

FAMILY PARTICIPATION IN DETERMINATION OF FIM AND BARTHEL INDICES

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ABSTRACT

Functional Independence Measure (FIM) is a basic indicator of severity of disability, and is used for measurement of functional independence. The aim of this paper is to present our initial experiences in the application of FIM. It needs to be noted that we have had an incomplete team in implementation of this project, and also that we have involved the patients and their families in the measurement of FIM. We selected a small sample of 23 patients, and measured their FIM and Barthel index both at the admission and discharge from the hospital. We do accept that this sample may be too small for the purposes of scientific verification. Therefore, we have included patients and their family members in the process of FIM measurement, along with the team members including a physiatrist, physiotherapist, nurse, and a help-nurse. Most of the subjects included in this project were patients with hemiplegia after a stroke (65.21 %), followed by quadriplegic patients (17.39 %), and patients with paraplegia (17.39 %). Gender structure shows 47.82 % male and 52.17 % female patients. The best progress (an increase in score from 4 to 53 points) in FIM was observed in patients with hemiplegia, and in Barthel index in patients with quadriplegia (an increase in score from 0 to 84). The differences are not statistically significant ($p > 0.05$). The patients with hemiplegia were hospitalized in our clinic for the shortest period of time (around one month). Average rehabilitation time in our clinic for paraplegic patients was around 3 months, and for quadriplegic patients around 4 months (including early rehabilitation). We established that the patients who actively participated in FIM measurement had more control over their own medical assistance, and this participation had a supportive effect on patients. Their participation in FIM measurement needed constant encouragement. In order to make our claim that the FIM is a good supportive method as objective as possible, and in order to establish a correlation between disability and handicap, we intend to include a psychologist and apply Antonov SOC theory (coherency feeling) in our forthcoming research.

KEY WORDS: FIM, Barthel index, family participation

INTRODUCTION

Functional Independence Measure (FIM) describes functional independence and functional adaptation (1). FIM is the basic indicator of the level of independence. Many papers are published on this subject. FIM is also a very good indicator of responsibility towards the patient – medical care, but there is still a need for further research (2). A. Heinemann (3) conducted a research in 1993 establishing a link between injury and physical disability measured by FIM, and came to a conclusion that the results of his research enable clinics physicians to plan the treatment costs if they are able to measure the disability correctly. The need for rehabilitation and evaluation of the rehabilitation of patients after ICV can be established by FIM (4). No papers are published about participation of the patient's family in FIM measurement. The aim of this paper is to present the first experiences of the Clinic for Physical Medicine and Rehabilitation in Tuzla in family participation in certain segments of team work in measurement of FIM.

PATIENTS AND METHOD

The sample consisted of 23 patients who had FIM and Barthel Index measured both at their admission and discharge from hospital over six months period at the Clinic for Physical Medicine and Rehabilitation in Tuzla. For Barthel Index, the score ranged from 0 to 100 points, where patients in the group with score 0 - 20 were completely dependant, patients with score 21 - 60 were in the group with heavy dependency, patients with score 61 - 90 in the group with moderate dependency, and patients with score from 91 to 99 in the

AGE GROUPS	NUMBER	%
To 30 Years	1	4.3
From 31 to 50	6	26.1
From 51 to 70	16	69.6
Total	23	100

TABLE 1. Number of patients according to their age

PROFESSION	NUMBER	%
Retired	8	34.9
Housekeeper	7	30.4
Handicrafts	4	17.4
Economist	2	8.7
Professor	1	4.3
Physician	1	4.4
Total	23	100

TABLE 2. Distribution of patients according to the profession

group with mild dependency. In FIM measurement the score ranged from 18 to 126 points. The implementation team for FIM measurement included a physiatrist, physiotherapist, speech therapist, nurse, help-nurse, a patient and the closest family members of the patient. All members of the team were familiar with the score scale ranging from 1 to 7 for 18 items. The patient and family member actively participated in the FIM scoring process. Further to that, the clinic project team held regular meetings where the scoring was discussed and the team leader gave instructions for further activities. This was followed by a meeting of the team leader and a family member to give him/her the directions and suggestions for his/her further supportive work.

RESULTS AND DISCUSSION

The research included 11 (47.8 %) male patients and 12 (52.2 %) female patients, with average age of 53.2 years. Most of the examinees were in the group from 51 to 70 years of age (Table 1). According to the profession, most of the examinees were retired, followed by housekeepers, which is shown in Table 2. The shortest period of hospitalization at the clinic was observed in patients with hemiplegia (32.53 days). Average duration of hospitalization at the clinic of patients with paraplegia was 97.5 days, and of patients with quadriplegia 130 days (including

TYPE OF CONDITION	NUMBER	%
Hemiplegia	15	65.2
Paraplegia	4	17.4
Quadriplegia	4	17.4
Total	23	100

TABLE 3. Distribution of the patients by the type of condition

early rehabilitation). According to the cause of the condition, most of the patients had cerebrovascular insult and hemiplegia, followed by the posttraumatic paraplegia and quadriplegia (Table 3). The highest improvement in the score was observed in the patients with hemiplegia. Figure 1 illustrates the results obtained with Barthel index, at the patients' admission and discharge from the hospital. There is a significant increase in number of patients in the group with moderate and low dependency at the discharge from hospital, while the number of patients with heavy and complete dependency decreased ($t=-7.11$, $df=22$, $p<0.0001$). When the results of FIM at the admission and discharge of patients were analyzed, we found that at the admission the score ranged from 18 to 117, with average value for the whole group of

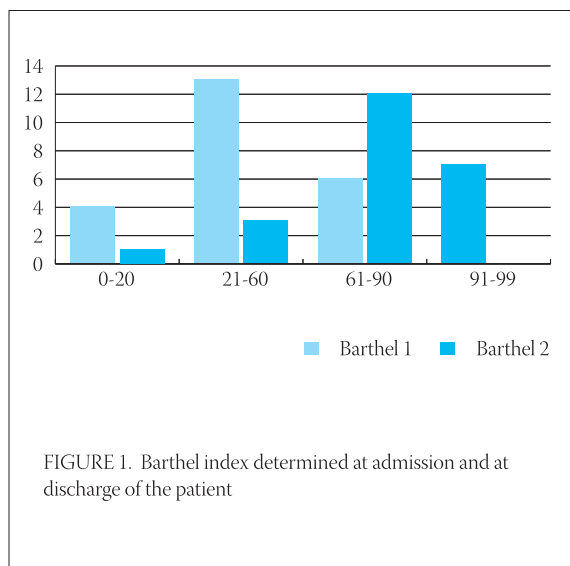


FIGURE 1. Barthel index determined at admission and at discharge of the patient

76.4, while at the discharge the score ranged from 30 to 124, with average value 100.1 ($t=-5.73, df=22, p<0.0001$).

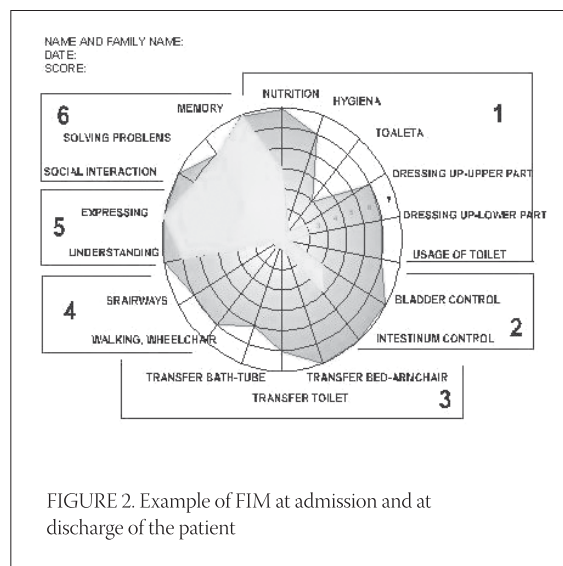


FIGURE 2. Example of FIM at admission and at discharge of the patient

Figure 2 illustrates an example of FIM measurement at the admission and discharge from the Clinic.

CONCLUSION

We perceived that the subjects, through their active participation in measurement of their everyday functions by Barthel Index and independence measurement by FIM, established a higher control over their own medical assistance, and that such participation had a supportive effect on both the patient and his/her close family. Patients' participation should therefore be encouraged and research into this matter should be continued.

REFERENCES

- (1) Forer S., Granger C. et al. Functional Independence Measure. Buffalo NY: The Buffalo General Hospital, State University of New York at Buffalo, 1987; pp:1-31
- (2) Dodds T.A., Martin D.P., Stolov W.C. et al. A validation of the Functional Independence Measurement and its performance among rehabilitation inpatients. Arch. Phys. Med. Rehab. 1993; 74: 531-536
- (3) Heinemann A., Linacre JM., Wright BD., Hamilton BB., Granger C. Prediction of Rehabilitation Outcomes With Disability Measures. Arch. Phys. Med. Rehab. 1994; 75: 133-143
- (4) Oczkowski WJ., Bareca S. The Functional Independence Measure: Its Use to Identify Rehabilitation Needs in Stroke Survivors. Arch. Phys. Med. Rehab. 1993; 74: 1291-1294.