Slovenská únia podporovaného zamestnávania

Biopsychosocial assessment model, protocols, procedures and tools

ICF -
The International Classification of Functioning, Disability and Health

Guidance Book

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1. Introduction

In 2001, after a long preparation, the last version of *the Classification of Functioning, Disability, and Health* was published. It is a complex work focused on the area of disability and the permanent effects of injuries, chronic diseases and invalidity. The first version of the classification of disability was published already in 1980; it was the basic step for forming common interest to introduce an international characteristic of a disability. This first classification was based on morphological criteria, meaning that an impairment of certain body organ or system is conditioned by the changes of morphological structures of this system and followed by reduction of activity of a disabled person. In some way it correlated with *the International Classification of Impairment, Disabilities and Handicaps* (ICIDH) that was based on medical knowledge of aetiology – pathological changes characterised by clinical symptoms.

The new version is called *the International Classification of Functioning, Disability and Health – ICF*. With the respect to twenty years of experience, it unifies the description of health and its disorders and defines individual components of health, factors characteristic for *the feeling of well-being*, including education and work. It is based on the knowledge of functions and structures of a human body, human activities, participation in these activities, but also of conditions important for the preservation of the feeling of health even in the times of illness. The term *functioning* is an essential technical term for somatic functions, activities, and participation. The technical term *disability* covers physical, sensory, intellectual or mental disease, the reduction of functions by illness and the restriction of potential participation in working and social life of a disabled person. The new version of classification characterises also factors of environment and their influence on the health status of a person.

In comparison with the original version from 1980 that was focused especially on consequences of illnesses, this new version is focused especially on the individual components of health.

The group of expert at the World Health Organization gradually formulated bio-psycho-social model of a man and this fact lead to the modification of conventional concepts – a three-dimensional model was created. It is characterised by:

1. The level of *impairment* – the change of physical function, respectively anatomical structure of a person caused by a long-term illness, injury, or congenital defect,
2. The dimension of *disability* – disability occurs when the consequence of illness or disorder changes the functioning of a person in the relationship to the implementation of certain activities in comparison with an individual of the same age, sex, education, and cultural environment,
3. The dimension of *handicap* – handicap is a permanent state that prevent or permanently limits implementation of certain activities and reflects the interaction with the environment of a person and with his/her adaptation to this environment that can limit the participation of a disabled person in the social life.

Further development showed the necessity to modify in a certain way these dimensions, which characterise especially medical aspects and the technical terms of *participation* and *activities* are introduced. Participation, working or life activities cover social element and emphasize basic characteristics of bio-psycho-social model of a man (that is why it present a multi-dimensional model of a person with disability).

In individual countries, the introduction of this classification encountered many problems. One of the issues was related to the need to solve a problem of the attitude of

disabled person to his/her own chronic disease, as well as the attitude of a society and its structures to disabled citizens. The outcomes of these efforts showed that it is inevitable to modify *the International Classification of Impairment, Disabilities and Handicaps* from 1980 and to include new elements into it which would emphasize these new views.

Through the creation of *the International Classification of Functioning, Disability and Health*, some assumptions required by modern practice are met and at the same time all the principles and rules expressed also in the last versions of the classifications are kept.

The health conditions of a person representing the health status of a person, the presence of pathological changes, opportunities for this person`s social activities at existing changes of structures and functions of individual body systems and through that also options for participation in work and social life, are being emphasized. Also environmental factors – characterising the eco-system of a disabled person – together with important personal factors are also taken into consideration. Environmental and personal factors form a certain basis for possible activities limited by the clinical state of a disabled person and influence possible participation.

This model is a model of functioning and self-realization that at the same time respects current health status of a person and potential participation in social and working life.

The International Classification of Functioning, Disability and Health represents a modern approach to important questions of today`s society, where people with disabilities live together with healthy individuals, and where it is possible – if the rules set up by the classifications are obeyed – to create atmosphere for their participation and life in social structures of the modern world.

The basic motivation of the World Health Organization to prepare this classification was the need to emphasize and evaluate health issues of a person with the goal to secure broad efficiency of health care.

The International Classification of Functioning, Disability and Health (ICF) is focused especially on the extent of health-care experience in consideration of wide practice and already mentioned classification of illnesses, injuries and death causes. It is in compliance with the resolution of the World Health Assembly and based on information necessary for planning the health-care services.

The organisation and planning of the health care through a form of individual health services is based on two types of information – morbidity records (evidence) and administrative data, respectively the number of people with disabilities in consideration of individual groups of illnesses, injuries, and intellectual or physical disability.

These basic data – the morbidity records and numbers characterizing care for these people (including material, personal and technical equipment) create the basis for the creation of health-care and social systems and for the application of into health and social care.

The development that happened since 1981 showed that some aspects required modification and adaptation for practice in the area of treatment, prevention, and social care. The fact that the concept of an impairment of a health status of a person through existing disorder or disease (especially if it is chronic) expresses primarily medical criteria of impairment, turned out to be – especially taking into consideration the requirement of the three-dimensional structure – a one-sided action in long-term care for these people.

The international classification (ICF) pays attention also to the questions of the influence of individual factors – environmental and personal – on above mentioned three dimensions of the classification. These relationships create a model that formulates the classification as a status of health, status of illness, and status of disability. In certain way, this fact motivated the creation of mentioned classifications as the rehabilitation approaches in the area of disorders, activities, and participation currently represent an important intervention.

This knowledge is reflected, partially or totally, in the area of health-care, casualty and social insurance as well as in the area of social care and social help. Each of these areas is – in its specific way – based on the existence of chronic diseases and their consequences and decides for its own approach and own competences for appropriate intervention. However, such a state requires certain coordination in the selection of form and content of an intervention. And the classification in its development (IC IDH - IC IDH-2 and ICF) is an important element in this process of coordination.

The international classification makes it possible to start from standard positions at the assessment of health (and eventually pathological) status of a disabled person and at the same time offers certain solutions with the respect for limitations of activities conditioned by a chronic disease with the possibility of the participation of a disabled person in working and social life.

2. Bio-Psycho-Social Model and the International Classification

The international classification is a method which – based on the identification of physical or other disabilities and their stages - enables the ranking of individual types of disabilities from the functional and morphological perspective and the characterisation of people with disabilities in various activities and their self-realisation in the society.

Every chronically ill or disabled person is a **bio-psycho-social unit**. This postulate was a basic point of view already for the original *International Classification of Impairment, Disabilities and Handicaps.* The modified International *Classification of Functioning, Disability and Health* is an effort for further development of these principles and is based on the knowledge stated in the original document (ICIDH) and on the participation of internationally recognized experts and institutions in its preparation. The emphasis is put on the state of illness with its effects and consequences from the medical and social perspective and at the same time the role of the modern rehabilitation care in its full extent. The International Classification of Impairment (ICIDH) is based on a model with following individual sequences:
Aetiology (cause) → Pathology (disease) → Symptoms (clinical).

These individual sequences represent in the ICIDH the basic schemes of a classical medical approach, however, this approach cannot identify all issues related to the development and consequences or effects of the illness from etiological agents through manifold pathological symptoms up to clinical symptomatology – the domain of the modern medicine. In addition to these components, every illness, especially chronic one, has quite a number of other factors which have an influence on its course and on its complications. Pathological state limits a disabled person in the area of the implementation of individual physiological function but also in his/her psychological and social functions. Taking into consideration the bio-psycho-social structure of an individual, it is important to emphasize that the violation of **the homeostasis of physiological functions** by present chronic disease has an influence also on the violation of **the homeostasis of psychological and social functions** with manifold spectrum of symptoms. The homeostasis of physiological functions is a phenomenon related to the principle of feed-back to a homeostasis of psycho-social functions. This feed-back is not affecting only physiological functions, but is reflected also in psycho-

social functions and vice versa –changes in the homeostasis of psycho-social functions can cause changes in the homeostasis of physiological functions. This is especially true in the case of chronic and long-term diseases, respectively mutilating injuries – states that lead to disabilities and handicaps.

This terminology is oriented especially on the medical perspective. During the further development, the efforts of experts and expert groups were focused on the more exact determination of latter two dimensions – the level of disability and of a handicap. These facts were reflected also in the changed terminology – there are new terms introduced, such as **the dimension of activity** and **the dimension of participation**. The changes in terminology in the second and the third dimension of the original model better characterise not only activities and participation, but also point out to **the issue of attitudes of a disabled person to his/her own disease** as well as to **the attitude of the society to disabled persons**. These components are very important for the life of a disabled person and express especially the area of psycho-social functioning.

The introduction of the original *International Classification of Impairment, Disabilities and Handicaps* inspired the creation of a new model, with the effort to express those models of psycho-social areas which are part of the life of a long-term disabled individual – his/her life and working activities and participation in social life. In such a way, the modified *International Classification of Functioning, Disability and Health* (ICF) was introduced. Its introduction into practice is expected to happen in our country in following years.

The International Classification of Functioning, Disability and Health (ICF) adopted by leading bodies of the World Health Organization is the result of a long-term activity of respected experts working in the field of health-care, social affairs, and non-medical fields. This classification is currently being translated into national languages so that it could be widely used within the social area of health-care structures. It will serve especially for the creation of a scientific basis for understanding and study of health and disabilities with the goal to determine individual factors influencing this process. At the same time it provides a terminology basis for common language defining health status and its disorders and through that creates communication basis that can be used by various users – social workers, doctors, researchers, politics, media – and also disabled persons or persons that are threaten by chronic disease or invalidating disability.

The new version of the classification will enable further comparison among individual countries, health-care systems in these countries and at the same time creates certain coding system important not only for the transmission of obtained data, but also for the creation of new models in future. The full and latest version of the ICF is currently available and creates a basis that is based on four levels:

1. level of physiological or somatic functions,
2. level of physiological structures,
3. level of activities and participation of a disabled person in these activities,
4. level of environmental factors which influence health.

Mentioned classification defines these four levels and describes them in details. *The International Classification of Functioning, Disability and Health* (ICF) represents a modern approach of today`s society to the area of health issues of a man, defines them and also factors of their causes, classifies individual forms of disabilities of a person and characterises his/her participation in this process. It is a modern contribution of the World Health Organization to the efforts to provide a complex solution for increasing problems in the current spectrum of diseases, especially those chronic.

3. Creation of Universal Ecosystems

Human development is in a certain way related to his/her environment. The environment or eco-system is a set of factors which are creating certain space enabling a man to carry out certain activities in it – basic life activities, but also working and social activities. This environment is a centre of interest of ecology. Ecology is part of modern biology which deals with relationships among living organisms, their characteristics, way of life and individual populations which form the ecosystem.

Human ecosystem includes positive but also negative influences. Positive influence means that the ecosystem currently forms the environment that enables people to carry out various activities of life – we are talking about the environment of a man. Negative influences of the human ecosystem represent risks which threaten people by various illnesses, impairments of physical and mental functions leading to invalidity, i.e. to the loss of ability to carry out certain working activity. Other living organisms – plants and animals which create positive or negative symbiosis with a man – form a special part of the human ecosystem.

Human ecosystem is characterised by:

1. bio-physical-chemical effects of environment with the respect to biological structures, chemical properties and physical parameters in environment,
2. social effects given by mutual relationship of people in one ecosystem, relationship to other living organisms in the ecosystem and the creation of a certain model of mutual co-existence,
3. medical effects given by the system of risk factors of this system which threaten the life and health of a human being.

All characteristics of the ecosystem form certain unity – bio-physical-chemical effects of the ecosystem influence social relationships and have an influence also on the health status of people living in this environment.

From the complex point of view, it is important to emphasize that the human environment is based in natural environment – it is influenced by geography and its characteristics such as the shape of a land, water surfaces in that particular region and by demographical indicators, density of population, fauna and flora, meteorological effects and characteristics of a climate such as temperature and its changes, humidity, atmospheric pressure, rainfall, and season changes. Also changes caused by human interventions or natural events such as disasters - geographical and atmospheric - negatively influence human environment. Other influences are represented by electromagnetic radiation related to solar radiation and artificial light – the light intensity, its quality and colour contrasts – the issue of biorhythm, changes of night and day, lunar cycle, etc. The question of noise, its intensity and quality dependent on its wave-length and wave characteristic of sound, colouration and melody is another important factor, as well as the quality of air in the human environment – both in interior and exterior.

These characteristics represent physical and chemical elements influencing a human being and creating bio-physical-chemical complex of environment.

Social relationships of the human ecosystem are related to family, but also to working and social environment. Family as a social basis for a society plays also an important role in the ecosystem of a person. Relationships with close family members create a complex that decisively influences the behaviour of a person – whether in positive or negative way. Similar relationships are formed among friends and/or colleagues at work.

Working environment of a person has a special character – new relationships, related to common work and common effort to fulfil work tasks, are formed there. In this connection, it is necessary to emphasize also the relationships characterised by superiority or submissivity which often violate the optimal co-existence within a working process.

Animals play a special role in the area of social relationships of a person – these provide physical, emotional or mental support and create certain social complex which has a special importance in the area of social relationships of a person – whether we are talking about a visually impaired person or a healthy person with positive relationships to animals.

Medical characteristics are also important for the human ecosystem. There is certain unity that is created between a human ecosystem and a human being. If the unity is violated, pathological symptoms occur. There is a wide spectrum of pathological states which are caused by the violation of individual function within human organisms without the influence of external factors. We are aware of many – still incurable, genetic diseases which often cause early death of a person that is disabled in such way. However, there are quite a lot of diseases and pathological syndromes influenced by the human ecosystem. Currently, we are talking about risk factors and risk indicators of a person. Many of them are dependent on an individual who is – through his/her disorderly conduct – violating factors characterising a healthy life and consequently his/her own health. In a certain way, this fact is related to the human ecosystem and its social structure – as an example we can use the occurrence of nicotinism and drug addiction which currently form a high risk for health of a society as such, but also of an individual as a part of this society.

The creation of universal ecosystems is a complex issue of modern life and society. It is based on already mentioned factors with the goal to create organic unit of elements from the bio-chemical-physical, social, and medical areas which represent the important situation for a person who is sick or disabled, but also for his/her development with the consideration of his/her bio-psycho-social character.

There are quite a lot of issues and questions that need to be solved today. Already mentioned classification of functioning, disability, and health creates certain opportunities for its application also in the area of the creation of universal ecosystems. The human development and the development of his/her health status were formed throughout years – the present times bring many new aspects which have an influence on this developmental cycle. The presence of clinical diseases violates determined human development in a certain way. That is why it is important to define individual factors which have an influence on the development and individual developmental stages of a man. And to know the risks that are part of this human ecosystem is a basic assumption for it.

4. Current Assessment Models in Slovak Legislation

Currently, the assessment of the health status is carried out according various legal norms valid in the Slovak republic, depending upon the purpose of the assessment. The laws are as follows:

- ***The Law on Social Insurance no. 461/2003 Coll.*** (§§ 153 – 156 – medical assessment in the process of social insurance) and attachment 4 (the percentage level of decrease of the ability to carry out gainful activity, defined according the type of impairment of organs and systems of a body).
- ***The Law on Compensation Benefits for Severely Disabled People No. 447/2008 Coll.***– with the purpose to support social integration of a person with severe disability into society with the active participation and preservation of human dignity of this person... (§1, section 2). The

level of functional impairment is defined according the attachment 3 to this law.

- ***The Law on Social Services No. 448/2008 Coll.*** regulates legal relationships within the delivery of social services, the funding of these services and supervision of these services. The dependency upon social services is regulated by the attachment 3 to this law.
- ***The Law on Employment Services No. 5/2004 Coll. –*** relevant for the creation of appropriate working conditions and for the examination of capability (from the health point of view) and suitability of an offered job.

In 2003, the Law on Social Security No. 100/1988 Coll. was replaced by ***the Law no. 461/2003 Coll. on Social Insurance, valid since January 1, 2004.*** The law on social insurance replaces the system of social security with the new system of social insurance based on the insurance principle. This is the basic law for the social area, the basic pillar of the pension system in the Slovak republic. It creates a complex legal framework that regulates occurrence of claim for a pension, the way how it is calculated including the determination of the amount of the invalidity pension as one of the types of a pension that is provided to people who lost their ability to work. ***The insuree is entitled to get the invalidity pension if he/she became invalid, gained necessary number of years of pension insurance and in the time, when he/she became invalid did not fulfil the conditions for gaining the old-age pension or the social insurance did not admit the requirement of this person for the early pension.***

The law states that the insuree is entitled for the invalidity pension in the time before he/she fulfil the conditions needed for the entitlement to get the old-age pension if his/her ability to work is decreased by more than 40% in the comparison with a healthy person (the attachment no. 4 to the law). The calculation of the amount of the invalidity pension depends on the percentage decrease of the ability to work and it differs by 41 – 100% with the ability to work of a healthy person.

The law also determines the accident benefits, defines vocational rehabilitation and requalification, the entitlement for the refunding of costs related to rehabilitation and requalification as well as the entitlement to get the compensation for pain and hindered self-realization in society. ***The law enables any disabled citizen to work according his/her own decision without the limitation of the amount for the invalidity pension.*** After this person reaches the age for the old-age pension, the calculation of the old-age pension takes into consideration the income from the economic activity as well as the income from the invalidity pension. The law has four attachments:

Attachment 1 – the list of vocational illnesses
Attachment 2 – illnesses and states which need special care
Attachment 3 – general base of access for years before 2003
Attachment 4 –percentage level of decrease of ability to carry out gainful activity according the type of impairment of body organs or systems

In 2008, the Law on Social Help No. 195/1998 of Collection of Laws was replaced by two new laws: ***the Law on Compensation Benefits for Severely Disabled People No. 447/2008 Coll.*** and ***the Law on Social Services No. 448/2008 Coll.***

The Law on Cash Benefits for Compensation of Severe Disability No. 447/2008 and on amending of certain acts is a basic legal norm for the area of help for severely disabled people in the material area – represented by one-time or repetitive ***benefits for the compensation of a severe disability***. ***Severe disability is determined on the basis of special medical diagnosis and only a person, whose functional impairment is reaching 50% in the comparison of healthy population (this is regulated by the attachment 3 to the law), can be defined as severely disabled.*** The provision of financial help is based on the assessment of the damage to health, financial and income status of the applicant and his/her family. Also personal characteristics (especially the evaluation of capacity and effort to solve a material

distress by own means - especially through employment), but also family environment (especially the evaluation of the level of help of the family), and the environment influencing the integration of the person into society (especially the evaluation of housing conditions and accessibility of buildings) are assessed for the purposes of compensations. This law enables – under clearly defined conditions – the provision of financial benefits ***for the purchase/repair of an aid, for the purchase of a car*** (attachment 10), ***for the transport by cab, for personal assistance, for the adjustment of an apartment/house/garage to a barrier-free environment, the benefit for the provision of care by a relative, benefit for the stair lift, etc.*** This financial help is provided through benefits with the co-funding of disabled citizens which means that ***the state is not covering the total price of a compensation aid – not even in the case that the person is in material distress.*** The level of the financial contribution provided by the state ***depends on the price of the aid and on the income of the disabled person and his/her family*** *(attachments 10, 12, 13).*

In addition to that, the law provides an opportunity to gain repetitive ***financial contribution for the increased expenses related to the dietary needs of citizens*** (attachment 5), for ***hygiene, cloths, underclothes, shoes, and furniture*** (if a person uses technical aid such as mechanical or electric wheelchair, prosthesis, orthesis, etc. – attachment 7), ***for the operation of a car and for the care for a specially trained dog*** (increased expenses related to food and veterinary care for this dog). These benefits are provided on a monthly basis ***only under the condition that the income of the severely disabled person does not exceed the triple amount of the subsistence minimum. Compensation benefits are not provided for health aids*** which are available for a prescription through health insurance.

Financial benefits are provided by the respective ***Office of Labour, Social Affairs and Family***, based on a request from a disabled person who asked for the assessment of the level of functional ability, the issuing of an I.D. card for severely disabled persons, I.D. card for people needing assistance, as well as for the entitlement to gain financial benefits.

The Law on Social Services No. 448/2008 is a legal norm regulating the area of help to people dependent on social services (according the attachment 4). The law enables the provision of institutional social service in respective facilities, services for the support of families with children, services for severely disabled people in an unfavourable life situation, services with the application of telecommunication technologies, other supportive services for socially dependent people, transportation services (even though it is not that frequently used and not functioning well in Slovakia). Domiciliary service is provided by municipality or private entity such as Slovak Catholic Charity, Diaconate, Malthesian Knights, etc.; the institutional care is provided by social care facilities established by regional administration or private institutions or organizations.

The Law on Employment Services No. 5/2004 is the basic law for the employment of people with severe disabilities. This law creates a legal framework for the employment of people with disabilities as its determines ***obligatory quota of employees with disabilities and sanctions – in the form of financial fees – if this quota is not fulfilled or an option for facultative compensation of this quota*** and through that an opportunity to avoid these fees by ordering services and/or products from companies that employ disabled people in a higher extent (for example sheltered workshops. ***This law defines a severely disabled person as a person entitled to get invalidity pension.*** The law also provides a framework for ***requalification, counselling, training, and preparation for work***. It enables ***the establishment of sheltered workshops and workplaces*** – the state provides ***benefits for the establishment and operation. This support is provided also if a disabled citizen wants to work as a self-employed person.*** In case of employment of the larger

number of severely disabled persons, the labour office covers the job assistant the larger portion of the salary.

The Law on Social Security for Police Officers and Soldiers No. 328/2002 of the Collection of Laws.

The Law No. 466/2008 of Collection of Laws which changes the Law No. 305/2005 of Collection of Laws on Social and Legal Protection of Children and on Social Guardianship.

The Law No. 437/ 2004 Coll. on Compensation for Pain and on Compensation for Reduced Social Opportunities.

The Law No. 600/2003 Coll. on Child Allowances amending and supplementing Act No. 461/ 2003 on social insurance and for the purpose of parent benefits according the Law No. 571/2009 on parent benefits.

The Law No. 346 / 2002 on **State Service of Professional Soldiers of Armed Forces of the Slovak Republic and on Change and Amendment of Some Acts*.***

Construction Law No. 50/1976 is regulating the creation of barrier-free environment and plays a key role for environmental factors as § 43e of this law codify general technical requirements for construction which define requirements for town-planning and technical solutions for construction, technical and purpose solutions of buildings. These requirements need to be respected by private and legal entities, state administration and municipalities in the process of locating, projecting, authorizing, building, inspections, usage and removals of buildings. These requirements are specified in details in the executing regulation:

Regulation of the Slovak Ministry of Environment No. 532/2002 defines details in general technical requirements for construction and in general technical requirements for buildings used by people with limited mobility and orientation. It is a legal norm regulating projecting and technical solutions for buildings used by disabled people which respects requirements of severely disabled people with problems in the area of mobility as well as requirements of people with sensory disabilities with problems in orientation, acquisition of information and in communication.

Basic laws regulating the provision of health care:

The Law No. 576/2004 Coll. on Healthcare, Healthcare-related Services and Amending and Supplementing Certain Acts is applied for the assessment of health capacity for specific activity and for the assessment of the health status related to the occupational illnesses. This law regulates the provision of health care and health-care related services, rights and responsibilities of private and legal entities within the health-care provision, but also procedures used in the case of death and the performance of state administration in the area of health care.

The Law No. 577/2004 on Scope of Health-Care paid by public health insurance and on payments for health-care related services. The Slovak Ministry of Health-Care is regularly publishing ministry measure which is related to this law and includes a list of pharmaceuticals and health aids which are fully or partially covered by respective health insurance company based on health insurance. This measure is updated and published every three months.

The Law No. 578/2004 of Coll. on Health-care Providers, people working in health care, chambers existing within the area of health-cares and amending and supplementing certain acts.

The Law No. 580/2004 of Coll. on Health Insurance regulates conditions of health insurance. This law constitutes health insurance, legal relationships established within the health insurance and the distribution of insurance money for public health insurance (further only insurance money).

These laws specify conditions for the provision of health-care and health-care related services.

The application of the new classification (ICF) should be incorporated as an attachment to relevant social legislation, especially for the assessment of the level of decrease of ability to carry out a gainful activity (the law on social insurance), but also within the assessment of the level of a functional disorder and the need for compensation of a severe disability (the law on benefits) and of course also for the decision-making on the suitability of an offered job (law on employment services). This implies that the close cooperation of health-care professionals with experts from the social field, but also good cooperation with specific NGOs advocating for the needs of people with disabilities is inevitable for the creation of new legislations.

5. The International Classification of Functioning, Disability and Health – ICF (basic characteristic), its practical meaning and application in practice

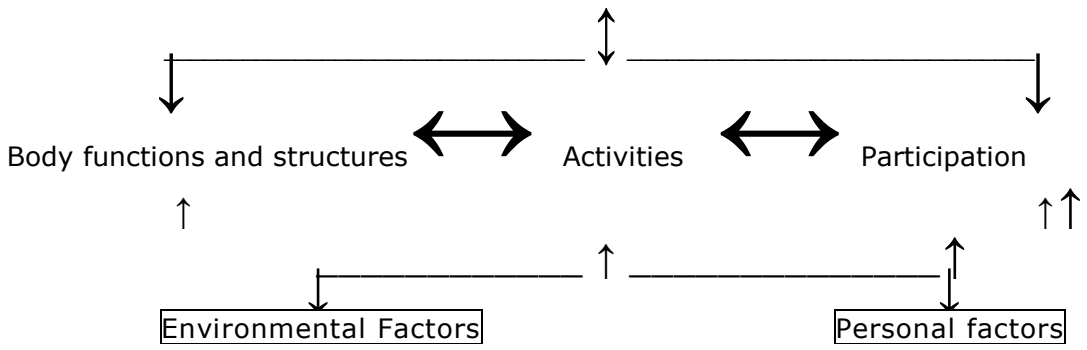
The assessment of the level of functional disorder is currently based on above mentioned laws and those are based on the international classification of impairment from 1981 which is using terms such as impairment, disability and handicap (meaning social consequences of disability).

The new international classification (ICF) is changing our understanding of disability that should not be perceived either as a problem of a minority or as a problem related only to those who are visibly disabled (for example those in wheelchairs). In case that a disabled person cannot retain its profession or a job (for whatever reason), ICF provides a way how to classify functional abilities of such person in a complex way and through that various perspectives how and to what extent it is possible to work with this person and optimize his/her ability to work and live full and independent life in his/her community.

The new international classification (ICF) emphasizes mutual influence of all components (see Picture 1) in positive or negative way, with positive or negative impact on residual functional capacities, with the goal to develop and support this residual potential.

The ICF views all pathological states equally, regardless the causality. A person can for example be incapable to go to work because of cold or tonsillitis, but also because of a depression. This neutral approach considers the mental state as important as an illness and in such a way contributes to the identification and documentation of depressions which represent – according the latest research – one of the most frequent causes of mortality around the world (because of suicides for example).

INTERACTIONS AMONG COMPONENTS ACCORDING THE NEW INTERNATIONAL CLASSIFICATION (ICF)



As can be seen from the chart, ICF takes into consideration also social aspects (environmental and personal factors) and provides a mechanism for documenting the impact of social and material environment for the functioning of a person. For example, if a person with a disability have difficulties to work in certain building because there is no lift or stair lift, it si possible – based on ICF and relevant legislation (construction law, antidiscrimination law) to intervene at competent bodies and require to secure such technical equipment for the building.

The ICF enables multi-spectral approach to the classification of functional abilities, the level of health and disorders as well as interactive and evolution process and in such a way differs a lot from the international classification established in 1980.

The ICF works with technical terms such as: ***components*** (body functions and structures, activities, and participation including also environmental factors), ***domains*** (practical, purposefully created groups of related physiological functions and anatomical structures – *domains for components of body functions and structures* and groups of tasks and activities of living – *domains for components of activities and participation* covering all areas of life). ***Categories and sub-categories*** within the domain of a component represent individual elements for the classification (codes).

Problems in body function or structure are defined as ***impairments***. Other important technical terms are: ***qualifiers*** (numerical codes expressing the evaluation of ***performance***, where the performance is anything that an individual is doing in his/her environment including „the involvement into actual life situation" and evaluation of ***capacity – the level of performance of a concrete person*** – the ability of an individual to perform a task or act, i.e. the highest possible ability to function which can be in that particular domain and in that particular moment reached by that person. ***Performance and capacity further influence the level of health, respectively the seriousness of a disability.***

Other important technical terms are: ***participation*** (involvement in life situation) and its ***limitations and environmental factors, facilitators, and barriers*** (positive and negative environmental factors). Through interconnection of important codes with qualifiers we get ***constructs***. These include such issues related to the functioning and disabilities as: the change in a body function, change of body constitution, performance, efficiency; in the relationship with context factors these include environmental barriers or elements which enable the removal or reduction of barriers.

Criteria for the evaluation of performance and capacity can be used for the situation where a person uses compensation aid or personal assistant, but also without help. It is necessary to mention that neither compensation aids nor personal assistance can eliminate impairments; however, they can remove limitations in functioning of specific domains. This type of coding is often used also for identification of limitations in functioning of a person without compensation aids.

Generally, the ICF is divided into two large separate parts:

Part 1 classifies functioning and disability
- these are components marked with small letters **(*b, s, d*)**
  * body function **(*b*)** and body structures **(*s*)**
  * activities and participation **(*d*).**

Part 2 comprises context
- these are components which are marked by small letter **(*e*)** and define:
  * environmental contextual factors **(*e*)**
  * personal contextual factors (usually not classified in ICF).

The ICF offers standard working definition of health and domains related to health. For example „the visual function" is defined as a function to perceive forms and outlines from various distances and with relations to relevant parameters while using one or both eyes in a way that would enable to define seriousness of a visual impairment that could be defined on various levels (from mild or moderate to serious or absolute vision loss).

6. The Usage of ICF in Practice

The last edition of *the International Classification of Diseases* serves for the need of a diagnostic process. *The international classification of functioning, disability and health* represents a handbook for various areas of modern medicine that bring a system of assessment of a health status of a disabled person to individual medical branches. This assessment respects the diagnosis, the stage of illness and disability as well as the prognosis.

The current classification of functioning, disability and health should serve especially for the assessment of the actual health status of an individual who is experiencing chronic disease, physical or mental disability and is based on the diagnostic pattern of the above mentioned classification of impairments.

The international classification of functioning, disability and health enables each medical branch not only with the option to do international comparisons but also with certain standard for health-care information systems and general principles for communication among health-care professionals and institutions, social sphere, political leaders and wide public in various countries which accepted this classification as a legislative norm. The important aspect of this international classification is that it represents an opportunity for clinical workers to use it for the special assessments and evaluation, the assessment of results of treatment and also as prevention from the point of view of the selection of rehabilitation approach or programs.

The international classification represents an important contribution for the area of social care not only from the aspect of social security of people with disabilities, but also from the perspective of the assessment and review of respective specialists. The fact that

the usage of all options the classification brings, presents an opportunity to obtain new data and knowledge which can – in the form of research – be used by programs focused on retention, eventually improvement of the quality of life of people with disabilities or those experiencing chronic illness, is also very important.

The international classification of functioning, disability and health represent a certain model applicable for the area of health-care, social security and for the monitoring of health of population on local, national and international level.

The international classification of functioning, disability and health gives attention to body functions and structures characterised by basic elements we can encounter in the description of illnesses. Every illness is characterised, especially from the aspect of clinical evaluation, by the impairment of functioning which can – if it is long-term – cause permanent changes of morphology of a disabled system. The classification is based on this knowledge and is – in so-called one level classification – focusing on individual functions of body system with the respect of factors of living and working environment, the opportunity of the chronic ill or disabled person to integrate into social life and to use residual functions which can enable these people to perform certain, even though sometimes a bit limited, working activities. The two-level classification then enables through relevant codes (so-called classifiers) to quantify appropriate symptom which is characterised by disability of a certain function of an organ or a system. In such a way, the classification gives attention to mental functions, visual functions, and pain, but also to issues related to voice and its functions. Gradually, the classification is focused on individual functions of cardio-vascular, haematological, immunological, and respiration system, on the function of digestive system, metabolic and endocrine system, on genito-urinary and reproductive functions, on neuro-musculo-sceletal functions and motion functions, on function of skin and skin structures. Individual functions of above mentioned organs and systems, with regard to clinical diagnosis, are consequently coded for practical application by assessment doctors, for statistical needs in the area of health-care, health-care services, in the area of social affairs and social care. Every code is in the classification exactly specified and represents current state of an individual with the respect to his/her diagnostic pattern, the current state of respective function of the system or organ. We emphasize the focus on current state because when a person experiences a long-term chronic disease, eventually mental of physical disability, there are changes of current state of the relevant functions. As the function is changed, there is also a change of respective code.

This general view on the classification of functioning, disability and health does not exclude the option that the assessed functions can change over time. It reflects the basic state which is for everyone who assesses chronically ill or disabled person certain standpoint which needs to be defined and presents assessment standpoint also for long-term monitoring of respective chronic disease or disability.

The international classification of functioning, disability and health basically represents a corner-stone for the assessment of chronic ill and disabled individuals with the respect to the current clinical diagnosis. It enables the observation of changes in functions during a long-term illness and current options of the integration of such disabled person into social and working environment in consideration of the spectrum of potential working and social activities and of the ecosystem of respective individual characterised by environmental factors as defined in the classification.

a) in clinical branches

With the respect to universality of the international classification of functioning, disability and health, it is necessary to emphasize its individual components: the component of functional ability and disability, the component of other factors interfering and influencing the health status and status of the illness – these especially include

environmental and personal factors characterising social, working, cultural, and ethnic environment of a man.

Talking about the aspects of clinical medicine and its individual branches, it is necessary to emphasize factors of functional ability and disability. Individual clinical disciplines are focusing its attention especially on the health status, its changes, risks leading to the deterioration of a health status and options for improvements of a health status such as treatment interventions whether they are conservative, surgical or rehabilitative. The health status of a chronically ill or a disabled person is characterised especially by morphological changes of respective disabled system or organ and current functional status which is a result of changes of organs and of medical interventions. Individual clinical disciplines are focusing on current health status of a sick or disabled person with the respect to permanent morphological changes of respective system or organ.

The international classification of functioning, disability and health differentiate between body functions and structures which – with the respect to opportunities for participation and to factors of the ecosystem of a chronically ill or disabled person creates basis for the one-level classification. The two-level classification consequently uses this basic distribution and on individual diseases and nosological element determines a complex view important for the assessment of the clinical sate of an individual.

The knowledge of the clinical state of a chronically ill person, the determination of the current functional status of respective organ or system which is disabled including the determination of functional reserves in consideration of possible prognosis, which are determined not only by the course of illness, but are influenced also by social and environmental factors (including those related to work) represent a model which can serve as a tool for the long-term monitoring of a chronically ill person and the assessment of the development of his/her health status and this is also a subject of assessments done in the area of health and social care.

The ICF respects the distribution according the clinical branches of medicine. One-level and two-level classification respects this distribution as well and in individual chapters documents the content of individual clinical branches. For the health-care practice it means that a chronically ill or disabled patient has to have a complex diagnostic scheme for the assessment needs. This scheme is based on the structural changes caused by a pathological process and on the functional assessment which determines options and limitations for the quality of life in the consideration of psycho-social and environmental factors, factors of ecosystem of a sick or disabled person. From this point of view, the classification formulates so-called qualifiers determining the extension and level of impairment or disability, the character of changes in respective body structure – in the area of structure, the level of performance in physical, mental and social area – in the area of activities, and the extent to which a chronically ill or disabled person is able to use his/her abilities. However, there is no qualifier defined for the environmental area.

The ICF differentiate the pathological states according clinical branches of medicine. It describes structures of a nervous system, characterises mental functions, pays attention to the otorhinolaryngology, and focuses on voice and vocal functions. Cardio-vascular impairments together with the impairments of immunological and respiratory systems represent other areas covered by this classification which characterises relevant functions of these vital organs and systems. Another areas covered by the classification are impairments of the gastro-intestinal system, metabolic and endocrine diseases with the focus on specific functions of these systems. Genito-urinary and reproduction system together with the functions of these systems form another part. The closing chapters devoted to clinical branches are focused on structures related to the area of mobility in consideration of neuro-muscular-sceletar functions and other functions related to

motions. The chapter on modern dermatology and morphological changes are related to skin diseases and functions of skin and relevant skin organs. The classification is not focusing on psychiatry and other diseases. Another area that is not covered is the area of geriatrics, presumably because the area of ageing and pathological changes in an old age does not form a reason for an assessment.

The individual assessments of a chronically ill or disabled individual have its coding system which is described in this manual. This system serves primarily for statistical purposes, tasks related to research projects implemented in this area, organisational and economic models of long-term care for chronically ill or disabled people through a resort of health-care or social care. Above mentioned qualifiers are important factors which are characterising the extent of impairment, its character and localization in the form of a scale. The issues of participation and environmental factors have their own coding system and special qualifiers.

b) in rehabilitation

Rehabilitation medicine has a special position among clinical branches of medicine. It is an inter-disciplinary branch that uses diagnostic and therapeutic approach of other clinical disciplines and refers to treatment and intervention programs of other clinical branches. In case of chronic illnesses and disabilities, it complements clinical therapeutic interventions with further long-term program focused on the improvement of disabled functions, eventually on the retention of residual functions and quality of life. In the consideration of the definition of the World Health Organization, the goal of the efforts of rehabilitation is to prevent invalidity. That is why it is a branch which interferes not only to the biological basis of living organism but also into its psycho-social structure. Its focus represents the usage of modern methodology and techniques focused on the renewal of disabled functions together with the focus on the disturbed homeostasis of psycho-social functions. This is why the rehabilitation medicine uses the long-term rehabilitation programs the basic components of which are not only techniques and methodology for the renewal of violated biological functions, but also those focused on the adjustment of a psycho-social homeostasis. It is important that both types of methodology and techniques are interconnected and create an organic unit – as a principle of comprehensivity.

The ICF represents an important document for the area of rehabilitation medicine. In consideration of codifiers and individual aspects characterising particular pathological state or a state of disability, it is possible to objectively evaluate the modification of disabled functions and to use so-called reserve functions of a disabled system. This is possible especially thanks to the long-term character of this type of care. The classification enables the objective evaluation of these changes and that is the basic element of revision and assessment activity.

The area of psycho-social rehabilitation is an important factor for the rehabilitation medicine. Also that area provides a chance to use the ICF, especially for the selection of activities and participation in working and social life through a form of rehabilitation counselling. Rehabilitation medicine has enough options to assess the functional state of a chronically ill or disabled person and in consideration of current state of psycho-social functions it has also the opportunity to recommend working activities, their form, extent or content.

ICF can have a huge impact also on the area of modern medicine in general and specially on the area of rehabilitation medicine. The introduction of this classification into these areas will enable a better starting position for assessment doctors. The standardisation of the approach and the application of ICF into work of these doctors will be needed. The ICF also represents certain tool usable also for the comparison and

improvement of long-term care for chronically ill or disabled individuals the number of which is constantly rising which is common for all countries.

c) in the assessment medicine and in the system of social security

Social status of a person within a society and its structures depend primarily on health status, abilities and readiness of this person to implement working and social activities within these structures. A healthy individual uses social and working opportunities of this system with the goal to apply his/her ideas or to secure his/her position in that system.

However, the social status of an individual depends also on objective factors characterising social and working environment and on assumptions to secure his/her real work integration. Chronic illness or disability limits in a certain way the participation of a disabled individual in working and social life, as well as his/her social-economic situation and provision for his/her basic life needs. A man and his ecosystem characterised by the opportunity to integrate into working and social activities, the state of health and reduced by existing chronic illness or disability represent a relationship based on feed-backs – the disorder in health status has the impact on limitations in the area of social and working activities and the lack of these activities caused by chronic disease or disability is consequently reflected in the deterioration of a health status. This matter is currently characterised as a violation of the homeostasis of physiological functions and vice versa, the disorder in the balance of psycho-social functions is reflected in the violation of the balance of physiologic functions.

The ICF is focused also on activities and participation of a disabled or chronically ill person in the consideration of the reduction of his/her body functions based on morphologically conditioned pathological processes and determines opportunities for the self-realization of such person. It also determines individual activities and opportunity of this person to participate in them – from information transfer and learning process, through communication, issues related to mobility and self-care, to the life in a household and community. These activities are defined in a taxative way.

Environmental factors are also closely related with this issue. The ICF defines them as factors of environment – including products and technologies, attitudes or services, systems and political approach. Working and social activities of a chronically ill or a disabled person form, together with environmental factors, one system. Working activities and participation of these people is possible only within optimal environmental conditions. It is only logical that these areas (the area of activities and participation and environmental factors) are closely related, interconnected and form a requirement for harmony important for the quality of life of a chronically ill or a disabled person.

From the aspect of medical disciplines, social medicine is focused on this issue. It deals with the occurrence and specification of chronic diseases and disabilities in consideration of their causality and relationships to social environment, conditions, living and working environment. Based on these premises, the social medicine formulates – with the respect of the organization of health-care and social security – opportunities and tasks for those institutions responsible for social security – social and health insurance companies, bodies responsible for old-age pension, casualty insurance, as well as for the area of social help. Also NGOs associating disabled people, various agencies in consideration of their social activity and specific focus of their activities are in a certain way participating in this activity. The area of modern rehabilitation plays an important role in the activity of social medicine. An assessment doctor forms similarly important relationships with the area of rehabilitation medicine as with the field of social security.

The role of social medicine and rehabilitation medicine is to integrate chronically ill or disabled people into working and social environment – that is why it is necessary to coordinate their activity and to integrate their efforts into one system. The ICF basically creates conditions for the coordination of the efforts of these medical disciplines and for the integration with the goal of optimization of the long-term care for chronically ill and disabled people and through that to reach good quality of life of these people and such a participation which would bring values into life of these individuals. Physical, mental and social health are priorities for this long-term and complex care for daily life of an individual, his/her status in society and at work.

d) in the educational system

The issue of information transmission is a basis for any educational process and represent an important area also for the education in the health-care and social services areas. These are special issues that need to be considered from two points of view:

1/ the education of specialists – doctors, health-care professionals of all categories, psychologists, social workers, special pedagogues, and other specialists implementing health-care programs and those participating in the process of diagnostics, treatment or therapy, and rehabilitation.

The ICF brings important information relevant for the whole spectrum of specialists working in the area of health-care and other relevant areas including not only the health-care but also social and family affairs. It is not only about expertise and content of individual classification activities but especially about the implementation of the assessment of the current state of a chronically ill or a disabled person in consideration of the content of the qualifiers.

2/ the education of chronically ill and disabled people from the perspective of a presence of chronic disease or disability, its further development, risks and prognosis from the long-term horizon.

Chronically ill and disabled persons need to learn how to live with the illness or disability. In order to do so, they need to have enough information from a doctor, health-care or other specialist participating in their diagnostic, treatment and rehabilitation. The education of a patient in the area of his/her own attitudes to the illness or disability and represents a special process important for the whole life of such person as it interfere into his/her quality of life.

If this individual is informed, he/she can identify with the long-term process oriented on the health status of this person with the goal to enable – in the cooperation with a team of specialists – participation of this person in social and working activities. Programmed education enables the creation of a model in which a team of specialists together with a disabled or ill person uses all options for the optimal approach in order to solve complicated life situation of that person.

The usage of ICF, in the area of information transmission and educational approaches of specialists participating in the whole process as well as of ill or disabled people for whom this process, represents an optimal choice for their own way of life, quality of life and opportunities to participate in social and working activities. The knowledge of ecosystem, individual environmental factors including modern technologies and services, presents a modern and complex approach to long-term care for chronically ill and disabled citizens. Conventions and norms of government institutions in Slovakia and abroad form another important factor which influences political system – this system governs and regulates choices for these people, influences individual programs and other processes in the social structures in a legislative way.

e) in the research

Research is a way how to bring new knowledge and information, to create new concepts enriching wide practice and to form new options. The ICF initiates not only a new perspective on general issues of chronically ill and disabled citizens, but at the same time inspires professionals through new information and knowledge to new approaches.

However, the question remains – how can we implement these objectives? The classification strives to standardize – in a certain way – the assessment of a clinical stage of a chronically ill or disabled person through a form of functional characteristics and morphological changes in individual body organs and systems. But it still lacks certain standardization which would enable comparison of specific state of functions with specific clinical stage in consideration of research methods. Morphology of disabilities presents an internationally recognized standard as it is based on the international classification of diseases which is generally recognized and serves for exact determination of the characteristic of a disease. The comparison of the functional state for specific disease or disability is less possible. It is changing not only in the course of time, but the final state and current functional state of such person is influenced also by other organs and systems. That is why it is very difficult to monitor the area of disabled functions on large groups of people. Casuistic approach can bring valuable results; however, it is not possible to consider the results of individual case studies for generally valid knowledge. Despite that, the ICF can bring very valuable information also to this area, including primarily the exact assessment of individual codifiers that need to become a standard. It is important to reach a unified understanding of definitions used in this classification.

Epidemiology of chronic diseases and disabilities forms a special chapter in the scientific approach. There are information available on the occurrence of chronic diseases in various countries of the world, there are comparative analysis done for different age groups, however, for disabilities, there is a lack of information that are evaluating the situation in a relevant way. We are missing standards that would characterise the state of disability, risks of permanent disability and causes of these states. In this area, there is a real chance to focus scientifically on this issue not only on national, but also on international level and that would be an important step forward. The lack of observations – especially on the international level – could result in accepted measures in the fight against disability.

There is a scientific interest also in the area of activities of disabled people, their options for participation in social and working life. Working potential is preserved by many of the disabled people even though it is changed and sometimes decreased. International comparison of these facts would bring not only certain stimuli for quite a lot of measures, but also information on opportunities for the creation of respective programmes for the usage of this residual working potential. The same situation occurs in the area of environment – the ICF defines environmental factors and even if we accept the fact that some of these factors are different in individual countries, it is possible to bring important outcomes from it. However it will be necessary to find certain optimal approach to their standardized evaluation and to use this information widely in practice.

The topic of research is complicated one – those responsible should seriously take into consideration, that it is necessary also for the area of inter-disciplinary issues. It is important to find a methodology which would enable objective evaluation of gained results and would create specific projects that could be widely implemented into practice on local, national and international level. ICF brings information on important activity of people, on the living environment of chronically ill and disabled people; it is focused on issues which are very relevant for today`s world. Scientific and research activity, even it is a very complicated issue, could certainly bring results applicable in a wide medical and social practice. It is necessary to prepare specific projects, methodology approach for

their implementation and to use them for the benefit of chronically ill and disabled individuals and their quality of life.

7. Summary

Potential development and application of ICF in the future can be summarized in the following way:

- the application of ICF in every country (the creation of national databases),
- the creation of international databases and system that would enable comparisons on international level,
- the determination of algorhythms for the assessment of people for the purposes of entitlement for social benefits and pensions,
- the elaboration of the component of personal factors with the goal to examine disability and functioning of family members,
- the elaboration of exact practical definitions of categories for research purposes,
- the elaboration of assessment tools for the evaluation of a disease,
- the application of ICF in practice through software solutions and forms for detection of cases,
- further development of terms related to the quality of life, criteria for the assessment of subjective feeling of well-being,
- the exploration of the suitability of interventions and care for a patient,
- enforcement of the ICF application in scientific studies for the comparison of various health issues,
- the preparation of a training material on the application of ICF,
- the creation of training and reference centres for ICF throughout the world,
- further research of environmental factors.

Taking into consideration the complexity of the new international classification within the assessment practice and issues related to its application into practice, it will be necessary to implement several educational seminars on this topic in the future and to create conditions for the usage of technologies for its practical application in the assessment medicine – whether for the purposes of evaluation of invalidity, respectively for compensation of social consequences of disability or for the assessment of residual potential for the chances of employment with the goal to integrate disabled person into suitable job.

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