VARIA

NEW CONSIDERATION OF THE DEGREE OF DEPENDENCE FOR CARE BENEFIT PURPOSES IN PERSONS AFTER CEREBROVASCULAR ACCIDENTS AS OF JANUARY 2012

Libuše Čeledová[1, 3], Rostislav Čevela[1], Eva Vaňásková[2], Miloš Velemínský[3]

[1]*Department of Assessment Service, Ministry of Labour and Social Affairs, Prague 2, Czech Republic*
[2]*Rehabilitation Clinic of the Medical Faculty of Charles University, Hradec Králové, Czech Republic*
[3]*University of South Bohemia, Faculty of Health and Social Studies, České Budějovice, Czech Republic*

Submitted: 2012-08-04 **Accepted:** 2013-05-07 **Published online:** 2013-06-28

Abstract
The article introduces new medical assessment criteria for consideration of the degree of dependence for care benefit purposes pursuant to the Social Services Act in neurological diseases, e.g. in persons after cerebrovascular accidents. The principle of the new consideration method effective as of 1/1/2012 is an improvement of the existing system for consideration of the degree of dependence. The assessment process associated with consideration of the degree of dependence aggregated the tasks of self-care and the tasks of self-sufficiency into ten higher units. They cover basic personal needs, such as mobility, orientation, communication, food intake, putting on clothes and shoes, personal hygiene, using the toilet, health care, personal activities, and household cleaning. These facts are based on the general principles of the International Classification of Functioning, Disability and Health (ICF) and internationally used ADL (Activities of Daily Living) system. Through this method, a comprehensive overview of everyday and vital needs that are a prerequisite in every physical person to have the ability for a self-sufficient living is obtained. The new method of dependence consideration is a contribution to application of the personalised assessment medicine.

Key words: *Medical Assessment Service; degree of dependence; neurological diseases; cerebrovascular accident*

Degree of dependence and neurological disabilities

According to the data of the Ministry of Labour and Social Affairs of the Czech Republic (MoLSA), neurological diseases have been the fifth most common cause of acknowledgement of the degree of dependence since 2007. From 2007 to 2012, there was an increase in the number of acknowledged degree of dependence by 8.4% from 11,144 to 12,084 cases. The most common specific health reasons for dependence are cerebral palsy, Alzheimer's disease, Parkinson's disease, multiple sclerosis, paraplegia and tetraplegia, followed by hemiplegia. In this context, it is at the same time necessary to mention the significance of vascular brain diseases, although with respect to statistics of the Medical Assessment Service, they are included in the diseases of the cardiovascular system. Since 2007, cardiovascular system diseases have been the third most

common cause of acknowledgment of the degree of dependence, although between 2007 and 2012, there was a reduction in the number of acknowledgements of the degree of dependence by 4.4% from 19,888 cases in 2007 to 15,989 cases in 2012. The numbers of considerations of the degree of dependence between 2007–12 classified according to the most common types of functional limitations are shown in Table 1.

Table 1. The cases of considerations of the degree of dependence between 2007–12 according to the most frequent types of functional disabilities

Diagnostic category	2007	2008	2009	2010	2011	2012
Musculoskeletal diseases and diseases of the connective tissue	28,930	33,939	27,427	26,298	23,732	27,123
Mental disorders and behavioural disorders	21,596	25,940	22,049	23,778	24,317	30,810
Cardiovascular system diseases	50,296	56,653	44,725	44,307	38,378	41,983
Neoplasms	6,642	10,236	9,318	10,394	9,437	11,069
Nervous system diseases	16,782	17,160	13,916	14,236	13,799	16,653

Medical assessment criteria for consideration of the degree of dependence according to ADL and ICF

Basic principles of the assessment activity apply to consideration of the health condition and the degree of dependence. A physician of the Medical Assessment Service (MAS) takes into account the health condition of a person documented in a medical report from the treating physician, the result of social surveying and identifying the person's needs, or the results of functional examinations and of the examinations they have carried out themselves. A long-term adverse health condition, specifically, its impacts on self-sufficiency and the ability of self-care, is a basic criterion for determination of the degree of dependence on the help of another person. Owing to the change in the consideration method, 10 comprehensive and related areas of everyday life, i.e. basic personal needs, are distinguished and considered. A comprehensive view of everyday personal activities that are necessary for social integration (Act No. 108/2006 Coll., Decree No. 505/2006 Coll., Čeledová and Čevela 2011a, b) is preserved.

Consideration of neurological disabilities means to assess functional deficits and their impact on the functional self-sufficiency. Apart from assessment of consciousness disorder and of motor functions introduced by neurologists, the tests assessing everyday activities are commonly used (FIM, Barthel index, Katz index, Frenchay index, Activity index, Copenhagen Stroke Scale and similar). Quality of life assessment (QOL) expresses the consequences of health problems at the social level. It indicates emotions of persons in the current life situation and presumes an individual approach. A basic quality of life assessment should be carried out at the beginning of a treatment as a basis for monitoring changes over time. Interpretation is uncertain, because it is not yet clear whether the statistical significance corresponds to the clinical significance. However, the tests assessing quality of life have already become a necessary part of a clinical practice (Vaňásková 2006).

The new consideration is based on the principles of the Activity of Daily Living (ADL) assessment, which has already been used for disabled patients since the middle of the 1960s. It is not an improvement in a partial degree that is decisive in ADL assessment but, in the first place, it is a functional fitness in the sense of self-care and self-sufficiency, activity and participation. Basic ADL focuses on self-care. It assesses, for example, relocation, bathing. Instrumental ADL (IADL) focuses on more complex activities that enable an individual to live their life independently; they

condition their self-sufficiency. Such activities include, for example, doing shopping, household cleaning or money management (Vaňásková 2004, Kalvach et al. 2008, Bartoš et al. 2010). A change in the medical assessment criteria for consideration of the degree of dependence thus follows up on the already used ADL assessment method. In principle, it anticipates a systematic use of the International Classification of Functioning, Disability and Health (hereinafter as ICF) by general practitioners through the use of the principles of the classification, since the ten basic needs take into account not only ADL, but also the ten activities from ICF (ICF 2008, Švestková et al. 2009). Functional abilities are assessed with the use of the remaining potentials and competencies of a physical person and with the use of generally available aids, means, articles of daily use or household gadgets, public areas or with the use of a medical device. This assessment is obtained through ICF (International Classification of Functioning, Disability and Health – ICF). ICF classification can be used for a wide range of applications, including social security, epidemiological studies, and evaluation and management of health care. It implements a social model through the information about how the functional abilities of an individual are affected by their environment. It offers an information framework for improvement of participation through reducing social barriers, for the area of social support. The view of health sector changes from pathology to the consequences of pathological processes. We must address the needs of people with disabilities; that is why the ten basic personal needs represent a compressed expression of the domain No. 3 Activity and participation from ICF. Through this, an effective interconnection of ICF principles with the new medical assessment criteria is ensured during consideration of the degree of dependence – as shown in Table 2.

Table 2. Reflection of the ICF classification into the Basic personal needs assessment

Basic personal need	ICF classification
	activation/participation
mobility	chap. 4 mobility, e.g. d 450 walking, d 460, d 410
orientation	chap. 1 learning and application of knowledge, e.g. codes d 110–129
communication	chap. 3 communication d 310–360
food intake	chap. 5 self-care, food and drink d 550–560
putting on clothes and shoes	chap. 5 self-care d 540
personal hygiene	chap. 5 self-care d 510–520
using the toilet	chap. 5 self-care d 530
health care	chap. 5 self-care d 570, chap. 2 general tasks and requirements, e.g. d 230
personal activities	chap. 8 the main areas of life, e.g. d 810–820, chap. 9 community, social and civilian life, e.g. d 910–920
household cleaning	chap. 6 living in a household, e.g. d 630–640

The new medical assessment criteria for consideration of the degree of dependence

The method of consideration of the degree of dependence was tested before approval of amendments to the legal regulations, so that its functioning, reliability and impact on the assessed persons as well as on the activity of the Medical Assessment Service is verified. Model testing has been performed both at the Ministry of Labour and Social Affairs of the Czech Republic and at the Czech Social Security Administration and was performed by qualified assessing physicians. Testing was performed in two phases in 2010 and 2011 and the results showed a high level of concordance of inputs in consideration of the degree of dependence between the existing (up to 2011)

and the new system for consideration of the degree of dependence, with minor benefits for children and persons with mental disorders. Physicians of the Medical Assessment Service appreciated comprehensive approaches, well-arranged structure of the system, its clarity for the users, and reduction of administration associated with assessment and drawing up a report. Consideration of the degree of dependence is based on eight principles and twelve rules for assessment of a functional impact of a long-term adverse health condition.

Eight principles for consideration of the degree of dependence:

1) the ability to fulfil a basic personal need of health care is assessed in relation to specific health disability and the regime prescribed by the treating physician;
2) the ability to fulfil a basic personal need of household cleaning is not assessed in persons under 18 years of age;
3) in assessing the ability to fulfil basic personal needs, a functional impact of a long-term adverse health condition (LTAHC) on the ability to fulfil basic personal needs is assessed; at the same time, the help, supervision or care not related to a functional impact of a long-term adverse health condition are not taken into account;
4) for a dependence to be acknowledged in the respective basic personal need, there must be a causality between the disorder of functional abilities due to LTAHC and the loss of ability to fulfil basic personal need to an acceptable standard;
5) functional abilities are assessed with the use of the remaining potentials and competencies of a physical person and with the use of generally available aids, means, articles of daily use or household gadgets, public areas or with the use of a medical device;
6) when assessing the ability to fulfil basic personal needs and the need for special care in persons under 18 years of age, an extent, intensity and the level of demand of care that needs to be provided to the assessed person with health disability is compared to the care that needs to be provided to a healthy physical person of the same age;
7) when considering the degree of dependence in a person under 18 years of age, the need for care that is related to the age of the person and the respective level of bio-psycho-social development is not taken into account;
8) special care means the kind of care that significantly exceeds the care provided to a person of the same age with respect to its extent, intensity or the level of demand required.

Twelve rules for assessment of a functional impact on a long-term adverse condition:

1) assessment of the person's ability to fulfil basic personal needs includes assessment of individual activities that are defined for each individual basic personal need in the annex to the Decree;
2) assessment of the person's ability to fulfil basic personal needs in a natural social environment and with respect to the age of the physical person;
3) assessment of body structures and physical functions in relation to the extent and seriousness of the disorder of functional abilities (psychological, mental, sensory, circulatory, respiratory, hematological, immunological, endocrinological, metabolic, digestive, excretory, neuro-musculoskeletal, including rough and fine motorics, and the function of voice, speech and skin);
4) definition of the inability to fulfil basic personal needs as a condition, when a disorder of functional abilities reaches the level of a disorder in the full extent or of a serious disorder, when it is not possible to fulfil personal needs to an acceptable standard even despite the use of "facilitation aids and means";
5) determination that the inability to fulfil basic personal needs is considered also the state when the regime prescribed by a specialist providing special healthcare service does not allow to fulfil a basic personal need to an acceptable standard;
6) assessment of whether the extent of psychological, mental, physical and sensory functional abilities with respect to a long-term adverse health condition is sufficient for a regular fulfilment of a basic personal need;

7) assessment of whether the assessed physical person is able to identify, fulfil and check correctness of the fulfilment of a basic personal need;
8) taking into account whether a long-term adverse condition does not permanently influence functional abilities, when evaluating the result of rehabilitation and adaptation to a health disability;
9) assessment of conditions that continuously worsen or improve, in which case a functional ability to fulfil a basic personal need is determined, so that it corresponds to the prevailing extent of the ability in the reference period;
10) determination that the inability to fulfil at least one of the activities, which is defined for the ability to fulfil a basic personal need in the annex of the Decree, represents grounds for the inability to fulfil the respective basic personal need, regardless of the cause of a long-term adverse condition;
11) determination of variations in the process in persons between 1–18 years of age;
12) while assessing basic personal needs for the purposes of determination of the degree of dependence, the basic personal needs, which were identified as the needs that cannot be fulfilled by the assessed person due to their long-term adverse health condition, are added up (Čeledová et al. 2012).

The new method of consideration of the degree of dependence has brought a slight increase in the number of persons with the degrees of dependence III and IV and slight decrease in the number of persons with the degrees of dependence I and II, as shown in Tables 3 and 4.

Table 3. Consideration of the degree of dependence in persons under 18 years of age for the period between 2011–12

Year	DoD I	%	DoD II	%	DoD III	%	DoD IV	%	total	%
2011	5,614	46.0	2,758	22.6	1,875	15.4	1,959	16.0	12,206	100
2012	5,807	42.7	3,359	24.7	2,305	16.9	2,093	15.7	13,564	100

DoD – the degree of dependence

Table 4. Consideration of the degree of dependence in persons over 18 years of age for the period between 2011–12

Year	DoD I	%	DoD II	%	DoD III	%	DoD IV	%	total	%
2011	31,826	31.1	33,332	32.6	21,436	21.1	15,589	15.2	102,178	100
2012	36,308	31.0	34,841	29.6	26,984	22.8	18,981	16.6	117,114	100

DoD – the degree of dependence

DISCUSSION

It is a known fact that cerebrovascular accidents (CVAs) have an annual incidence of approx. 300 cases per 100,000 inhabitants, i.e. an accident occurs in approx. 30,000 persons a year, while the incidence is increasing in people in productive age and CVA affects more younger people. If approx. 18,000 individuals of those 30,000 affected by CVA in the Czech Republic become dependent on help or supervision of another person every year, as shown by the data presenting the results for considerations of the degree of dependence, we have to view this situation as alarming. We have to think about whether the organisation of care for those affected by CVA, the method, process as well as quality of care and capacities of the facilities that should be taking care of the people with CVA are designed and applied optimally in the Czech Republic. This concerns particularly an early

diagnosis, care before admission, provision of health care in accordance with advancements of medical science and standards, provision of bed care with respect to acute bed care, including rehabilitation and follow-up and long-term health-social care. Another known fact is that the possibility to provide targeted, intensive acute and long-term rehabilitation (medical, social, vocational) with the objective to improve the functional condition of an affected person, and thus to improve the quality of their life, is not sufficiently guaranteed. The second aspect of high incidence of CVA and dependence in persons after CVA undoubtedly are the risk factors in the Czech population and in the population of the affected, such as hypertension, smoking, obesity, hyperlipidemy, diabetes mellitus, insufficient physical exercise, bad eating habits, etc. With the change in consideration of dependence taking into account 10 comprehensive tasks in the area of everyday life, the process has been made more simple, clearer and the volume of administration has been reduced for all parties, while the four-degree model and age categories have stayed the same. One of the criteria of particular importance is the one determining adverse health condition in a period lasting over one year. The four-degree scale, age groups as well as description of the abilities to fulfil basic personal needs and evaluation of the functional impact are suitable for individual assessments, even for people with a neurological disability. The increase of acknowledged dependencies for neurological diseases in 2012 compared to 2007 by 8.4% confirms the advisability of the change of the paradigm of consideration of the dependence degree for care benefit purposes.

CONCLUSION

The new consideration of the degree of dependence, i.e. assessing 10 basic personal needs: mobility; orientation; communication; food intake; putting on clothes and shoes; personal hygiene; using the toilet; health care; personal activities; household cleaning – has significantly improved the process of consideration of the degree of dependence, and reduced the amount of time and administration required for preparation of a report, while maintaining objectivity of assessment. As a consequence, the procedure towards the client has been made more flexible and higher effectiveness of the Medical Assessment Service activity has been achieved. New medical assessment criteria are based on the system that has been used already for 40 years and on the assessment of activities of daily living (ADL) proven in practice, and at the same time, they represent a reduced form of ICF classification. Activities of daily living (ADL) correspond to the ten activities from the International Classification of Functioning, Disability and Health that cover all components of human health and some components of welfare. Reflection of ADL and ICF into the new medical assessment criteria for consideration of the degree of disability has therefore contributed to the change in view of healthcare public of disabilities and will ensure a better interconnection between the area of health care, follow-up and long-term care and social area. Now we know what the incidence of CVA is and in how many people CVA conditions their dependence on help and care of another person. It is not known, however, how many people after CVA have limited mobility or are immobile, how many of them have communication disorders, how many of them have continence disorders and how many of them lose even their mental competencies. The results about the dependence of people after CVA should be used in the concept and organisation of health care for the people with CVA and with the consequences of the accident as well as a warning for "prospective patients and dependence candidates", so that they change their lifestyle in time and reduce their health risks.

Implementation of the elements of ICF classification, which covers all components of human health and some components of welfare, into the new medical assessment criteria for consideration of the degree of dependence changes the view of the professional public of disabilities. Assessment of fulfilment of basic personal needs in an acceptable standard takes into account what is expected in the specific socio-cultural environment in the given area. It addresses those situations, when a physical person's physical capabilities would allow them to fulfil the need, however, they would fulfil it "in a non-

standard manner, in insufficient quality, and unsatisfactorily" due to their disability in the mental or sensory area. The new consideration thus also focuses on the use of a functional diagnosis and salutogenetic attitude to health, i.e. on the monitoring of quality of life. The aim of making the method of consideration of the degree of dependence more modern was to build the medical assessment criteria upon a functional assessment of a functional condition. A slight increase in the number of people with an acknowledged degree of dependence III and IV proves that the change in the method of consideration promotes application of a personalised assessment in assessment medicine.

REFERENCES

1. Bartoš A, Martínek P, Řípová D (2010). Dotazník Bristolská škála aktivit denního života BADLS-CZ pro hodnocení pacientů s demencí [The Bristol Activities of Daily Living Scale BADLS-CZ questionnaire for the evaluation of patients with dementia]. Cesk Slov Neurol N. 73/106/6: 673–677. ISSN 1802-4041 (Czech).
2. Čeledová L, Čevela R (2011a). Nové medicínské paradigma posuzování stupně závislosti pro účely příspěvku na péči [New medicinal paradigm for consideration of the degree of dependence for care benefit purposes]. Čas Lék Čes. 150/10: 550–553. ISSN 0008-7335 (Czech).
3. Čeledová L, Čevela R (2011b). Proč měnit posudkově medicínská kritéria pro posuzování stupně závislosti [Why change the medical assessment criteria for consideration of the degree of dependence?]. Prakt. Lék. 91/6: 337–340. ISSN 1080-2711 (Czech).
4. Čeledová L, Čevela R, Doležal T, Klimeš J (2012). Health Technology Assessment (HTA) v principech a zásadách posuzování stupně závislosti [Health Technology Assessment (HTA) in the principles and rules for consideration of the degree of dependence]. Prakt. Lék. 92/5: 267–269. ISSN 1080-2711 (Czech).
5. Kalvach Z, Zadák Z, Jirák R, Zavázalová H, Holmerová I, Weber P et al. (2008). Geriatrické syndromy a geriatrický pacient [Geriatric syndromes and the geriatric patient]. Grada Publishing, p. 336. ISBN 978-80-247-2490-4 (Czech).
6. Mezinárodní klasifikace funkčních schopností, disability a zdraví (WHO) [International Classification of Functioning, Disability and Health – ICF] (2008). Praha: Grada Publishing (Czech).
7. Švestková O, Angerová Y, Sládková P (2009). Mezinárodní klasifikace funkčních schopností, disability a zdraví (ICF) – kvantitativní měření kapacity a výkonu [International Classification of Functioning, Disability and Health (ICF) – quantitative measuring of capacity and performance]. Cesk Slov Neurol N. 72/105/6: 580–586. ISSN 1802-4041 (Czech).
8. Vaňásková E (2004). Testování v rehabilitační praxi: cévní mozkové příhody [Testing in rehabilitation practice: cerebrovascular accidents]. 1st ed. Brno: Národní centrum ošetřovatelství a nelékařských zdravotnických oborů, p. 65. ISBN 80-7013-398-8 (Czech).
9. Vaňásková E (2006). Rehabilitace motorických a řečových poruch po cévní mozkové příhodě. In: Kalita Z. Akutní cévní mozkové příhody [Rehabilitation of motor and speech disorders after cerebrovascular accident. In: Kalita Z. Acute cerebrovascular accidents]. 1st ed. Praha: Maxdorf, p. 486–505. ISBN 80-85912-26-0 (Czech).
10. Vyhláška č. 505/2006 Sb., kterou se provádějí některá ustanovení zákona o sociálních službách [Decree No. 505/2006 Coll., which implements certain provisions of the Act on Social Services] (Czech).
11. Zákon č. 108/2006 Sb., o sociálních službách, ve znění pozdějších předpisů [Act No. 108/2006 Coll., on Social Services, as amended] (Czech).

Contact:

Libuše Čeledová, Department of Assessment Service, Ministry of Labour and Social Affairs, Prague 2, Czech Republic
Email: libuse.celedova@mpsv.cz