

## Survey on Continuous Nursing Requirements for Stroke Patients

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**Abstract: Objective** Surveying continuous nursing requirements for brain stroke patients after leaving hospital. **Methods** Questionnaires survey by conveniently selecting 136 stroke patients from medical wards of the Neurology Departments in third grade A-class hospitals in Zhengzhou. **Results** Most patients have strong requirements for continuous rehabilitation nursing. Requirements of continuous nursing knowledge for stroke patients out of hospital mainly are the fundamental knowledge related to the brain stroke, next medical rehabilitation instructions and nursing supporting. **Conclusions** Brain stroke patients have strong continuous nursing requirements after leaving hospital. It can guarantee that brain stroke patients receive complete and continuous nursing out of hospital with medical personnel's working out nursing plan and developing health education based on requirements of the patients.

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**Keywords:** Stroke; Continuous Nursing; Requirements

### 1. Introduction

The brain stroke is a common clinical and frequently-occurring disease, and its incidence rate, case fatality rate and disability rate are in a leading place among diseases in China. In the US, the disease has become the third lethal disease and the first factor causing disability (Michael and Shaughnessy, 2006). In Chinese towns and countries, the stroke incidence rate is 200 per 100,000, case fatality rate per year is 80-120 per 100,000, and recurrence rate comes to 40%. Over 70% survivors have dysfunction in different degrees, of whom are severely disabled (Nan, 2008). Which affect their daily life, and bring heavy burdens to their family and society. The brain stroke is of high disability rate, long course of disease, and slow recovery. The continuous nursing after leaving hospital is the key to improve patients' life quality. This study is aimed at surveying the nursing for the stroke inpatients out of hospital, and provides reference bases to structure the continuous nursing mode from hospital, community to family for the stroke patients.

### 2. Methods

136 stroke patients were selected conveniently for questionnaire survey from the wards of the Neurology Department in two third grade A-class hospitals in Zhengzhou from January to June 2011. Inclusion criteria for patients: ① Conforming to diagnostic criteria revised in the 4th National Cerebrovascular Disease Academic Conference (Nan, 2008), and diagnosed as brain stroke by the CT or MRI head inspection; ② The course of disease lasts

within two weeks, with stable vital signs; ③ Having disfunction of limbs, without important viscera diseases such as severe heart and lung; ④ Glasgow coma scale (GCS) is larger than 8 points; ⑤ Voluntarily participating in the study. The exclusion criteria: ① Severe cognitive dysfunction; ② Having previous dementia; ③ Having previous psychiatric history; ④ Suffered from diseases of aphasia, or severe heart, liver and kidney. Totally 150 questionnaires were released totally, 136 of which were valid at the valid rate of 90.7%.

The data were collected by questionnaire survey, the researchers released questionnaires after the agreement of patients and their family members, and instructed patients or main caregivers in the uniform instructions to fill in the questionnaires. The questionnaires were taken back on the spot and checked by item, and the unfinished items were corrected.

The questionnaires were self-designed on the basis of consulting of related literatures, and the questionnaire contained two aspects: requirements of continuous nursing knowledge and techniques for stroke patients after leaving hospital. The requirements of continuous nursing knowledge included ten items such as cause and symptoms of brain stroke, inductive and risk factors, complication prevention, sequelae, palindromia first-aid knowledge, medicine-taking knowledge, etc. The requirements of techniques included the following ten items: blood pressure and pulse measuring, blood sugar monitoring, effective cough method, limbs rehabilitation exercise, language recovering, injection method, etc. Four options were

set for each item, i.e. not required, not to matter, required, very required. The pilot test showed it was better validity for the questionnaires.

The statistical analysis was done by SPSS (16.0 version) after data were collected. The general data for patients were described with frequency, percentage and mean; nursing requirements for patients were described with frequency, percentage, mean and standard deviation.

### 3. Results

There were 60 women and 76 men in the final sample. The mean age was  $67.7 \pm 11.8$  years (range 38-81 years). 57.4% were retired, 11.4% were employed full-time, 13.2% were unemployed, 17.0% were employed part-time. 58.1% stroke patients on one occasion, 35.3% two to three times. A majority lived with family members (89.7%). Nearly half participants had another disease (Table 1).

Table 1 Demographic data of patients (n=136)

Characteristics	N	%
Gender		
Female	60	44.1%
Male	76	55.9%
Degree of education		
Junior high school or below	85	62.5%
Senior high school or secondary school	31	22.8%
Junior college and above	20	14.7%
Employment status		
Retired	78	57.4%
Employed	40	29.4%
Unemployed	18	13.2%
Form of payment		
Self-supporting	16	11.8%
Medical insurance	108	79.4%
Others	12	8.8%
Living situation		
Alone	14	10.3%
With another person	122	89.7%
Number of hospitalization		
One	79	58.1%
Two	34	25.0%
Three	14	10.3%
More than four times	9	6.6%
Diagnosis type		
Cerebral infarction	70	51.5%
Cerebral embolism	38	27.9%
Other type	28	20.6%
Complications		
High blood pressure	47	34.6%
Diabetes	22	16.2%
Heart disease	11	8.1%
Others	8	5.9%

As shown in Table 2, the survey shows that the patients are lack of knowledge and techniques of brain stroke rehabilitation, and most patients have strong requirements for continuous rehabilitation nursing. More than 70.0% patients either required or very required basic knowledge of stroke, 77.9% report that they need recovery knowledge. Requirements of continuous nursing knowledge for stroke patients out of hospital mainly are the fundamental knowledge related to the brain stroke, as well as medical rehabilitation instructions and nursing supporting, for example, Medicine-taking and diet knowledge. About the skill training requirements, above half indicate that they want to know how to perform limb exercise and language training. At the same time, most participants either required or very required basic nursing skill (Table 2).

Table 2 Requirements of continuous nursing for patients out of hospital (n=136)

Items	Vr (%)	R (%)	Nm (%)	Nr (%)
<b>Rk</b>				
Cs	16.2%	54.4%	13.2%	16.2%
Irf	14.0%	56.6%	12.5%	17.6%
Cp	14.0%	56.6%	14.0%	16.2%
S	16.2%	58.8%	8.8%	16.2%
Pfk	14.0%	58.8%	10.3%	16.9%
Rk	23.5%	54.4%	10.3%	11.8%
Mk	14.7%	44.9%	19.1%	21.3%
Dk	19.9%	36.8%	16.2%	27.2%
Mi	16.2%	44.9%	19.1%	19.9%
<b>Rs</b>				
Ure	14.7%	55.1%	14.7%	15.4%
Lre	28.7%	51.5%	7.4%	12.5%
Lr	22.1%	52.9%	11.8%	13.2%
Bpm	22.1%	55.1%	11.0%	11.8%
Bsm	20.6%	51.5%	13.2%	14.7%
Im	19.1%	44.1%	16.9%	19.9%
Gtctn	13.2%	43.4%	22.8%	20.6%
Cofn	13.2%	47.1%	17.6%	22.1%
Rt	19.1%	52.9%	15.4%	12.5%
Mrs	22.1%	44.1%	19.1%	14.7%

(Rk, requirements of knowledge; Rs, requirements of skills; Cs, causes and symptoms; Irf, inductive and risk factors; Cp, complication prevention; S, sequelae; Pfk, palindromia first-aid knowledge; Rk, recovery knowledge; Mk, medicine-taking knowledge; Dk, diet knowledge; Mi, mental instructions; Ure, usage of rehabilitation equipment; Lre, limbs rehabilitation exercise; Lr, language recovery; Bpm, blood pressure and pulse measuring; Bsm, blood sugar monitoring; Im, injection method; Gtctn, gastric tube and catheterization tube nursing; Cofn, cut and orificium fistulae nursing; Rt, respiratory training; Mrs, mental regulation skills; Vr, very required; R, required; Nm, Not to matter; Nr, Not required).

#### 4. Discussions

The stroke patients and their family members are generally lack of related knowledge and rehabilitation techniques. With aging of population and reform of medical system, the stroke patients have higher requirements for medical rehabilitation nursing and life services(Shi et al.,2010). The survey results show that the stroke patients have the stronger requirements for continuous nursing knowledge and techniques out of hospital. Continuous health education is an effective method. The nursing personnel may evaluate timely the patients' health situations and nursing requirements when they are admitted to hospital, and work out continuous nursing plan out of hospital. After leaving hospital, medical care personnel offer instructions on purpose based on patients' diet, drug taking, limb rehabilitation training, blood pressure and sugar control, etc. so as to improve patients' self-care and self-training capability(Cai et al.,2010). Moreover, the medical personnel should also instruct the caregivers at home so that they can assist patients for limb exercise and daily life training.

Currently, the Chinese medical security system is not yet perfect, and the treatment and nursing for brain stroke patients is proceeding mainly in hospitals, and the timely, effective and continuous recovering nursing is not available for most patients out of hospital, which results in recurrence or multi-recurrence of the disease(Yin and Liu,2010). Owing to such reasons as hospital stay and expenses, the stroke patients mostly complete rehabilitation at home or community. It is suggested that patients continue recovering nursing by hospital or community medical personnel after leaving hospital to prevent recurring or multi-recurring of the brain stroke and resolve timely the patients' problems or puzzles. By this way, the continuous hospital-community-family recovering nursing mode is structured to improve the stroke patients' daily life and quality(Zhang et al.,2010).

Systematical health education should be carried out, correctly evaluate patients' condition, awareness, knowledge related to disease, psychologic status, etc. during patients' hospitalization; implement continuous nursing technical instructions based on patients' mastering of the disease-related knowledge, such as daily functional training, blood pressure and pulse measuring, blood sugar monitoring, insulin injection, etc., repeatedly demonstrating and imitating; help stroke patients master rehabilitation nursing techniques, and promote and assist patients to apply the techniques and knowledge to daily life. The health administrative departments in communities should improve the community service facility, work out the detailed training plans, develop all kinds of professional training, and invite extramural hospital rehabilitation specialists to make recovering

knowledge lectures. By this way, they can help community nurses learn and accumulate rehabilitation knowledge and improve their recovering level. This will lay the solid foundation for structuring of the continuous hospital-community-family nursing mode.

Our study identified the stroke patients have the stronger requirements for continuous nursing knowledge and techniques out of hospital. This indicates the continuous nursing out of hospital should be further strengthened. So, in combination with Chinese conditions we should actively develop the continuous hospital-community-family nursing based on the specific requirements of continuous nursing services by borrowing foreign family and community nursing service mode.

Despite the limitations of our study, we believe that the data presented here will help to inform future research of interventions to meet requirements for continuous nursing and help to stimulate further work in this area.

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