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### *Evaluation of nursing care standard in a neurological ward*

Neurology is a specific branch of medical knowledge dealing with many diseases of unknown etiology, chronic or degenerative character, which often lead to disability due to paresis or paralysis (1). This sets particular standards for the quality of nursing care.

Quality in nursing denotes the degree of achieving desired effects concerning the state of health of an individual or a population due to nursing care. In order to improve this care, standards are established and implemented (2, 11). Standard defines an average, typical model, pattern, which is attainable and measurable. There is also a basic level below which performance is not acceptable. Nursing care standard is a set of requirements achievable and desired in the provision of nursing care (2,8,9,10,11).

The standard contains the following criteria: structural – defining the resources (people and their education level, technology, finance); process – activities and effects; and effect – a measure of the effectiveness of nursing care (9,10,11).

#### OBJECTIVE

The aims of the study were the following: 1. Evaluation of the standard of nursing care provided in practice by comparison with the theoretical standard assumed. 2. Analysis of the effects of the standard implemented. The evaluation was conducted in the Neurology Clinic at State Hospital No. 4 in Lublin, by means of a questionnaire form and observation. The survey covered 85 patients, aged 32-68 – 41 males and 44 females – with various diseases, different education levels: elementary – 25, secondary – 49, and university – 11, who retained good verbal contact.

The table presents the theoretical standard of nursing care to which the practical standard of care will be referred.

Table 1. Nursing care standard in a neurological ward

Structural criteria	Process criteria	Effect criteria
<p>1. Nursing staff is trained in collecting information, and observation from the point of view of specificity of neurological diseases.</p> <p>2. The data collected are used to formulate nursing diagnosis.</p> <p>3. The diagnosis serves as a base for the elaboration of the nursing care plan.</p> <p>4. The nursing care plan is correctly made and biased towards the preparation of a patient for self-care.</p> <p>5. The ward provides conditions for the realization of the nursing care plan.</p> <p>6. The ward is fitted out with equipment facilitating mobilization and self-care.</p> <p>7. Brochures available in the ward designed for the education of patients and families.</p>	<p>1. A nurse conducting the process of mobilization of a bed-ridden patient change of body position tilting a patient upwards locomotive movement.</p> <p>2. A nurse performs activities training into self-care hygienic activities control of respiratory and cardiovascular processes:  ** respiratory exercises,  ** coughing up  ** massage, tapping,  ** loose clothes,  ** microclimate in patients' room,  ** consumption of non-flatulent food,  participation in consumption of meals,  rehabilitation of sphincter muscles:  ** uninhibited bladder,  ** automatic bladder,  ** autonomic bladder,  ** atonic bladder,  ** constipations,  ** faecal incontinence,  prevention of complications:  ** muscles contractions and atrophy,  ** bedsores and chafes,  ** ankylosis,  elimination of hemi-neglect syndrome.</p> <p>3. Psychotherapeutic activities:  a nurse provides emotional support for a patient and his family, a nurse helps the patient in coping with stress.</p> <p>4. Health education:  a nurse encourages patient and family to participate in the educational programme,  a nurse provides information concerning the life style within the area of:  ** locomotor activity, nutrition and consumption of food products such as: alcohol, strong tea and coffee;  a nurse familiarizes a patient with risk factors of neurological diseases;  a nurse teaches a patient correct procedures in illness;  a nurse trains a patient in self-observation in individual diseases;  a nurse teaches self-control (measurement of blood pressure, BMI index, lipid tests, caloric demand, and others).</p>	<p>1. Correctly formulated and documented nursing diagnosis.</p> <p>2. The nursing plan prepared is clear and comprehensible, it ensures the continuity of nursing, enables the realization of the assumed goals.</p> <p>3. A patient has been trained for self-care.</p> <p>4. A patient obtained optimum functional independence.</p>

Standard of care in a neurological ward was examined (3,4,5,6,7).

**Evaluation of nursing care standard in a neurological ward.** Among the patients in the study, 25 (29.4%) were immobilised, 21 (24.7%) – had locomotor limitations, and 39 (45.9%) were independent with respect to locomotive abilities. Mobilization consisted in changing the body position every 2-3 hours – in bed-ridden patients; propping up to a sitting position – 12 patients (14.1%), providing assistance with standing and walking – 21 patients (24.7%).

Hygienic activities covered mainly body and oral cavity hygiene. In 20 patients, body and oral cavity hygiene activities were performed in the morning and in the evening; in 21 (24.7%) – only in the morning, and in 5 (5.9%) – exclusively in the evenings. Other patients – 21 (24.7%) were assisted in the bathroom, and the remaining were mobilised to cope independently. During the period analysed, only 2 patients (2.4%) took a bath, and 10 patients (11.8%) had their hair washed in bed. As many as 46 patients (54.1%) were assisted with other hygienic activities, such as hair combing, care of nails or shaving. In 15 cases (17.7%), families were instructed to participate in hygienic activities.

Cardiopulmonary parameters were monitored by the observation of respiration and the lower extremities (thrombosis), in 25 patients (29.4%) respiratory exercises were carried out twice a day with the patients being trained in these exercises. In order to improve respiration in these patients, rubbing with alcohol solution and tapping with a cupped hand were applied, which had a stimulatory effect and facilitated expelling secretion from the lungs. Apart from respiratory training the patients were taught coughing up and expectorating the retained secretion. Nineteen patients (22.4%) learned these activities. In order to prevent thrombosis, in 31 patients (36.5%) the lower extremities were elevated and properly massaged. Other procedures within this scope of nursing activities were not performed. No cardiopulmonary complications were noted.

The tasks of the nurse during the serving of meals were: feeding – 25 patients (29.4%), assistance with eating – 21 (24.7%), and providing incentives for patients to cope independently with this activity – 39 patients (45.9%).

Bed-ridden patients had difficulties with defecation. This was regulated by a proper diet and application of glycerin suppositories (15 patients – 17.6%). Patients with urination disorders (15 patients – 17.6%) had catheters periodically introduced, the amount and colour of the urine being observed.

Among 40 patients (47.0%) with risk of bed-sores occurring due to immobilisation, obesity or fouling themselves, 15 (17.6%) had reddening in the area of the coccygeal bone. Apart from changing body position, massage at the sites exposed to pressure and anti-bedsore pads were applied for the successful elimination of reddening and prevention of bedsores. In 21 patients (24.7%), contractions were prevented by systematic exercises and assuming a proper body position to reduce spasticity.

Patients were trained in all activities according to their possibilities and provided incentives to make efforts. A large group of patients – 45 (54.1%) obtained assistance from a nurse while being mobilised and trained to self-care.

To sum up the problem of shaping physical efficiency of a patient, it should be emphasized that this process took a favourable course, reflected by 39 respondents (46.5%) attaining the optimum scope of this efficiency with respect to coping with locomotor and self-care activities.

**Psychological comfort.** In order to make it easier for a patient to adapt to hospital conditions the nurses applied psychotherapeutic means, such as: information, explanation, conversation, empathy and respecting patient's rights, especially their dignity. Intimacy was generally respected, though screens were not always used during hygienic activities. According to 75 respondents (88.2%), moderate stress favourably influences the body; however, chronic and strong stress exerts a pathogenic effect. Patients were familiar with methods of coping with stress – 72 (84.7%), and mentioned that while coping with stress associated with hospitalization they received assistance, mainly from nurses – 71 (83.5%). The nurses approached patients with empathy – 76 respondents (89.4%), and patients

most frequently obtained necessary information – 65 (76.5%). Conversations were conducted (44 patients – 51.8%) to help patients understand many problems and to dispel their fears.

**Health education.** The education programme covered the basic tasks which were performed in practice and shaped health-promoting attitudes in all respondents. In the neurology ward, health promotion was carried out within the scope of issues concerning life style, coping with disease, self-observation and self-control. Due to this health education the majority of patients (65 – 76.5%) were familiar with the problems associated with correct nutrition. However, their knowledge of atheromatous effect and caloric value of food products was much less comprehensive (29 correct answers – 34.1%).

Physical activity plays the leading role in maintaining the general condition of the body and locomotor mobilization, and in the opinions of 71 respondents (82.4) passive and active exercise, change of position, respiratory exercise and walks are of great importance with respect to health promotion. Bed-ridden patients were mobilized according to their state of health, through changes of body position, passive, and passive-active exercise (25 patients – 29.3%), whereas the remaining patients were encouraged to self-care activities.

According to 69 patients (81.2%), the elimination of cigarettes, strong tea and coffee is necessary in patients with arterial hypertension; 21 respondents (24.7%), however, considered alcohol in the form of red wine as permissible.

In addition, patients were taught to observe their own state of health and to interpret appearing symptoms. As many as 45 patients (53.0%) had the knowledge of their illness, were familiar with risk factors, knew the procedures in hemi-neglect syndrome, spasticity, intention tremor, tremor at rest, and during spastic attack (the patient's family also being familiar with procedures), how to recognize the aura, etc. The remaining patients were partially familiar with these problems. Measurements were not performed, but all nursing care activities and their effects were registered in the Nursing Charter.

All the structural criteria adopted by the standard of care were achieved. However, not all process criteria were entirely fulfilled, especially with respect to health education, where 73.5% of respondents evaluated educational activities in positive terms, but as many as 23.2% expressed negative evaluations; psychotherapeutic activities were positively evaluated by the majority of patients (80.4%), although with a considerable percentage of negative opinions – 0 19.5% on the average; whereas manual activities were positively evaluated by 46.5% of patients and negatively by 7.8%.

The greatest number of positive evaluations was noted with respect to psychotherapeutic activities, followed by health education; however, quite a number of respondents evaluated these activities in negative terms. Activities associated with mobilization and hygiene were not highly evaluated, but the number of negative opinions was rather small.

The effect criterion is evaluated by the degree by which neurological patients obtain optimum self-care efficiency, which was observed in 61.5% of patients in the study.

In the summing-up it should be stated that not all nursing care activities were provided for all patients, and not all patients obtained a satisfactory functional independence; the structural criteria were therefore fully completed, while process and effect criteria were only partially fulfilled.

## CONCLUSIONS

After a certain period of providing nursing care according to the theoretical standard, the effects of these activities were analysed and the standard evaluated. The effectiveness of psychotherapeutic activities was evaluated in positive terms –

80.4% of positive evaluations on the average, followed by health education – 73.5%, activities for training in self-care – 46.5%. However, the first two of these components of care obtained a relatively large number of negative evaluations, which was not observed with relation to manual activities, where the percentage of negative opinions was rather small (7.8%). Mobilization and health education activities resulted in 61.5% of patients attaining optimum functional independence.

Based on the results of the study, the degree of the provision of the standard in practice was determined by comparing these results with the theoretical standard. The results of the study showed that 100% of the structural criteria were performed, while for process and effect criteria this percentage was 61.5% – the percentage of patients attaining functional independence.

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#### SUMMARY

Providing high quality of nursing care is extremely important with respect to the specific character of neurology, dealing with negative consequences of chronic and incurable diseases which often lead to disability. Quality in nursing denotes the degree of achieving the desired effects with respect to the state of health and health promoting attitudes. The precondition for the provision of quality is the development and implementation of the standards of care. The standard is an average typical model or pattern which is attainable and measurable, i.e. a basic level below which the performance is not

acceptable. A standard contains the following criteria: structural (staff, technology, finance), process (provision of services), and effect measuring the effectiveness of the nursing care. The evaluation was conducted in the Neurology Ward at State Hospital No.4 in Lublin by the assessment of the work of nurses and its effects, based on a sample of 85 patients. Evaluation was carried out by comparing the nursing standard provided in practice and the theoretical standard which covered a complete realisation of the structural criteria and partial fulfilment of process and effect criteria. This resulted in the majority of patients (61.5%) obtaining optimum functional independence.

#### Ocena standardu opieki pielęgniarskiej w oddziale neurologii

Ze względu na specyfikę neurologii, jej negatywnych konsekwencji w postaci chorób przewlekłych i nieuleczalnych oraz częstej niepełnosprawności zapewnienie jakości opieki pielęgniarskiej jest szczególnie ważne. Jakość w pielęgniarstwie oznacza stopień osiągnięcia pożądaných efektów w stanie zdrowia i postaw prozdrowotnych. Warunkiem zapewnienia jakości jest opracowanie i wdrażanie standardów opieki. Standard jest to przeciętny, typowy model, wykonalny i mierzalny, poniżej którego wykonanie nie jest akceptowane. Standard zawiera kryteria strukturalne (personel, technologia, finanse), procesowe (świadczenie usług) i wynikowe, mierzące efektywność opieki pielęgniarskiej. Na próbie 85 chorych dokonano ewaluacji standardu w oddziale neurologii SPSK nr 4 w Lublinie, oceniając pracę pielęgniarki i uzyskane efekty. Ocena standardu praktycznego polegała na jego konfrontacji z teoretycznym, obejmującym w zakresie kryteriów strukturalnych pełne ich zapewnienie oraz częściowe w zakresie kryteriów procesowych i wynikowych, co skutkowało pozyskaniem przez chorych (61,5%) optymalnej niezależności funkcjonalnej.