ROLE OF THE REHABILITATION HOSPITAL IN THE SOCIAL AND ECONOMIC INTEGRATION OF PERSONS WITH DISABILITIES

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ROLE OF THE REHABILITATION HOSPITAL IN THE SOCIAL AND ECONOMIC INTEGRATION OF PERSONS WITH DISABILITIES (Abstract): **Aim:** The perceptions towards disability and the disability legislation has changed over the last years. However, for the persons with disabilities and their families a clear path to follow to manage their conditions and successfully integrate in the economic and social life has not been established, yet. **Material and methods:** Analysis of the status of disability practice in Europe and in our country, and an attempt to establish the role of the rehabilitation doctor and regional rehabilitation hospital in the long-time management of these patients. **Results:** The largest share of a hospital income is based on contracts with the National Health Insurance Agency, so all rehabilitation procedures conducted during hospitalization must fit into standardized protocols developed by expert committees. The same is true for the outpatient rehabilitation. **Conclusions:** Many aspects would require improvement in our country and it is the duty of the rehabilitation doctor to ensure personalized care for all patients. Therefore, there is a need for some changes, starting with attracting collateral funding, implementation of national healthcare programs and establishment of non-governmental agencies. **Keywords:** DISABILITY, REHABILITATION HOSPITAL, SOCIAL REINTEGRATION.

Disability is a generic theme, a so-called “problem” recognized worldwide. However, it is socially problematic to define clearly and to establish concrete terminology in this relatively controversial area.

Regarding the antithesis disability-ability, we subjectively establish a degree of normality of the population, to establish later, subjectively, the disability (1).

Disability should not be seen and should not be an impediment to success - neither for the patient nor his/her family, nor for the “auxiliary” people involved in this issue.

Reactions to disability have changed over time, largely because people with disabilities started to unite in associations and non-governmental organizations (NGOs), which has led to various national and international initiatives to support them (2, 3, 4, 5).

Adopting and organizing a quality man-
management system centered on personalized healthcare should be a strategic decision of each hospital. The design and implementation of such a system is primarily the duty of the manager, being influenced in this respect by specific needs and objectives, the services he provides and which he intends to implement in the future, and by the size, structure and profile of the unit he is leading (6).

Patients with disabilities must be effectively integrated socio-economically to contribute within the limits allowed by the type and degree of disability to the country economic growth. Thus, disability costs will be more easily borne by both patients and family, and by the society (7, 8, 9).

Because a great part of the rehabilitation and integration of people with disabilities is realized in the community it is our duty as doctors to ensure the continuity of this rehabilitation by establishing good collaborative relationships with the state institutions and various NGOs that manage these patients, to facilitate their access to continuous rehabilitation services, avoiding bureaucratic obstacles (8, 9).

**MATERIAL AND METHODS**

We evaluated the role of a rehabilitation hospital, the Botosani “Sf. Gheorghe” Rehabilitation Hospital, in the social and economic integration of persons with disabilities.

Several management, quality-of-care and financial indicators, the implementation of social policies in the Botosani Rehabilitation Hospital and Botosani county, as well as the status of management of the people with disabilities nationwide were assessed.

The statistical analysis was performed using SPSS 18.0 software (SPSS Inc., Chicago, IL, USA).

We also wrote a series of proposals and plans management of these people, to fulfill objective needs and increase their active participation in the social and economic life.

Medical services are provided by two clinics of Rehabilitation, Physical Medicine and Balneology (RMFB) with separate compartments for neurological, cardiovascular and pulmonary rehabilitation, a department of rheumatology, and one of geriatrics-gerontology, totaling 195 beds. The clinic also has a 25-bed short-stay unit and 7 outpatient consulting rooms: internal medicine, ENT, rheumatology, neurology, rehabilitation, physical medicine and balneology, geriatrics and gerontology, opthalmology. Medical rehabilitation services are provided in the treatment base (10).

The hospital also has a medical laboratory, a functional exploration laboratory and a medical radiology and imaging laboratory.

Within the hospital, until 2014, the National Program for Active Monitoring of People with Disabilities was functioning.

Botoșani County is in North-east part of Romania, with a total area of 4,986 km². The administrative-territorial organization of Botosani County in municipalities, towns, communes and villages has the following proportions: 2 municipalities, 5 towns, 71 communes and 333 villages. Botosani municipality, located in northeastern Romania, is the largest town and the capital of Botosani County; it has a population of about 115,000 inhabitants (11).

The total population of the county is 397,151 inhabitants (2015), distributed as follows (12): 196,905 (49.6%) male inhabitants and 200,246 (50.4%) female inhabitants; 161,518 (40.7%) urban population
and 235,633 (59.3%) rural population.

Age-group distribution: children and students (0-19 years): 98,324; active age population (20-64 years): 226,648; elderly (≥ 65 years): 72,179 inhabitants (11).

The distribution of the hospital staff is as follows (11): total jobs approved on 31 December 2016: 206, of which: 3 for the Steering Committee, 22 doctors, 8 health professionals with higher education, 92 nurses, 51 auxiliary staff, 12 technical, economic and socio-administrative staff and 18 workers (11).

The distribution of hospital beds over the different units is as follows (6): Department of Rehabilitation, Physical Medicine and Balneology I- 90 beds, of which 34 beds for Neurological Rehabilitation Department, 56 beds for the Department of Rehabilitation, Physical Medicine and Balneology, 15 beds for Rheumatology Department and 24 beds for Geriatrics and Gerontology Department. The Department of Rehabilitation, Physical Medicine and Balneology II has 66 beds, of which 26 beds for Cardiovascular rehabilitation, 12 beds for pulmonary rehabilitation, 22 beds for Rehabilitation, Physical Medicine and Balneology and 25 beds for the short-stay unit (6).

RESULTS

The number of patients discharged in 2016 was 4961 (fig. 1), of which 2,442 (49.2%) from the Department of Rehabilitation, Physical Medicine and Balneology I, 1711 (34.48%) from the Department of Rehabilitation, Physical Medicine and Balneology II, 313 (6.3%) from the Rheumatology Department and 495 (9.97%) from the Geriatrics and Gerontology Department (11).

Assessment of the economic and financial situation of the hospital

From table I, the highest share of the hospital income is represented by contracts with the National Health Insurance House (CNAS) (more than 90% over the whole analysis period). At the same time, it is noticed that the percentage of income from other sources, i.e. hospital own incomes, is decreasing (from 5.62% in 2014 to 4.26%
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in 2016).

Analyzing the expenditures over the period 2014-2016 (tab. II), it is noticed that the largest share of the total expenditures is for personnel expenditures. At the same time, the percentage of these expenditures is increasing, which is explained by the fact that, starting with 2015, the salaries of employees increased because of Ordinances no 35/2015, 20/2016, 43/2016 and Law no 250/2016.

**TABLE I**

Income structure by funding sources (years 2014-2016) (RON) (12)

<table>
<thead>
<tr>
<th>Funding source</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>A CNAS contracts</td>
<td>8,835,418</td>
<td>8,991,405</td>
<td>11,241,793</td>
</tr>
<tr>
<td>1. Continuous hospitalization</td>
<td>8,195,449</td>
<td>8,034,848</td>
<td>10,142,753</td>
</tr>
<tr>
<td>2. Short stay unit</td>
<td>161,155</td>
<td>256,212</td>
<td>273,793</td>
</tr>
<tr>
<td>3. Laboratory</td>
<td>152,774</td>
<td>303,618</td>
<td>385,572</td>
</tr>
<tr>
<td>4. Outpatient care</td>
<td>135,134</td>
<td>133,979</td>
<td>175,551</td>
</tr>
<tr>
<td>5. Rehabilitation base</td>
<td>190,906</td>
<td>262,748</td>
<td>264,304</td>
</tr>
<tr>
<td>B Public Health Department contract</td>
<td>222,512</td>
<td>265,032</td>
<td>367,506</td>
</tr>
<tr>
<td>C Hospital own income</td>
<td>496,662</td>
<td>447,308</td>
<td>527,039</td>
</tr>
<tr>
<td>D Income from concessions and rentals</td>
<td>4,500</td>
<td>10,211</td>
<td>6,146</td>
</tr>
<tr>
<td>E Interests</td>
<td>551</td>
<td>929</td>
<td>0</td>
</tr>
<tr>
<td>F FNASS subventions for salary raises</td>
<td>0</td>
<td>0</td>
<td>202,184</td>
</tr>
<tr>
<td>Total Income</td>
<td>9,560,079</td>
<td>9,714,886</td>
<td>12,344,848</td>
</tr>
</tbody>
</table>

**TABLE II**

Expenditures (years 2014-2016) (RON) (12)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel expenditures</td>
<td>6,154,821</td>
<td>6,882,570</td>
<td>8,460,151</td>
</tr>
<tr>
<td>Goods and services</td>
<td>1,724,772</td>
<td>2,248,384</td>
<td>2,285,293</td>
</tr>
<tr>
<td>Drugs</td>
<td>462,798</td>
<td>468,021</td>
<td>478,509</td>
</tr>
<tr>
<td>Other expenditures - scholarships</td>
<td>45,184</td>
<td>46,975</td>
<td>59,884</td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>563,538</td>
<td>551,685</td>
<td>571,819</td>
</tr>
<tr>
<td>Total</td>
<td>8,951,113</td>
<td>10,197,635</td>
<td>11,855,656</td>
</tr>
</tbody>
</table>

**The implementation of social policies for people with disabilities**

According to the World Health Organization Report (2), the prevalence of people with disabilities varies with age and disability; there is a slightly higher percentage of people with both severe and moderate disabilities in Europe compared with the rest of the world.

On December 31, 2016, the total number of adults with disabilities in Romania was of 786,546, of which 768,456 (97.7%) in the care of families (not institutionalized) and 18,090 (2.3%) institutionalized (12).
TABLE III
Total number of persons with disability in Romania
(Source: National Agency for People with Disabilities – ANPD, 2016)

Regarding the regional distribution, according to the National Agency for People with Disabilities (ANPD), the number of people with disabilities in the Northeast Romania is 118,304 (tab. III). According to ANPD, this region is ranked second at national level in terms of the number of people with disabilities (12).

The national distribution places Botoșani County under the average of 18727.28 (total number of disabled persons/total number of counties), with an effective number of persons with disabilities of 13577. Most adults have a physical disability, followed by people with a somatic and mental disability (11).

Age-group distribution reveals that the highest percentage of people with disabilities is in working age age-group (18-64 years) - 53%, followed by the age group over 65 years - 39% (11) (fig. 2).

DISCUSSION
Through this paper it is desirable to promote patient-centered and disability-based healthcare using the medical-social support hexadecimal scheme, and to promote personalized healthcare.

It is also important to seek and attract short, medium and long-term funding sources to be able to provide long-term rehabilitation health care and to make partnerships with governmental institutions and non-governmental organizations.

An important part in these actions is promoting them in the media by organizing interdisciplinary events at the hospital level with the involvement of social workers in partnerships: doctors, nurses, social workers, occupational therapists, psychologists, priests, organizing and coordinating support groups for patients with disabilities, in partnership with social assistance services at the
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level of local authorities, organizing and coordinating programs and projects at local level for the socio-economic and professional reintegration of people with disabilities.

Designing and printing informative materials (flyers, brochures) and promoting existing ones (sites, leaflets, brochures) for patients, family, can be useful to properly orientate to social assistance services.

The rehabilitation physician's duty is to increase the quality of life of patients with a certain degree of disability; hence the obligation to identify patients at risk (elderly, disadvantaged, vulnerable or non-functional).

Development of programs for the continuous rehabilitation of people with disabilities by organizing thematic meetings with the participation of patients, the family, as well as the medical staff involved in rehabilitation: specialized doctors, nurses, social workers, occupational therapists, psychologists and collaborations and partnerships with companies that sell or distribute healthcare devices at home; good cooperation with the National Health Insurance Agency and the county branches can be also useful in order to provide financial assistance to the patient for the purchase and use of these types of devices.

Another useful action would be to establish a loco-regional database of patients with disabilities to properly track their everyday work for socio-economic-professional integration.

In the end, an important step would be the establishment of a non-governmental association / non-profit foundation to acquire an infrastructure of medical devices and home care facilities available on loan for patients with a certain degree of temporary disability (e.g., chairs or cradles, crutches, walking sticks, prostheses, prostheses or non-personalized orthotics, special mattresses, mobilization or transfer devices etc.).

CONCLUSIONS

This study shows that establishing protocols for admission and treatment during hospitalization is strictly necessary in the Botosani Rehabilitation Hospital.

Community social rehabilitation and social reintegration assistance must start in the hospital.

During the hospitalization, it is necessary to have a complex interdisciplinary team (psychologist, occupational therapist, social worker etc.).

Post-acute cases with moderate and low disability levels will be analyzed through diagnostic protocols and rehabilitation therapy to be able to follow the outpatient treatment.

Social cases will be discharged after analysis with the region's NGOs.

Home treatment will be reviewed together with local specialist companies that can ensure proper care for the patient.

The readmission of aggravated chronic cases requiring hospital admission will be assessed based on specific protocols for each pathology.

REFERENCES

ROLE OF AML SPECIFIC CYTOTOXIC ANTIBODIES IN GVL RESPONSE

It is well established that most acute myeloid leukemia (AML) patients can obtain remission only by means of allogeneic hematopoietic stem cell transplant (HSCT). This process induces a graft versus leukemia immune response (GvL) mediated by T cells and NK cells. However, there is not much data showcasing the contribution of B lymphocytes, so a study was conducted that focused on B cells producing monoclonal antibodies against antigens expressed on the cell surface of leukemic cells but not on normal hematopoietic and non-hematopoietic cells. It is interesting that a number of these donor-derived antibodies recognized the U5 snRNP200 complex, a spliceosome component normally found inside cells. In AML however, the U5 snRNP200 complex is exposed on the surface membrane of leukemic blasts and can promote apoptosis in a FcR dependent way in the absence of cytotoxic leukocytes or complement. This potentially paves the way for novel tumor growth inhibitory therapy (AML-specific cytotoxic antibodies in patients with durable graft versus leukemia responses Marijn A. Gillissen, Martijn Kedde, Greta de Jong, et al., Blood 2017: blood-2017-02-768762; doi: https://doi.org/10.1182/blood-2017-02-768762i).

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