care is viewed as the main issue, and at the political level the principal response is that of modifying or reforming health care policy.



The social model of disability, sees the issue mainly as a socially created problem, and basically as a matter of the full integration of individuals into society. Disability is not an attribute of an individual, but rather a complex collection of conditions, many of which are created by the social environment.

Model of Functioning and Disability



Model of Functioning and Disability

The ICF focuses on three components body, activities, participation (at individual and societal levels) and contextual (personal and environmental).

These three components underscore the importance of the interplay and influence of both internal and external factors to each individual's health status.

Overview of ICF components:

Body functions are the physiological functions of body systems (including psychological functions)

Body structures are anatomical parts of the body such as organs, limbs and their components

Impairments are problems in body function or structure such as a significant deviation or loss

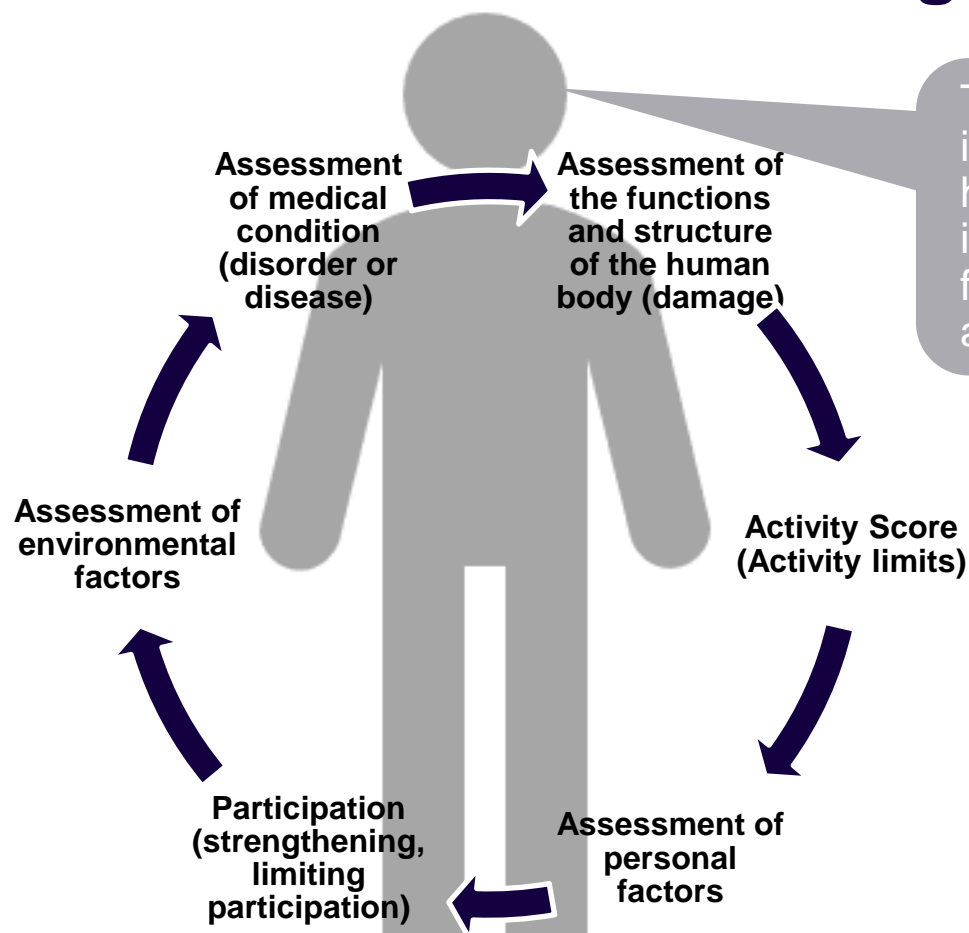
Activity is the execution of a task or action by an individual. Participation is involvement in a life situation

Activity limitations are difficulties an individual may have in executing activities

Participation restrictions are problems an individual may experience in involvement in life situations

Environmental factors make up the physical, social and attitudinal environment in which people live and conduct their lives

Functional assessment according to ICF



ICF classification objectives

To provide a scientific basis for understanding and researching health issues and related states, outcomes, and determinants

Establishing a common language used to describe health and health-related conditions to facilitate communication between different users, such as health professionals, academics, policy makers and the public, including people with disabilities

Allowing data to be compared across countries, across multiple healthcare domains, services and time periods

Developing a structured coding scheme for health information systems

ICF classification

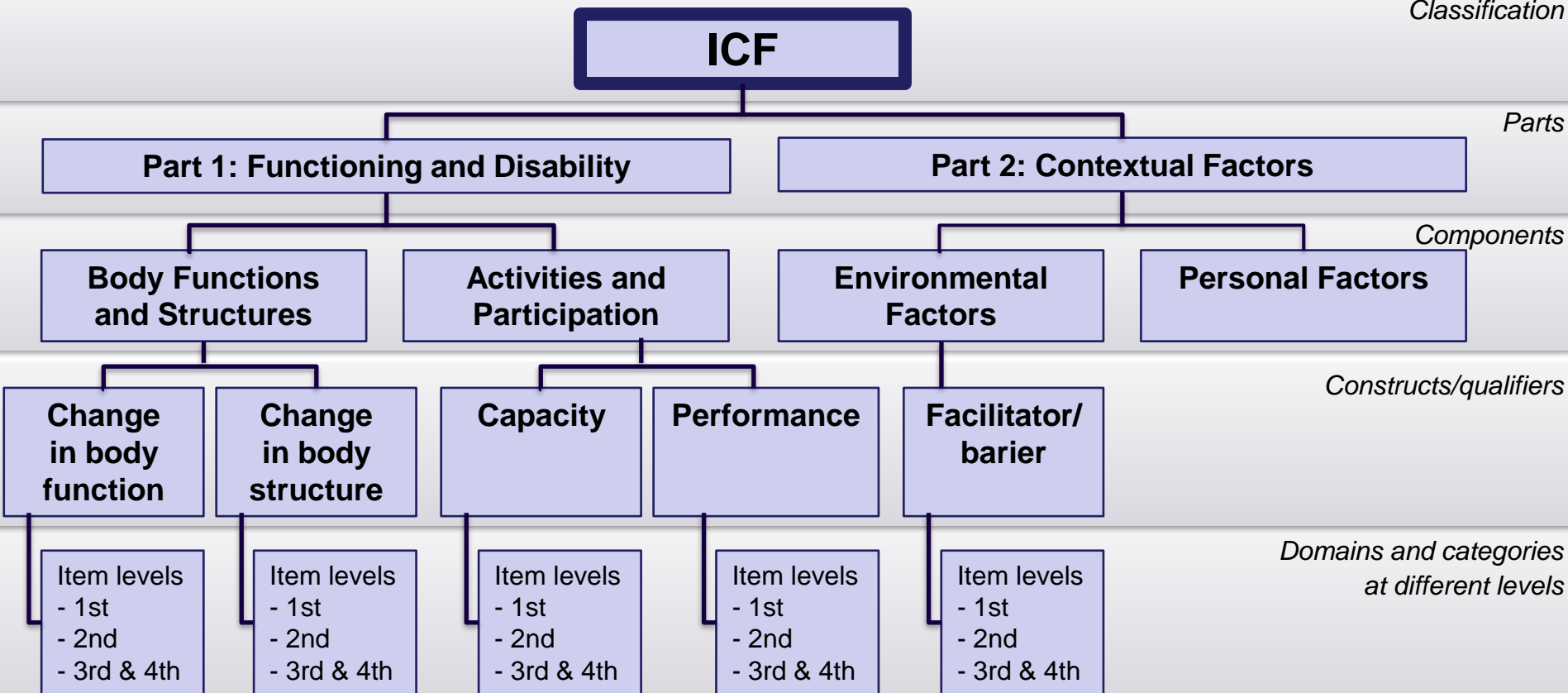
Classification

Parts

Components

Constructs/qualifiers

Domains and categories at different levels

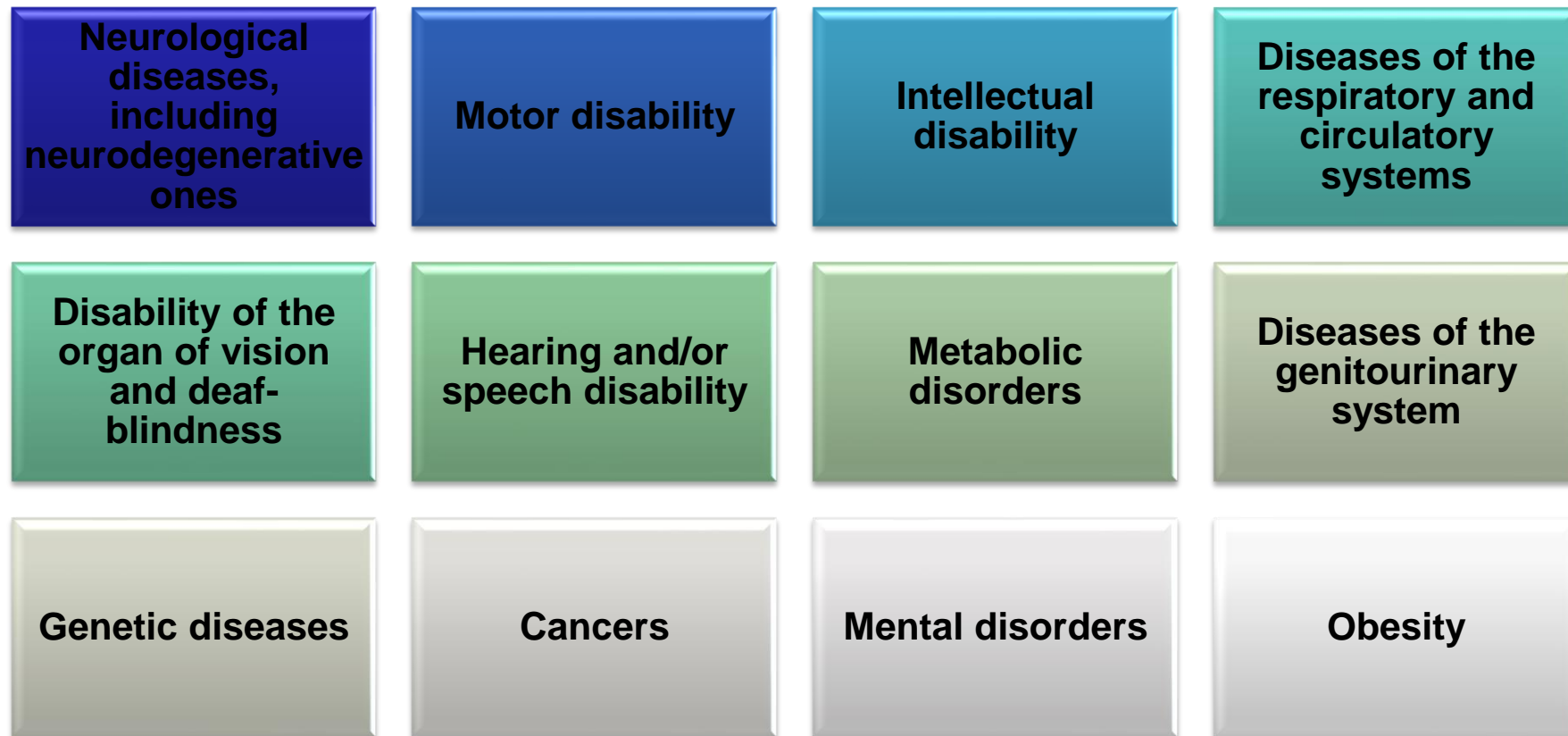


Detailed classification with definitions

On the website:

<https://apps.who.int/iris/bitstream/handle/10665/42407/9241545429.pdf>

Classification of functional impairments and disability according to ICF



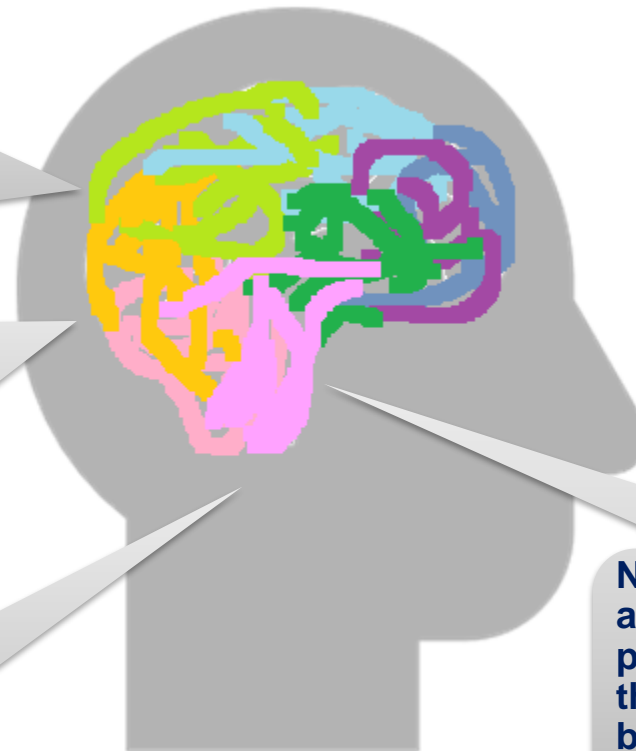
1. Neurological diseases, including neurodegenerative ones

The nervous system is a complex system that controls all processes in our body, and allows us to register and perceive what is happening both inside and outside of us

Nervous system diseases can be the result of:

- developmental defects,
- mechanical injuries,
- infections,
- degenerative changes

Diseases can affect the central part (e.g., epilepsy), the peripheral part (e.g., nerve damage and inflammation) or both



- Types of diseases:
- Multiple sclerosis
 - Cerebral Palsy
 - Stroke
 - Epilepsy
 - Alzheimer's disease and dementias
 - Parkinson's disease

Neurodegenerative diseases are associated with progressive damage to cells that build structures belonging to the nervous system

2. Motor disability

A motor disability is a condition of a person who is in a situation of reduced motor abilities of the body



Types of diseases:

- Paraplegia and tetraplegia
- Amputations
- Rheumatic diseases

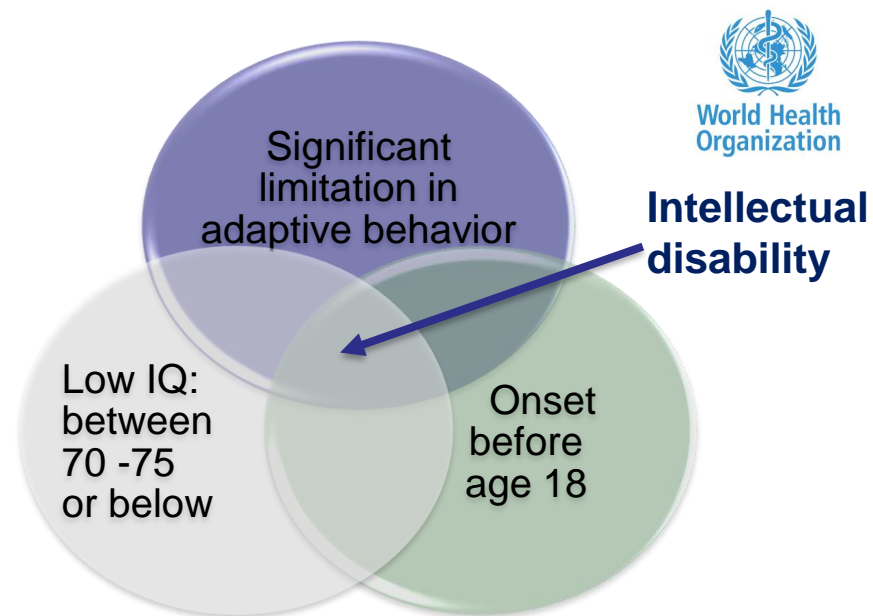


3. Intellectual disability

“Intellectual disability is a significant reduction in the overall level intellectual functioning, and difficulties in adaptive behavior, occurring before the age of 18. ”

Developmental disorders related to intellectual disability:

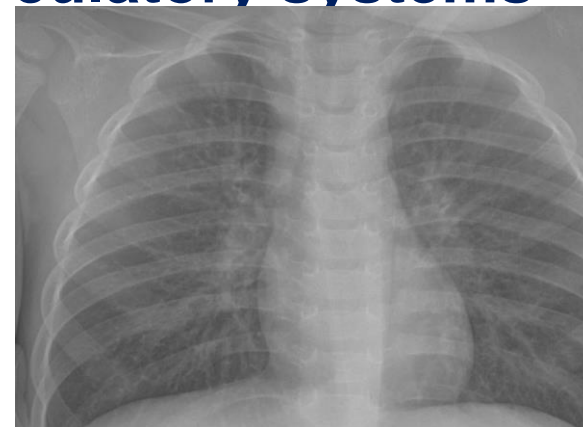
1. Genetically conditioned disorders
2. Pervasive development disorders
3. Neurological disorders
4. Conditions after infections of the prenatal period



4. Diseases of the respiratory and circulatory systems

Cardiovascular diseases - diseases of the organs and tissues of the circulatory system, in particular the heart, arteries and veins.

Respiratory Diseases - all medical conditions affecting or associated with the respiratory tract.



The most common diseases of the respiratory system:

- Infectious diseases,
- Cancers,
- Occupational diseases,
- Genetic diseases

The most common diseases of the circulatory system:

- Atherosclerosis
- Ischemic heart disease
- Rhythm and conduction disturbances
- Heart defects (congenital and acquired)
- Endocardial disease
- Diseases of the heart muscle

5. Disability of the organ of vision and deaf-blindness

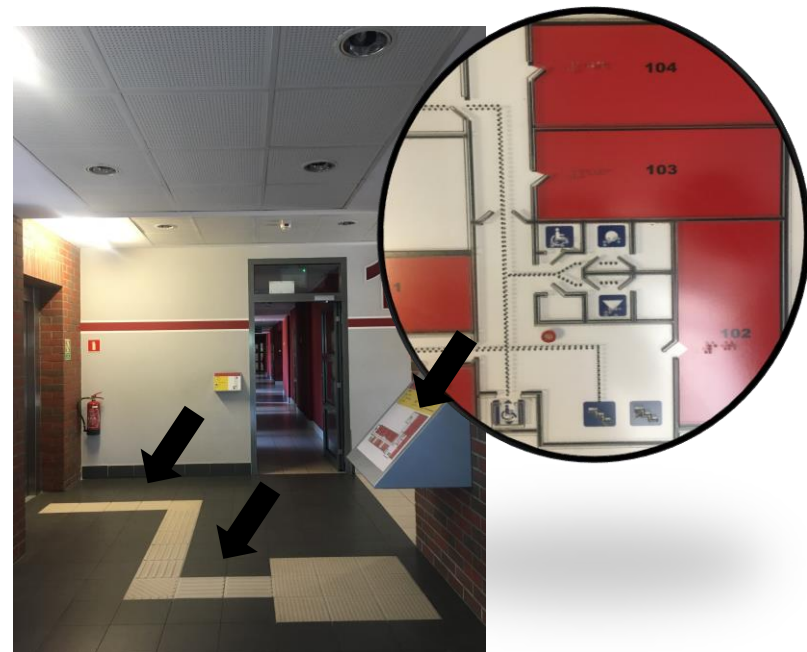
According to the World Health Organization (WHO) classification, the following can be distinguished among people with visual impairment:

1. Blind people - these are people:

- completely blind
- with a sense of light
- with residual vision
- with a significant reduction in the field of view

2. Visually impaired people - these are people:

- with a reduction in visual acuity from 0.06 to 0.3
- with the field of view narrowed down to 30 degrees

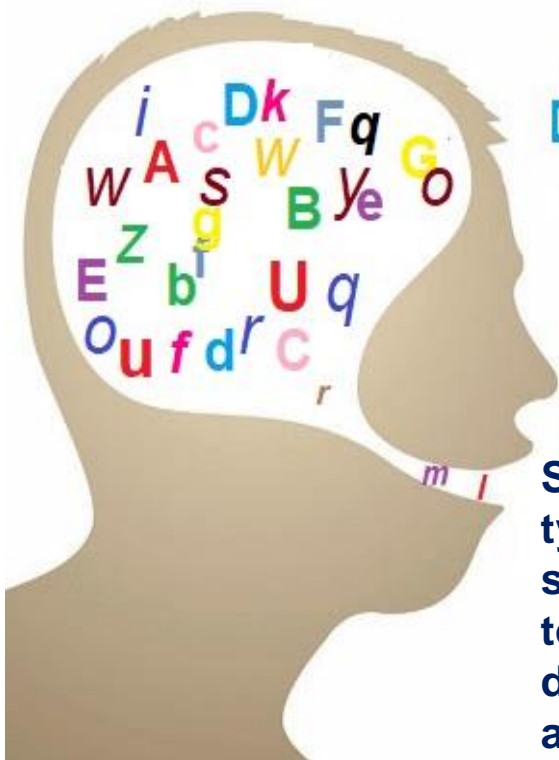


“A deaf-blind person is a person who has both hearing loss and sight damage; coupling them causes that it encounters specific difficulties in everyday functioning, especially in communication, access to information and getting around.”

Nordic Staff Training Centre for Deafblind Services (NUD, 2006)

6. Hearing and/or speech disability

Hearing loss - a hearing impairment involving incorrect conduction or perception of sounds. The incidence of hearing



Speech disorders - a group of disorders that includes various types of speech difficulties. They include difficulties in speaking, speech defects, the use of inappropriate words, so they are related to articulation, phonation, tone of voice, fluency, etc. This makes it difficult to understand the spoken message. Speech disorders may also be associated with more general language disorders.

7. Metabolic disorders

Metabolic diseases (metabolic disorders) are a group of diseases that are characterized by an abnormal course of metabolic processes in the body.

Disease types:

- **Diabetes**
- **Crohn's disease**



8. Mental disorders

Mental disorders, mental diseases - patterns or complexes of behavior, ways of thinking, feeling, perceiving and other mental activities and relationships with other people, which are the source of suffering or difficulties in the individual functioning of the affected person.

Factors that can cause disorders include:

- Genetic factors,**
- Damage to the nervous system**
- Medical history**
- Stress, frustration, developmental limitations, mental abuse**
- Hard life events**
- Decline in well-being, low self-esteem, prolonged sadness**
- Lack of emotional support**
- Long-lasting fatigue**

Types of disorders:

- Addiction,**
- Neuroses,**
- Depression,**
- Schizophrenia,**
- Anorexia**

Why learn and use a disability measure?

Diagnosis and assessment of disability is valuable because it can predict the factors that medical diagnosis (assigning a disease label) alone fails to predict, these include:

SERVICE NEEDS –
What are the patient's needs?

LEVEL OF CARE –
Should the patient be in primary care, specialty care, rehabilitation or another setting?

OUTCOME OF THE CONDITION – What will the prognosis be?

LENGTH OF HOSPITALIZATION –
How long will the patient stay as an inpatient?

RECEIPT OF DISABILITY BENEFITS –
Will the patient receive any pension?

WORK PERFORMANCE – Will the patient return to work and perform as before?

SOCIAL INTEGRATION – Will the patient return to the community and perform as before?

Why learn and use a disability measure?

Disability assessment is thus useful for health care and policy decisions, in terms of:

Identifying needs

Matching treatments and interventions

Measuring outcomes and effectiveness

Setting priorities

Allocating resources

WHODAS 2.0

A generic assessment instrument for health and disability A tool to produce standardized disability levels and profiles Applicable across cultures, in all adult populations Directly linked at the level of the concepts to the International Classification of Functioning, Disability and Health (ICF)

Used across all diseases, including mental, neurological and addictive disorders

Short, simple and easy to administer (5 to 20 minutes)

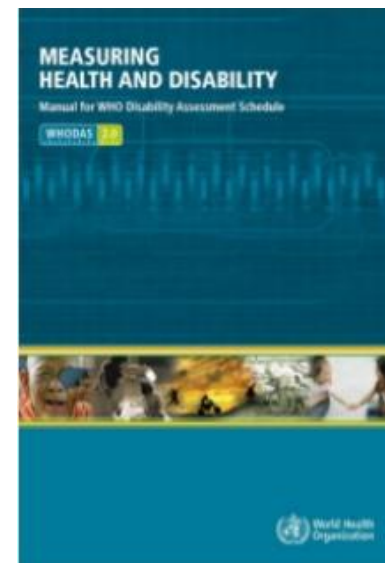
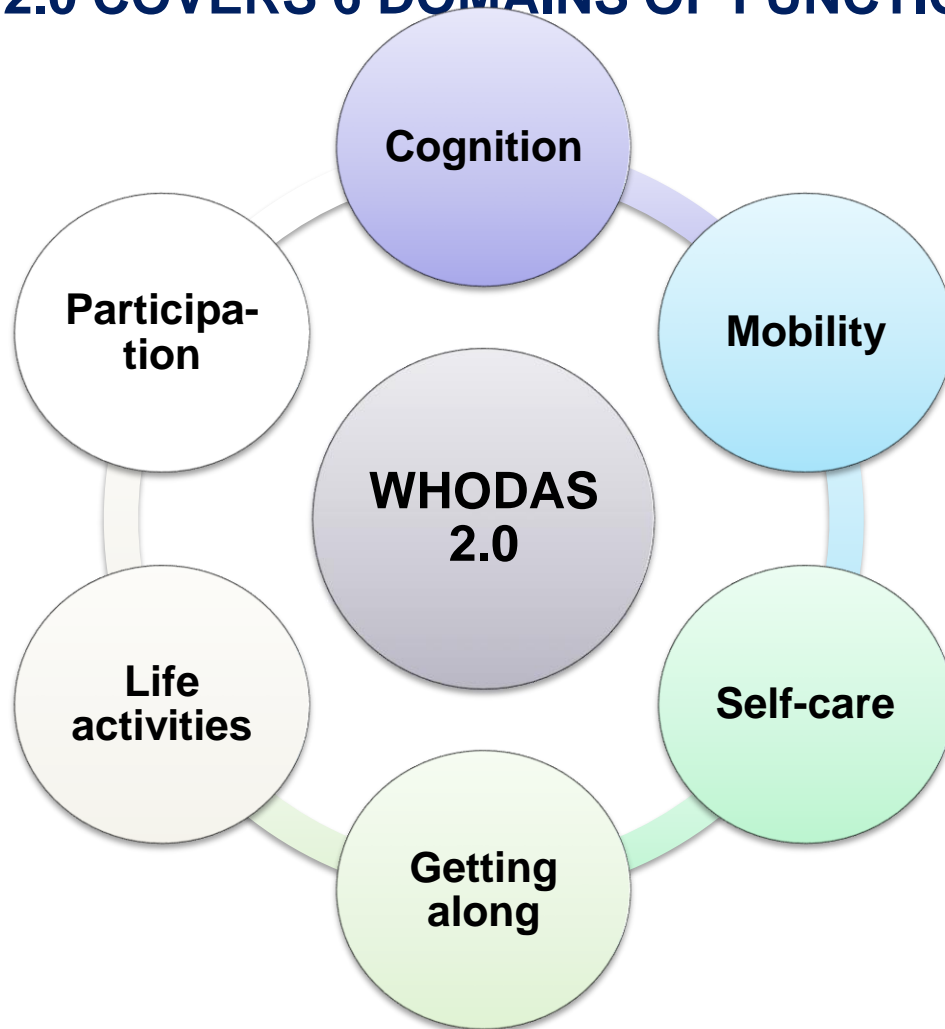
Applicable in both clinical and general population settings

A tool to produce standardized disability levels and profiles

Applicable across cultures, in all adult populations

Directly linked at the level of the concepts to the International Classification of Functioning, Disability and Health (ICF)

WHODAS 2.0 COVERS 6 DOMAINS OF FUNCTIONING, INCLUDING:



WHODAS 2.0 (36-item version)

Areas:

1. Understanding and communicating
2. Getting around
3. Self-care
4. Getting along with people
5. Life activities
6. Participation in society

SCALE:

- 0 - No Difficulty
- 1 - Mild Difficulty
- 2 - Moderate Difficulty
- 3 - Severe Difficulty
- 4 - Extreme Difficulty or Cannot Do

- Provides most detail
- Allows to compute overall and 6 domain specific functioning scores
- Available as interviewer-, self-, and proxy-administered forms
- Average interview time: 20 min.

The image shows a screenshot of the WHODAS 2.0 (36-item version) questionnaire. The form is organized into sections: 'Understanding and communicating', 'Getting around', 'Self-care', 'Getting along with people', 'Life activities', and 'Participation in society'. Each section contains several items with a corresponding difficulty scale (0-4). Blue arrows point from the 'Areas' list to the corresponding sections in the form, and from the 'SCALE' list to the scale column of the items.

WHODAS 2.0 (12-item version)

- Useful for brief assessments of overall functioning in surveys
- Allows to compute overall functioning scores
- Explains 81% of the variance of the 36-item version
- Available as interviewer-, self-, and proxy-administered forms
- Average interview time: 5 min.

SCALE:

- 0 - No Difficulty
- 1 - Mild Difficulty
- 2 - Moderate Difficulty
- 3 - Severe Difficulty
- 4 - Extreme Difficulty or Cannot Do



For the interesting:

In an article by Lee H.H. et al., 2017: [Is WHODAS 2.0 useful for colorectal cancer survivors?](#) compares the level of disability of people with different diseases using the 12-item version WHODAS 2.0.

		Score
S1	Standing for <u>long periods</u> such as 30 minutes?	0
S2	Taking care of your <u>household responsibilities</u> ?	0
S3	<u>Learning a new task</u> , for example, learning how to get to a new place?	0
S4	How much of a problem did you have in <u>joining in community activities</u> (for example, festivities, religious or other activities) in the same way as anyone else can?	0
S5	How much have <u>you been emotionally affected by your health problems</u> ?	0
S6	<u>Concentrating</u> on doing something for <u>ten minutes</u> ?	0
S7	<u>Walking a long distance</u> such as a <u>kilometre</u> [or equivalent]?	0
S8	<u>Washing your whole body</u> ?	0
S9	Getting <u>dressed</u> ?	0
S10	<u>Dealing with people you do not know</u> ?	0
S11	<u>Maintaining a friendship</u> ?	0
S12	Your day-to-day <u>work/school</u> ?	0
Overall Score		0,00%
H1	Overall, in the past 30 days, how many days were these difficulties present?	
H2	In the past 30 days, for how many days were you <u>totally unable</u> to carry out your usual activities or work because of any health condition?	
H3	In the past 30 days, not counting the days that you were totally unable, for how many days did you <u>cut back</u> or <u>reduce</u> your usual activities or work because of any health condition?	

Interpretation of the Global Disability Score by ICF severity ranges

0-4% no problem

5-24% mild disability

25-49% moderate disability

50-100% severe/extreme disability

More information about "Measuring Health and Disability "

On the website:

https://apps.who.int/iris/bitstream/handle/10665/43974/9789241547598_eng.pdf?sequence=1

ACCESS CITY AWARD



ACCESS CITY AWARD

Germany:

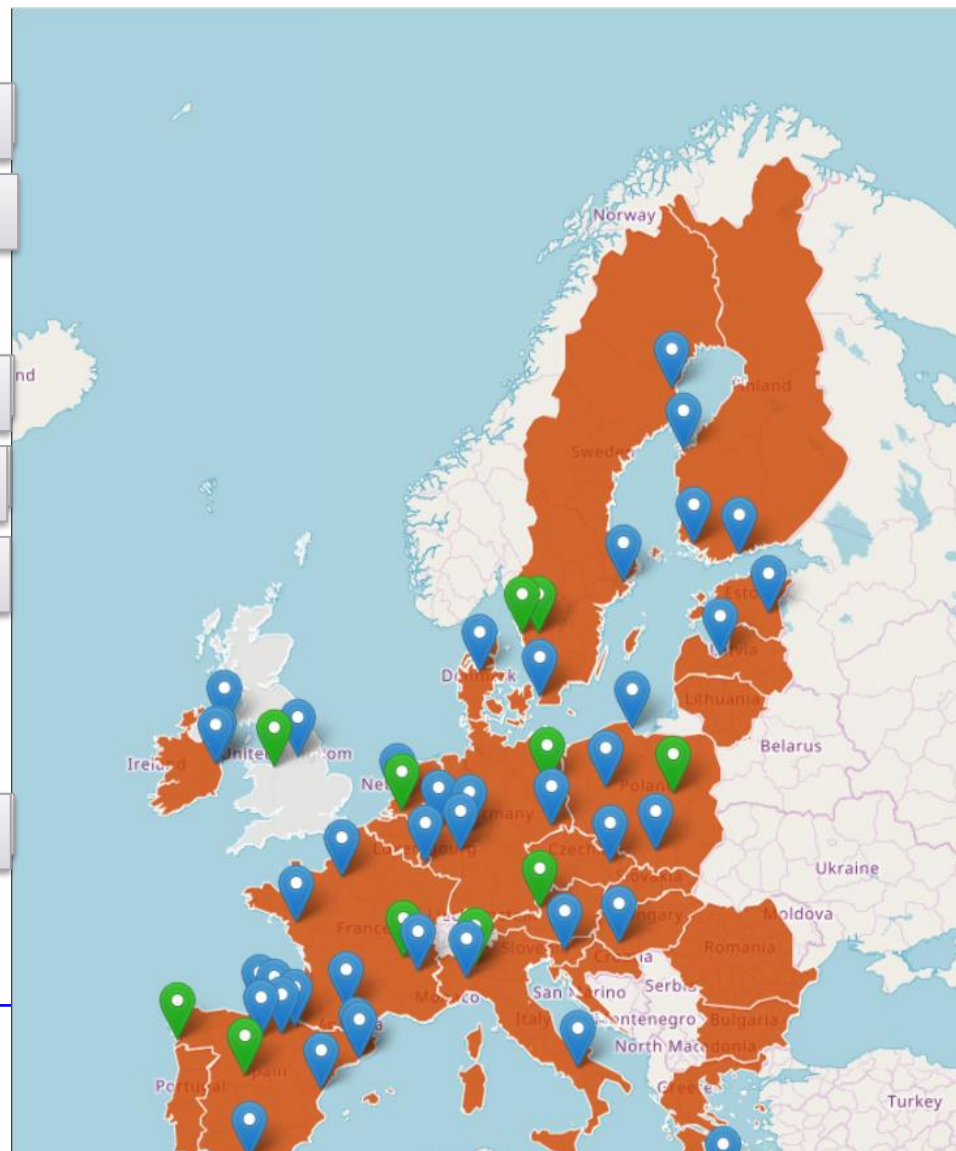
Cologne 2011	Marburg 2012	Berlin 2013
Dresden 2014	Luxemburg 2015, 2018	Wiesbaden 2016

Spain:

Barcelona 2011	Ávila 2011	Terrassa 2012
Santander 2012	Pamplona 2013	Bilbao 2013
Málaga 2014	Logroño 2015	Vigo 2019
Castellón de la Plana 2020		

Poland:

Cracow 2012	Gdynia 2013, 2019	Poznań 2014
Poznań 2014		



KEY FACTS

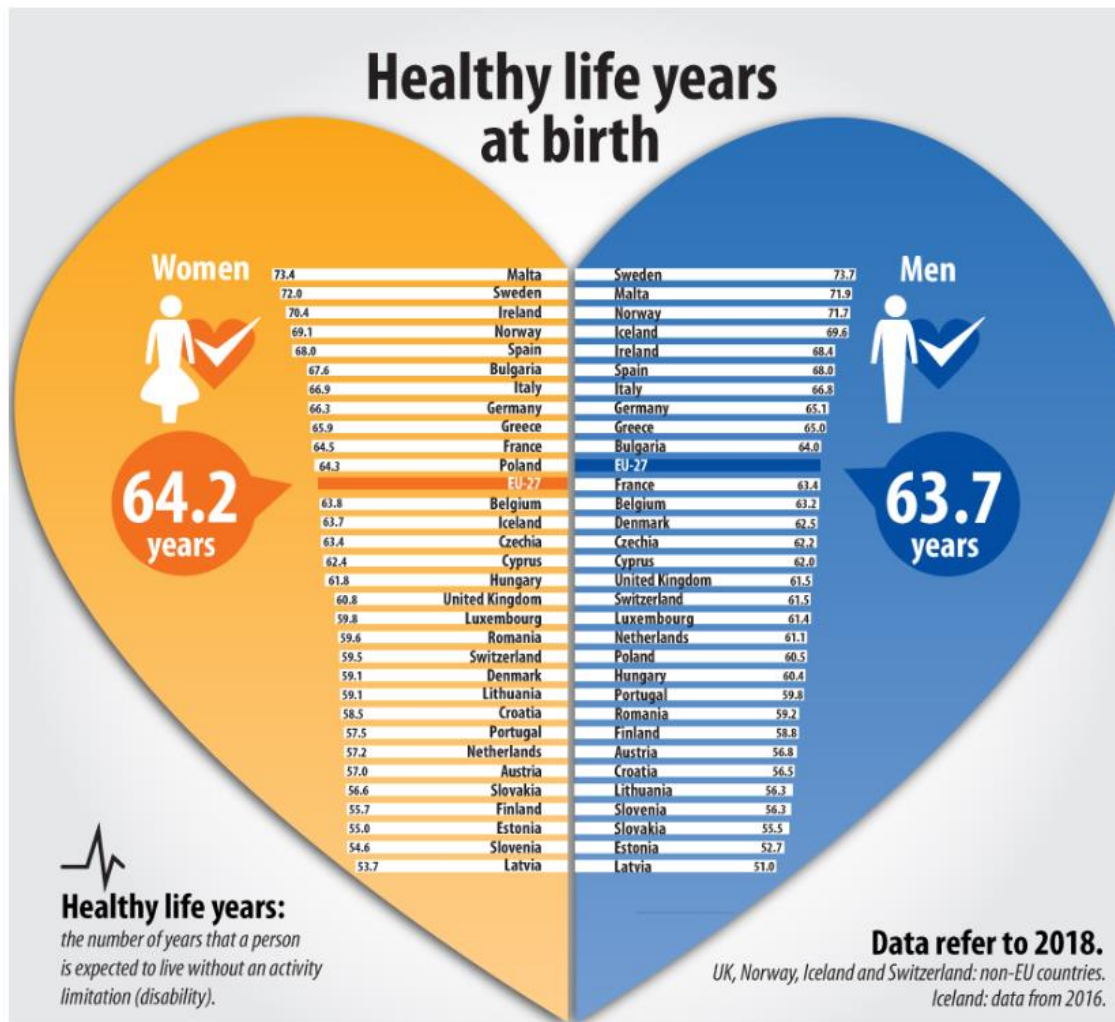
International Day of Persons with Disabilities 3.12

Over a billion people, about 15% of the world's population, have some form of disability

Between 110 million and 190 million adults have significant difficulties in functioning

Rates of disability are increasing due to population ageing and increases in chronic health conditions, among other causes

People with disability have less access to health care services and therefore experience unmet health care needs



TASKS

In teams of two, see the case study presented on the next slide. One of the people will play the role of a patient who had Cholecystectomy 14 days ago, and the other will act as an interviewer assessing the degree of disability. For this purpose, use the [12-item Instrument Scoring Sheet.xlsx](#) questionnaire. After the interview and completion of the questionnaire, present and discuss the results of the measurement.

PATIENT INFORMATION

A patient came to the general surgery department for a planned Cholecystectomy. Patient: female, 35 years old, BMI 38, comorbidities: type 2 diabetes, professionally active. The procedure was performed laparoscopically using the 4-incision technique. The procedure followed the procedure, no adverse events occurred. Discharge the patient from the ward on the 3rd day after surgery.

GOOD LUCK!

		Score
S1	<u>Standing for long periods</u> such as <u>30 minutes</u> ?	3
S2	Taking care of your <u>household responsibilities</u> ?	2
S3	<u>Learning a new task</u> , for example, learning how to get to a new place?	2
S4	How much of a problem did you have in <u>joining in community activities</u> (for example, festivities, religious or other activities) in the same way as anyone else can?	3
S5	How much have <u>you been emotionally affected by your health problems</u> ?	1
S6	<u>Concentrating on doing something for ten minutes</u> ?	1
S7	<u>Walking a long distance</u> such as a <u>kilometre</u> [or equivalent]?	4
S8	<u>Washing your whole body</u> ?	1
S9	Getting <u>dressed</u> ?	1
S10	<u>Dealing with people you do not know</u> ?	0
S11	<u>Maintaining a friendship</u> ?	0
S12	Your day-to-day <u>work/school</u> ?	1
Overall Score		39,58%

SOLUTION OF THE TASK

**Overall Score:
39,58%**

SOLUTION OF THE TASK

RESULTS: 39.58%

As a result of the survey, moderate disability can be stated. It should be noted that the limitations resulting from the patient's obesity have a significant impact on the degree of disability obtained.

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