



Journal of Nursing

Revista de Enfermagem

UFPE On Line

ISSN: 1981-8963

NOTE PREVIEW ARTICLE

QUALITY OF HEALTHCARE PROVIDED TO USERS AFFECTED BY CVA, BEFORE AND AFTER THE OPENING OF A CVA UNIT

QUALIDADE DE ATENÇÃO AO USUÁRIO ACOMETIDO POR AVC, ANTES E APÓS A IMPLANTAÇÃO DE UMA UNIDADE DE AVC

CALIDAD DE LA ATENCIÓN AL USUARIO AFECTADO POR ACV, ANTES Y DESPUÉS DE LA IMPLANTACIÓN DE UNA UNIDAD DE ACV

Simone Cristina Paixão Dias Baptista¹, Carmen Maria Casquel Monti Juliani², Sandra Regina Leite Rosa Olbrich³, Gabriel Pereira Braga⁴, Rodrigo Bazan⁵, Wilza Carla Spiri⁶

ABSTRACT

Objective: to assess the outcomes of the healthcare provided to patients affected by cerebrovascular accident (CVA), before and after the opening of a CVA Unit, through indicators. **Method:** quantitative, exploratory, descriptive, cross-sectional, and retrospective epidemiological study for services assessment. The field of study was the Botucatu Clínicas Hospital, State of São Paulo, Brazil, in which a CVA unit was opened in the Emergency Room in 2011, constituting a reference in the health region of Bauru, State of São Paulo. The research project was approved by the Research Ethics Committee of the Botucatu Medical School (CEP/UNESP), No. CAAE: 24188813.6.0000.5411. **Expected results:** indicators that demonstrate the reduction of mortality rate and degree of patients' disabilities at the CVA Unit after the opening of this specialized unit, which may show that it brought benefits to patients. **Descriptors:** Cerebrovascular Accident; Health Assessment; Indicators; Nursing and Health Services Administration.

RESUMO

Objetivo: avaliar o resultado da assistência prestada aos pacientes portadores de acidente vascular cerebral (AVC), antes e após a implantação de uma Unidade de AVC, através de indicadores. **Método:** estudo epidemiológico de avaliação de serviços, quantitativo, exploratório, descritivo, transversal e retrospectivo. O campo do estudo foi o Hospital das Clínicas de Botucatu, Estado de São Paulo, Brasil, no qual foi criada uma unidade de AVC no Pronto Socorro em 2011, sendo referência na região de saúde de Bauru, Estado de São Paulo. O projeto de pesquisa foi aprovado pelo Comitê de Ética em Pesquisa da Faculdade de Medicina de Botucatu (CEP/UNESP), sob nº CAAE: 24188813.6.0000.5411. **Resultados esperados:** indicadores que demonstrem redução da taxa de mortalidade e do grau de incapacidade dos pacientes na Unidade de AVC após da implantação dessa unidade especializada, o que poderá mostrar que a mesma agregou benefícios aos pacientes. **Descritores:** Acidente Vascular Cerebral; Avaliação em Saúde; Indicadores; Enfermagem e Administração de Serviços de Saúde.

RESUMEN

Objetivo: evaluar el resultado de la asistencia proporcionada a pacientes con accidente cerebrovascular (ACV), antes y después de la implantación de una Unidad de ACV, a través de indicadores. **Método:** estudio epidemiológico de evaluación de servicios, cuantitativo, exploratorio, descriptivo, transversal y retrospectivo. El campo de estudio fue el Hospital das Clínicas de Botucatu, Estado de São Paulo, Brasil, en el cual se creó una Unidad de ACV en la Sala de Emergencias en 2011, siendo referencia en la región de salud de Bauru, estado de São Paulo. El proyecto de investigación fue aprobado por el Comité de Ética en Investigación de la Facultad de Medicina de Botucatu (CEP/UNESP), N° CAAE: 24188813.6.0000.5411. **Resultados esperados:** indicadores que demuestren la reducción de la tasa de mortalidad y del grado de discapacidad de los pacientes en la Unidad de ACV tras la implantación de esta unidad especializada, lo que podrá mostrar que la misma trajo beneficios a los pacientes. **Descriptores:** Accidente Cerebrovascular; Evaluación en Salud; Indicadores; Enfermería y Administración de Servicios de la Salud.

¹Nurse, Master's degree candidate, Graduate Program in Nursing - Master's and Doctoral degrees, Paulista State University (UNESP). Botucatu, SP, Brazil. E-mail: simonepaixao@fmb.unesp.br; ²Nurse, PhD. in General and Applied Biology, Nursing Administration Field, Professor at Botucatu Medical School, Paulista State University (UNESP). Botucatu, SP, Brazil. E-mail: cjuliani@fmb.unesp.br; ³Nurse, PhD. in General and Applied Biology, Fundamentals of the Nursing Field, Professor at Botucatu Medical School, Paulista State University (UNESP). Botucatu, SP, Brazil. E-mail: olbrich@fmb.unesp.br; ⁴Doctor, Coordinator of the stroke unit, Area Neurovascular, Botucatu Medical School, Paulista State University (UNESP). Botucatu, SP, Brazil. E-mail: gabrielbraga@fmb.unesp.br; ⁵Doctor, PhD. in Neurology, Area Neurovascular, Professor at Botucatu Medical School, Paulista State University (UNESP). Botucatu, SP, Brazil. E-mail: bazan.r@terra.com.br; ⁶Nurse, PhD. in General and Applied Biology, Nursing Administration Field, Professor at Botucatu Medical School, Paulista State University (UNESP). Botucatu, SP, Brazil. E-mail: wilzaspiri@uol.com.br

INTRODUCTION

Today, the quality of healthcare organizations is frequently discussed in order to improve the services provided.¹ As a result of the change in the behavior of users, who are more demanding and understand the importance of more qualified services, there has been an increase in the competitiveness of hospital organizations as a result of political transformations and new technologies.²

The cerebrovascular accident (CVA) is considered a disease of great impact on individuals and families. It is caused by a brain injury as a result of impaired cerebral blood flow, which has a neurological deficit in its onset.^{3,4}

It is considered a disease that leaves sequelae and reduces quality of life, with high rates of prevalence, incidence, and recurrence. This fact becomes worrying in our field and highlights the need to establish preventive measures.³

The São Paulo State Department of Health, based on 2010 data, showed that there had been 38,900 admissions of patients with the disease via the Unified health System (*Brazil's publicly funded healthcare system which assures that healthcare is a "right of all and an obligation of the State"*). Similar data were reported in 2011, when there had been 39,000 admissions, with 21,200 deaths resulting from CVA in the State of São Paulo. In Brazil, the number of fatalities caused by CVA reaches almost 100,000 individuals per year. The number of cases has increased from 84,713 in 2000 to 99,726 in 2010.⁵

The mortality rate due to CVA in the individuals up to 70 years of age (which considers these deaths as more preventable) decreased 32.6% between 2000 and 2010. In this age group, the index fell from 27.3 to 18.4 deaths per 100,000 inhabitants, which represents an annual average reduction of 3.2%. In 2010, there were 33,369 deaths of individuals aged up to 70 years due to CVA.⁶ The mortality rate in Brazil shows the conditions and lifestyle of the population and the quality of health services provided.⁷

Ischemic stroke is caused by decreased blood flow in one or more regions of the brain and arterial obstruction due to a thrombus or bubble.⁸ Therefore, the survival of the tissue at risk depends on the intensity and duration of ischemia and the availability of collateral circulation.⁹ This is a medical emergency and the evaluation and treatment should be performed in qualified health units as soon as possible.¹⁰

The time of signs and symptoms onset is called *ictus* and it is very important for defining the treatment, since the use of intravenous thrombolytic therapy (tissue plasminogen activator [rt-PA])⁴ should be indicated when the symptoms manifest themselves with up to three hours of *ictus* or up to four hours and thirty minutes, and the use of intra-arterial thrombolytic therapy up to six hours.^{9,11} The use of this medication should be cautiously indicated, since it exposes patients to risk of bleeding.¹⁰ This type of treatment can reduce the chances of death and disabilities caused by CVA.¹² However, few individuals benefit from this medicine due to the difficulties in recognizing CVA symptoms, delay in seeking an appropriate emergency service, delay in obtaining imaging exams—such as computed tomography—for evaluation, and prescription of appropriate treatment.¹²

The Ministerial Ordinance No. 665/2012¹³ created the Emergency Services Centers for CVA patients, classified into three types depending on the size and capacity of the institutions. These centers play an important role in treatment of CVA patients and are articulated between the federal, state, and municipal governments. The goal of the Ministry of Health is to strengthen the policy of healthcare provided to victims of CVA, with the purpose of ensuring that all Brazilians have a referral hospital for healthcare, thus demonstrating the importance of effective treatment.

Donabedian¹⁴ contributed with the theoretical framework for the assessment of services, which was organized through the analysis within the classical triad: structure; process; and outcome. Thus, the present study is justified by the importance of the topic regarding the high morbidity and mortality, hospital and personal costs, in addition to the economic consequences for society and, yet, by the relevance and need of assessing the CVA Unit after its opening at the Emergency Room of the Botucatu Clínicas Hospital. The study has been designed in order to detect whether the measures adopted provided decreased length of hospital stay, faster and more efficient service, and reduction of harms arising from the disease, as a way to improve the quality of life of patients and their family members, as well as adapting the service with respect to necessary issues.

OBJECTIVE

- To assess the outcome of the healthcare provided to CVA patients, before and after the opening of a CVA Unit, through indicators.

METHOD

This is a quantitative, exploratory, descriptive, cross-sectional, and retrospective epidemiological study for services assessment. It is being conducted at the CVA Unit of the Emergency Room of the Botucatu Clínicas Hospital, State of São Paulo, Brazil, which was opened in 28th July 2011. Before the opening of the unit, the patients were admitted to the Emergency Room by spontaneous demand, the vacancy regulatory center, rescue, and intra-hospital transfer (Adult Emergency Room). Users were treated in the emergency room by the emergency physician who, after diagnosing the CVA, triggered the neurology team, providing healthcare in the emergency room without a specific unit for CVA. From the opening of the CVA Unit, neurologists have devoted to provide healthcare to CVA patients, which did not occur previously.

The database used for the assessment includes 245 medical records, 63 prior to the opening of the CVA Unit and 182 after the opening. The inclusion criteria are adult patients older than 18 years, with diagnosis of CVA, and having been treated within the study period.

The patients assessment protocol named National Institutes of Health Stroke Scale (NIHSS) is used as reference in order to classify the severity of the disease, through clinical assessments including: level of consciousness; combined gaze; visual field test; facial palsy; motor arm; motor leg; limb ataxia; sensory; language; dysarthria; and extinction and inattention, through physical examination and the use of figures and phrases. After this assessment, scores ranging from zero to three are measured.¹⁵

The modified Rankin scale was used at hospital discharge for measuring the degree of disability caused by the CVA, where: 0 = no symptoms; 1 = no significant disability; 2 = mild disability; 3 = moderate disability; 4 = moderately severe disability; 5 = severe deficiency; and 6 = death.

Donabedian's triad¹⁴—which considers structure, process, and outcome—was used as reference for the construction of indicators. The SAS software for Windows (version 9.3) was used for data analysis.

The research project was approved by the Research Ethics Committee of the Botucatu

Medical School (CEP/UNESP), No. CAAE: 24188813.6.0000.5411.

EXPECTED RESULTS

It is expected that this study can obtain and compare indicators before and after the opening of the CVA Unit, aiming at continuous improvement of the service so that users have a lower mortality rate and are discharged from hospital without or with minimal sequelae. Still, it is expected to make suggestions for the improvement of the service and the articulation with pre-hospital services, since the time to provide care tends to be a decisive factor for achieving satisfactory outcomes.

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Submission: 2014/11/12

Accepted: 2015/05/07

Publishing: 2015/06/01

Corresponding Address

Simone Cristina Paixão Dias Baptista
Joaquim Amaral Gurgel, 51
Bairro Vila Assunção
CEP 18606-020 – Botucatu (SP), Brazil