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The creation of programs of physical rehabilitation/therapy in musculoskeletal disorders

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Purpose: *to reveal the structure of planning in physical rehabilitation/therapy and to analyze the peculiarities of the creation of rehabilitation programs in the musculoskeletal disorders.*

Material & Methods: *the structure of planning was determined and analyzed as a functional subsystem of physical rehabilitation/therapy. Literature analysis, system analysis and synthesis, methods of analogies, abstraction and generalization were applied.*

Results: *the concept of "program" in physical rehabilitation has been analyzed. The need has been justified and the method of creating programs of physical rehabilitation/therapy, taking into account the source and target levels of motor functions and the availability of system resources, has been given. Definition of "program of physical rehabilitation/therapy" has been proposed. Components of programs of physical rehabilitation / therapy in musculoskeletal disorders have been identified.*

Conclusions: *planning is a functional subsystem of the physical rehabilitation/therapy. The purpose of planning is creating a program. Planning consists of the following functional subsystems of the second level: prognostication, goal setting, creating of an intervention technology, creating of a control technology and writing of a program. The program of physical rehabilitation/therapy is a plan of transformation of system resources into the goals and the purpose of physical rehabilitation/therapy using intervention and control technologies.*

Keywords: *physical therapy, movement disorders, planning, resources, program, goals, technology.*

Introduction

The question of planning of the process of physical rehabilitation constantly appears at scientists of the branch. The researches continue which are devoted to the creation of programs of physical rehabilitation at different nosology [1–5]. The attention to the mentioned problem is predetermined that inaccuracies and mistakes, when planning call into question efficiency of the whole rehabilitation process, can entail the loss of health and the patient's invalidization. At the same time the detailed recommendations from the creation of programs and definition of the concept "program of physical rehabilitation" are not succeeded to find in special scientifically-methodical literature.

The practicing specialists in physical rehabilitation also have to be ready to the solution of the questions, which are connected with rehabilitation programs. The marked-out experts can be appointed to the instructor's position on physical therapy. According to duty regulations, there is drawing up recommendations from improving systems and programs and modification to them among tasks and duties of the instructor [6].

Reforming of physical rehabilitation in Ukraine in modern international not medical specialty "physical therapy", introduction of specialty "physical therapist" on the code 2229.2 in the Qualifier of professions of Ukraine induce to pay attention to features of activity of physical therapists in the aspect of planning of rehabilitation actions.

It is noted that "physiotherapists (physical therapists) estimate, plan and realize rehabilitation programs for improvement or renewal of motive functions of the person" in the description of professional activity of the specialty "physical therapist" of the International standard classification of professions of ISCO-08 (group 2264). It is worth allocating such, which are connected with creation and implementation of rehabilitation programs, from between the tasks of professional activity:

- establishment of purposes of treatment with patients and development of medical programs for reduction of physical pain, strengthening of muscles, improvement of cardiothoracic, cardiovascular and respiratory functions, renewal of mobility of joints, improvements of balance and coordination of movements;
- development, implementation and monitoring of programs and procedures, with use of therapeutic properties of physical exercises, heat, cold, massage, manipulations, hydrotherapies, electrotherapies, ultra-violet and infrared light, and ultrasound in treatment of patients;
- development and deployment of programs of observation and prevention of the basic physical diseases and frustration [7].

Thus, planning of physical rehabilitation appears the urgent scientific and practical problem.

Communication of the research with scientific programs, plans, subjects

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at the meeting No. 8 of the academic council of LSUPC (the head, prof. A. S. Vovkanych).

The purpose of the research:

to reveal the structure of planning in physical rehabilitation / therapy and to analyze features of the creation of rehabilitation programs at violations of activity of the musculoskeletal system.

Material and Methods of the research

Research methods: analysis of references, system analysis and synthesis, methods of analogies, abstraction and generalization.

Results of the research and their discussion

The concept "program of physical rehabilitation" is used with definitions "complex", "typical", "individual", "problem-oriented" in special scientifically-methodical literature.

The term "program" means "in advance deliberate plan of any activity, work", and "complex" – that, "which covers group of objects, phenomena, actions, properties" [8].

The determination of the term "the comprehensive program of physical rehabilitation" was not succeeded to find. It is used as the synonym of the concept "complex rehabilitation" or "complex physical rehabilitation" in special cases. Also it is noted that the program of medical rehabilitation has to be complex, and the recovery treatment needs to be performed by the group of experts: doctor, psychologist, instructor of MPC, or rehabilitology [5; 9]. It is possible to draw conclusion that complex rehabilitation is the simultaneous implementation of different types of rehabilitation by the corresponding experts.

Researchers often understand the use of several means and methods as the term "comprehensive program of physical rehabilitation" [3; 4; 10; 11]. In that case there is need to establish whether the program of physical rehabilitation be "not complex" can and be based on application of only one mean or method? It was not succeeded to find the answer to this question in special literature.

One of the interpretations of the term "program" which is of interest in the context of the research is such: "set of the interconnected projects..., and also the complex of the organizational changes, which are united by common purposes and directed to the achievement of concrete ... benefits" [12]. In this definition the project is the conceived action plan; plan, intention [8]. Therefore, the complexity should be considered as one of the characteristics of the program, and the term "comprehensive program of physical rehabilitation" does not seem correct.

Typical programs of physical rehabilitation were created as average plans with orientation, first of all, to the main clinical diagnosis and the period of rehabilitation. The purpose of their development – scientific foundation of rehabilitation actions for educational and practical requirements. Unfortunately, some scientists prove the efficiency of new author's programs in comparison with the existing "standard", "classical" without analysis of contents of the last [1–3].

It would be mistake to consider the improvement of typical programs in the way to creation of ready "recipes" on rehabilitation at concrete nosological forms for studying by students-rehabilitologists, whether the ideal tool for effective influence on the patient in real clinical conditions. The reason – diversity of violations at the identical clinical diagnosis and stage of rehabilitation.

According to modern model of rehabilitation, activity physical rehabilitologist/therapist goes for reduction, elimination and prevention of development of violations which result from complications of the basic and accompanying diagnoses [13].

The size of violations is always individual and depends on many factors: mechanogenesis of trauma, pathogenetic factors, age, heredity, general state of health. The rehabilitation profile of persons with the identical clinical diagnosis differs. It does not deny the fact that identical violations happen at patients to the different clinical diagnosis.

The rehabilitation profile of the patient is formed by such indicators:

- the previous functional condition and level of independence before disease (trauma);
- the urgent functional restrictions and degree of their expressiveness: ability to self-service, independent movement, study, work, orientation, communication, monitoring the behavior;
- the psychoemotional status and motivation concerning participation in the rehabilitation program [14].

The listed individual factors are also influence on variability of dynamics of violations under the influence of rehabilitation actions.

Other problem, which scientists solve during the creation of the typical program, is the prediction of typical purposeful level of physical rehabilitation. The only way to define it – to average data of certain contingent of patients. But such purpose only approximately can meet individual needs and rehabilitation profile of the patient even at rather short stage of rehabilitation [1].

Expediency of establishment of typical purposeful level on long interval of time (several weeks or months) at violations of the musculoskeletal system it seems debatable [2]. The implementation of rehabilitation actions is influenced by individual terms of healing of soft tissues, consolidations of fractures of bones and cartilages, implantation of transplants. The attending physician formulates individual contraindication and caution to physical rehabilitation / therapy with their account. Physical rehabilitologist has to take this information into account when holding all actions with the patient [15].

Certain scientists created the author's program with a view to achievement of purposes and called it problem-oriented. According to scientists "means, forms and methods of physical rehabilitation most of which effectively will help to solve task reached strictly individually and to achieve goal" [16]. It comes up from the quoted that classes were actually given not by one, and different programs.

It is easy to create the typical program, having defined aver-

age values from individual programs, which are the object of the scientific research. Much more difficult task appears at experts experts on places: how was the typical program created from individual, in view of diversity of violations? The scientific research on this problem is not enough [17]. Scientists, as a rule, do not offer concrete ways of adaptation of author's programs to individual needs of patients and are limited to the general recommendations. The answer to the question remains open: what and how it is possible "individualize" not to be beyond the typical author's program?

Studying of different aspects of the process of physical rehabilitation and, in particular, questions of planning, it is expedient to carry out on the basis of the system approach. It treats general scientific methodology and allows investigating big and difficult objects (systems) fully as only whole with the coordinated functioning of all elements and parts. The system approach can be applied to any object of the scientific research [18].

The improvement of system of physical rehabilitation has to be based on understanding of features of its structure and functioning, which can be found by means of morphologically/topologically, functional and information descriptions.
It is established on the basis of the morphological description that physical rehabilitation consists of such subsystems as the patient, the specialist in physical rehabilitation and the purpose of physical rehabilitation. It is the part of metasystem (supersystem) of healthcare, which forms its environment [15].

The functional description allows to considering physical rehabilitation as the system of rehabilitation actions, the majority from which are in common carried out by physical rehabilitologis and the patient. The need of the separate functional description of physical rehabilitation does not contradict to modern understanding of the role of multidisciplinary team in medical – rehabilitation process [19].

Studying of foreign experience showed that the American Association of physical therapy allocates five components in clinical activity physical therapist:

1. Inspection or review (examination).
2. Estimation (evaluation).
3. Diagnostics of violations (diagnosis).
4. Forecasting (prognosis).
5. Intervention (intervention) [20].

It is necessary to understand of influence physical rehabilitologist/therapist on motive functions and activity of the patient by means and methods of physical rehabilitation/therapy as the term "intervention".

The listed components of clinical activity are considered as the sequence, but not system of processes and therefore their purposes are accurately not defined. For example, estimation and diagnostics are divided, and such components as planning and control, separately not certain. Five similar components are allocated in the new edition grants and it is noted that forecasting covers planning [21].

The opposite example is SOAP ("soap" from English) – the format which is suggested to be used for the organization of work with the patient and maintaining medical documentation. The abbreviation is allocated four components of activity by the first letters: collecting subjective information (Subjective), collecting objective information (Objective), estimation (Assessment), planning (Plan) [22]. In this case forecasting separately is not considered.

It is worth allocating four main functional subsystems with own purpose in physical rehabilitation / therapy:

• inspection, purpose, – to define motive and functional violations;
• planning, purpose – creation of the program of physical rehabilitation/therapy;
• intervention, purpose – implementation of the program of physical rehabilitation/therapy;
• control; purpose – support of functioning of system of physical rehabilitation.

The consecutive achievement of the purposes of subsystems in the end result provides the achievement of goals of functioning of the system of physical rehabilitation – renewal of motive functions, activity and health of the patient.
Investigating the subsystem of "planning", it is possible to compose it on number of functional subsystems of the second level:

1. Forecasting.
2. Statement of the purposes of intervention.
3. Formation of technology of intervention.
4. Formation of technology of control.
5. Written execution of the program of physical rehabilitation/therapy.

Let's consider each of the listed subsystems.

1. Forecasting.

Having analyzed the results of inspection, physical rehabilitologist/therapist has to describe motive and functional violations and predict possibilities of their elimination.

The purpose of the first subsystem of "forecasting" is the formulation of the individual purpose of physical rehabilitation, for example: to resume professional activity, to return to classes of concrete sport, to reach certain level of independence.

The determination of the term "forecast" allows connecting the establishment of the purpose with "forecasting". It comes from Greek "prognosis" and means "prediction on the basis of the available data directly, character and features of development and *termination* (allocation of the author) of the phenomena and processes in the nature and society" [8].

Forecasting covers the bigger period, than the plan, and precedes its drawing up. At the heart of scientific forecasting, as well as planning, the scientific prediction lies. Unlike plans forecasts do not contain concrete tasks [23].

In the Order of the Ministry of health protection "About the approval of Instruction about the establishment of groups of disability" of 05.09.2011 No. 561 is told that "rehabilitation forecast – predictable probability of realization of rehabilitation potential and predictable level of integration of disabled people into society which is defined not only by the level and

the maintenance of rehabilitation potential, but also real opportunities of application, for its realization of modern rehabilitation technologies, means and methods" [24].

The interpretation of the concept "forecast of physical rehabilitation" of special literature did not manage to be found.
The rehabilitation forecast in physical therapy is determination of level of the greatest possible improvement of functions of the patient and time, necessary, for achievement of this level. The forecast also may contain prediction of levels of improvement during the different periods during the course of physical therapy. The favorable forecast is the basis for rehabilitation intervention [25]. On analogies, the forecast of physical rehabilitation is predictable level of renewal of motive functions and activity of the patient for certain period under the influence of actions of physical rehabilitation.

As it was noted above, the rehabilitation forecast is closely connected with rehabilitation by potential – complex of biological and psychophysiological characteristics of individual, and also social-surrounding factors which allow realizing in this or that degree its potential abilities [14]. By other, very similar definition – it is complex biological, psychophysiological and social characteristics of the person, and also factors of the social- psychophysiological environment who allow realizing its potential opportunities to rehabilitation [24].

Rehabilitation potential and its realization are connected with resources of which the system of physical rehabilitation disposes [26]. As any other system, physical rehabilitation functions in the conditions of limit of resources. Therefore, forecasting can be considered as estimation of the system resources, which are necessary for achievement of goals. Such method of formation of initial position for development of the plan is called resource (by opportunities) [27].
By the definition of the researchers, the term "purpose of system of rehabilitation" consists in achievement in the corresponding time resistant, optimum to sanogenetic opportunities of renewal of the broken functions of individual, its adaptation, to the environment and participation in social life with the social functions [14] with changed in connection with disease.

Full renewal of motive functions and activity to the previous level is the main, but not the only option of the purpose of physical rehabilitation. Its difference from such spheres as physical education, education, industrial production where the purpose of activity is excess of initial level consists in it. The purpose of physical rehabilitation is renewal of the broken motive functions and activity according to sanogenetic opportunities of the person.

If it does not seem possible completely to resume the previous level of functions, then it is necessary to define another, which will be considered as accessible. Therefore, the purpose can be planned in different way:

- full renewal of the lost functions;
- support of functions at the certain level;
- delay of loss of functions (at irreversible changes);
- formation of compensations (at irreversible changes) [28].

In the listed cases, the forecast should be considered as positive, that it will allow to continue planning, having formulated the individual purpose and the goals of physical rehabilitation. Such method of planning is called purposeful (by requirements) [27].

If physical rehabilitologist considers that the intervention will not yield positive results, then he discusses the conclusions with the attending physician and the patient and behind their consent can stop the subsequent rehabilitation.

2. Statement of the purposes of intervention.

The purpose of this functional subsystem of the second level coincides with the name.

It is necessary to define the purposes of intervention by decomposition of the purpose. They are purpose elements, have to submit to it and answer unambiguously question: what have we made for its achievement? The goals indicate ways of achievement of purposes [28].

The purpose is divided into shortly – and long-term in physical rehabilitation/therapy. The last demand over three weeks for achievement [29].

The achievement of the purposes can consistently be planned when achievement of one purpose becomes the key to another. For example, the patient will hold the affected lower extremity over floor surface to lean on the affected leg without ability during certain time forcedly. If such loading is contraindicated, then studies of gait and gait with crutches with transferring of weight only through intact lower extremity will become impossible.

Short-term purposes can be also planned in parallel. Their simultaneous successful achievement will open way for the achievement of bigger long-term goal which plays unifying role. Simultaneous preparation of the upper and lower extremities, and also systems of power supply of the patient for study of gait with crutches is example. If to begin such work previously (for example when the patient still is on skeletal endurance), then the terms of rehabilitation will considerably be reduced.

Scientists and practicians recommend applying SMART format for correct statement of the purposes in different fields of activity and, in particular, physical therapy [30–33].

It is expedient to apply such option of definition of the purposes and its treatment in physical rehabilitation/therapy:

- Specific;
- Measurable;
- Attainable, achievable;
- Relevant;
- Time-bound [34].

"Specific" of the purpose consists in the accurate and clear formulation which does not allow different treatment participants of the rehabilitation process. Especially it concerns the patient. Such can be examples of inconcrete statement of the purposes:

- to liquidate pain in backbone of the patient with osteochondrosis;
- to teach to go without supportive applications of the patient after skeletal injury of the lower extremities;

• to return the patient to soccer classes after plasticity of forward crossed sheaf.

In the first case the patient can understand achievement of goals as the lack of sensations of pain without any communication with duration and intensity of loadings. At the same time experts know well that physical overworks (static or dynamic) cause pain in structures of backbone of all persons without exception.

Quality of walk (normal or pathological) and environment (surface equal or inclined; with architectural barriers or without them; in the room or outside) are not defined in the second case. It allows different interpretation of progress of rehabilitation by the expert and patient.

The third example of inexact statement of the purpose can be treated as the beginning of individual trainings with ball or as the moment of return to full competitive activity which needs significantly the highest level of physical functions.
All given examples have common feature: the purposeful functional level of the patient is accurately not outlined at them.

In order to avoid misunderstanding, physical rehabilitologist has to work thus:

• to establish the purpose together with the patient taking into account his requirements and wishes;
• to formulate the purpose as much as possible concrete and unambiguous;
• it is obligatory to be convinced that the patient understands the purpose essence.

Concreteness of the purpose provides its identity.

The purpose can be considered concrete if it contains the answer to the question “what needs to be made?”.

It needs to be described in figures or quality indicators for “measurable” of the purpose in rehabilitation:

• pain – points (visual analog scale of pain);
• range of movement in joint – degrees;
• muscular strength – newton, kilograms or points, on MMT (manual muscular testing);
• speed of movement of body – meters in second;
• angular speed in joint – radians in second;
• segment grasp – centimeters;
• indicators of functional tests – points.

Without measurability it is difficult to estimate advance in achievement and to define the moment of achievement of goals. The purpose can be considered measurable if it contains the answer to the question “how many?”.
“Attainable, Achievable” of the purpose is connected with the rehabilitation forecast. It should be considered in two aspects: theoretical and practical.

Factors which will influence “attainable, achievable” are rehabilitation resources as open social system: material, financial, power, human, organizational, information. They belong to two subsystems: to rehabilitolog and patient. It is also necessary to take external influences (influence of the environment and metasystem) which can both strengthen in attention, and to weaken resource base of rehabilitation.

The theoretical possibility of achievement of goals is the answer to the question: it is possible in general, isn’t it? The answer is based on basis of the medical forecast and depends on the clinical diagnosis, duration of disease, its course and efficiency previous, and medical rehabilitation actions. It is information which comes to system of physical rehabilitation from the attending physician. The theoretical aspect of reach is also defined by opportunities of modern technologies of physical rehabilitation and resources of which the therapist disposes physical rehabilitologist/therapist.

The practical possibility of achievement of goals is the answer to the question: will the particular person be able to achieve the purposes, won’t he? Therefore the practical aspect of reach concerns more resources of the patient and his rehabilitation potential [26].

The criterion of “relevant” consists in coordination of the purposes with strategic purposes of medical-rehabilitation process and their subordination of the rehabilitation purpose.

The specialist in physical rehabilitation has to understand accurately value of each established purpose for fast and full renewal of functions of the patient. If the achievement of purpose will not raise achievement of goals of rehabilitation, then such purpose cannot be considered corresponding. And, opposite: achievement by advantage for functioning is brought to each answering purpose and brings closer the rehabilitation purpose. The understanding of compliance whole motivates the patient.

Discrepancy of the purpose of the goal and to strategic purposes of rehabilitation sprays resources, increases duration of rehabilitation and reduces its efficiency.

The purpose is considered corresponding if allows to answer the question” in what way does the achievement of goal bring closer the rehabilitation purpose?”.

The criterion “time-bound” concerns time as resource of rehabilitation and provides establishment of concrete terms of achievement, or hour framework. Excess of limit of time demonstrates not achievement of goal. Thereof, there will be number of problems, which worsen the rehabilitation forecast:

• need for resources grows;
• violations, which at the beginning of rehabilitation were functional, can turn into irreversible structural changes and the definite purpose will become inaccessible;
• the patient is discouraged.

The purpose is considered certain in time if contains the answer to the question “when it will be reached?”.

The purposes of rehabilitation have different hierarchy. Being based on the International qualifier of functions (ICF) of their establishment, it is possible at the level of function, structure, activity, participation.

The purposes of different hierarchy can be united in “tree of purposes” in physical rehabilitation, as well as in other kinds of activity. This graphic display on interrelation and subordination of the purposes, distributions of mission and the purpose on goals, local goal, tasks and separate actions. The purpose of the highest level is reference point, basis for development

(decomposition) of the purposes of the lowest level at the creation of "tree of purposes". The purposes of the lowest level are ways of achievement of goals of the highest level and have to be presented so that their set predetermined achievement of the initial purpose [35].

3. Formation of technology of intervention.

It is necessary to understand the set of methods, means and forms which are used for achievement of the purposes of the consecutive rehabilitation actions, which are directed to renewal of motive functions, activities and health of the person/patient [36] as the term "technology of physical rehabilitation". Therefore, the purpose of the noted functional subsystem of the second level – to select combination of means, methods, intervention forms with the corresponding individual loading.

It is necessary to carry such to fixed assets and methods of physical rehabilitation at violations of activity of musculoskeletal system:

- physical therapeutic exercises (remedial gymnastics);
- functional training (training of motive skills);
- treatment by situation;
- massage;
- postisometrica relaxation;
- preformed physical factors.

The main forms of carrying out rehabilitation are individual classes under the supervision of the expert and independent in the hospital period. Individual, independent and, rarer, group classes are hold in the post-hospital period.

At the choice of means it is necessary to be guided, first of all, by criteria of safety and comparative efficiency for reduction of such widespread violations of musculoskeletal system as:

- pain;
- muscle weakness;
- decrease in muscle endurance;
- limited range of the movement;
- hyper mobility of joints;
- violation of posture;
- imbalance of length and force of muscles [37].

They surely consider interaction of means and their individual figurative.

Advantage at the choice in hospital and post-hospital periods should be given to active medical physical exercises. From all means they best of all promote renewal of motive functions; have no restrictions on application course duration; can at the same time mother special and general influence; do the patient independent. Physical exercises apply according to the all-didactic and specific principles of physical education.

Means and methods, which provide passive participation of the patient, are most widely applied in the hospital period. They reduce pain, hypostases, promote healing, normalize tone of muscles, improve mobility and thus help effective application of active physical exercises. Among them the special place is taken by passive therapeutic physical exercises, where the movement is carried out by external forces, for example: gravitation, CPM machine (continuous passive motion machine), physical rehabilitologist.

Dispensing of the general exercise stress is the finishing step in formation of technology of intervention. It has to answer rehabilitation profile and endurance of the patient. In rehabilitation physical endurance is characterized by times during which the patient can be engaged in physical functioning which level ensures realization of necessary rehabilitation interventions [14]. The size of influence depends on different factors:

- quantity of the chosen means;
- combination of methods and forms;
- quantity, frequency, duration of separate classes and procedures.

4. Formation of technology of control.

The subsystem purpose – to select terms, methods and control means.

The program has to provide staged and total types of control. It is planned in the form of the reduced inspection on separate classes or part of classes at violations of activity of musculoskeletal system. Terms of control are connected with the planned achievement of the purposes. Operating and current control do not need planning. Physical rehabilitologist/therapist carries out them with frequency which answers clinical profile of the patient and dynamics of improvement of its state.

Methods and control means are observation, poll, review, anthropometry, performance of active and passive movements, goniometry, articulate game, manual to muscle testing, isometric tension of muscles, dynamometry, palpation, pain scale, functional tests.

5. Written execution of the individual program of physical rehabilitation/therapy.

The subsystem purpose – to finish creation of the program.

The standard form of medical-rehabilitation institution can be developed and used for written registration. All program provisions should be discussed with the patient, to bring necessary corrections and methodical instructions and in common to approve them.

The program has to contain such main groups of information:

- program purpose/goal:
- long-term purposes;
- short-term purposes;
- means and methods of intervention;
- quantity, frequency, duration of classes and procedures;
- carrying out forms;
- methodical instructions;
- means and control methods;
- terms of staged and total control;
- marks about performance.

Thus, the program of physical rehabilitation is plan of transformation of system resources into the goals and the purpose of physical rehabilitation by means of technologies of intervention and control.
In medical rehabilitation, according to recommendations of WHO, two periods are allocated: hospital and post-hospital.

In the hospital period, when it is necessary to liquidate or to reduce activity of pathological processes, physical rehabilitation has to submit to medical interventions. The way of its introduction can be such:

1. Creation of clinical protocols where physical rehabilitation/therapy will be to the component providing medical care to the patient.

2. Definition of basic provisions of implementation of actions of physical rehabilitation/therapy: inspections, planning, intervention and control.

3. Adaptation of protocols by experts-methodologists to conditions of separate medical-rehabilitation institution.

4. Inspection of the patient by physical rehabilitologist/therapist on the basis of the clinical protocol.

5. Creation of the individual program by physical rehabilitologist/therapist behind results of primary inspection and forecasting.

In the post-hospital period, when reduction and mitigation of consequences of disease in polyclinic or house conditions continues, the program of physical rehabilitation/therapy can separately be created or as component of the comprehensive program of rehabilitation.

Conclusions

There is no only image of structure of planning in physical rehabilitation/therapy among experts. It is necessary to resolve this problem on the basis of the system approach.

«Planning» is one of functional subsystems of physical rehabilitation/therapy. The planning purpose – creation of the program.

Drawing up typical programs of physical rehabilitation/therapy at violations of activity of musculoskeletal system on the basis of the clinical diagnosis becomes complicated diversity of violations by which the diagnosis is followed. Inspection of the patient by physical rehabilitologist/therapist for determination of initial level of motive functions has to precede that planning.

Planning consists of such functional subsystems of the second level:

1. Forecasting; the subsystem purpose – to establish the individual purpose of physical rehabilitation/therapy (purposeful level of motive functions).

2. Statement of purposes of intervention; the purpose – to establish long-and short-term purposes of different hierarchy.

3. Formation of technology of intervention; the purpose – to select methods, means, forms of intervention and their dispensing.

4. Formation of technology of control; the purpose – to select terms, methods and control means;

5. Written execution of the program; the purpose – to finish creation of the individual program.
The program of physical rehabilitation/therapy is plan of transformation of system resources into the goals and the purpose of physical rehabilitation by means of technologies of intervention and control. It is created taking into account conditions of realization and has to contain such main groups of information:

- purpose and goals;
- means and methods of intervention;
- quantity, frequency, duration of classes and procedures;
- carrying out forms;
- methodical instructions;
- terms, methods and control means;
- marks about performance.

The prospect of the subsequent researches consists in the development of clinical protocols of medical care at the musculoskeletal system diseases where physical rehabilitation/therapy will be the component.

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