

إعداد معايير للعناية التمريضية لمرضى السكتة الدماغية

رسالة علمية

مقدمة لكلية التمريض
جامعة الإسكندرية
إيفاء جزئياً " لشروط الحصول على درج

الدكتورة

فى

التمريض الباطنى والجراحى

مقدمة من

إيناس محمد على على قاسم

كلية الطب
جامعة الإسكندرية
٢٠١٠

المشرفون

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الأستاذة الدكتورة/ سهير مصطفى عويضة
أستاذ التمريض الباطنى و الجراحى
قسم تمريض الباطنى والجراحى
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للحصول على درجة

الدكتوراة

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موافقون

لجنة المناقشة والحكم على الرسالة

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أ.د. / سهير محمد وحيدة
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ESTABLISHING STANDARDS OF NURSING CARE FOR STROKE PATIEN

A Thesis

**Presented to Faculty of Nursing
University of Alexandria
In the Partial fulfillment of the Requirements for**

Doctoral Degree

In

Medical Surgical Nursing

By

Enas Mohamed Aly Aly Kassem
M.Sc, Medical-Surgical Nursing

Faculty of Nursing
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INTRODUCTION

The quality of health care delivered to patients has been a prominent issue for decades. So defining and measuring quality of care are essential for health care providers, to demonstrate accountability to patients, legislative and regulatory bodies. Health care quality is the degree to which health services for individuals and population increase the likelihood of desired health outcomes and are consistent with current professional knowledge^(1,2).

It is not possible to measure the quality of care unless it has been accurately described in measurable terms. Standards provide the yardstick for measuring quality. Setting standards are the first (step) of the quality assurance cycle. Standards define measurable and achievable expectations for how a particular health care activity will be performed in order to produce the desired results⁽³⁻⁵⁾.

The standards of care should be evidence based and dynamic to form the basis of the acceptable level of care delivered and to ensure the improvement of the quality of patient care. Nursing care standards should be valid and acceptable to describe the competent level of nursing care that ensures the quality of patient's care. Moreover, they entail knowledge and skills required by nurses in specific detailed plans of care for individuals with a specific health problem^(6,7,8).

Stroke is a potentially life threatening event, it is the second leading cause of death worldwide. This making stroke the most common serious neurological condition requires hospital admission⁽⁹⁻¹¹⁾. Effective acute stroke care requires an organized, multidisciplinary and collaborative health care team that provides a standardized, high quality, efficacious and evidence based stroke patient's care. The team using the principles and components of the organized stroke care system to manage stroke patient's neurological deficits, prevent his/her post stroke complications and facilitate rehabilitation⁽¹²⁻¹⁴⁾. The nurse is an integral member of the multidisciplinary care group of stroke patients who affect the clinical outcomes of stroke patients⁽¹⁵⁻¹⁶⁾. Providing nursing care to stroke patients based on established standards is a key component of improving quality of stroke nursing care.

Developing standards is mainly based on research and it is an integral part of the field of nursing research^(17,18). In the Faculty of Nursing, University of Alexandria, several researches conducted for developing standards of care in many specialties of nursing, but stroke nursing still an area is in need of developing standards of care⁽¹⁹⁻²¹⁾.

Therefore, this study is an attempt to establish standards of nursing care for stroke patients that can be used in appraising basic nursing competencies required for providing care for those patients and to be a base for both increase stroke nurses knowledge and improve their practice.

Aim of the study:

This study aims to establish standards of nursing care for stroke patient.

REVIEW OF LITERATURE

Quality of health care:

Quality of health is now a major health care issue that health care organization cannot ignore the need for. Quality of health care has many definitions in light of technical standards and patient expectations^(٢٢-٢٤). Quality of care is doing the right thing to the right person at the right time at the lowest cost. Also quality of care is defined as the degree to which health services for individuals increase the likelihood of desired health outcomes and are consistent with current professional knowledge. According to Avedis Donabedian (٢٠٠٥)^(٢٢) “Quality of health care is amenable to measurements accurate enough to be used as a basis for the effort to monitor and assure it^(٢٥,٢٦). Health care quality can be measured utilizing Donabedian triad of structure, process and outcome. Structure refers to the components of the health care system, process refers to the activities that constitute health care and outcome refers to changes (desirable or undesirable) in individuals that attributed to health care^(٢٦,٢٧).

There is an agreement that the quality of health care must be both assured and improved. Assurance means achieving a state of accomplishments and implies a guarantee of excellence. Quality assurance refers to an organization's effort to provide services according to accepted professional standards and in a manner acceptable to the patient. The quality assurance activities including: accreditation of health facilities, external quality evaluation and improving performance; that are all intended to guarantee and ensure quality of care. Quality improvement is a process of attaining a new level of performance that is superior to the previous level. Quality improvement process uses preestablished criteria and standards and then follows the evaluation of care with an appropriate change for purpose of improvement^(٥,٢٥,٢٧). The first step in the quality improvement process is to establish standards of care against which actual clinical care is judged^(٢٨,٢٩)

Standards of care:

Performance according to standards is one of the biggest challenges to produce quality health care. Defining standard provides a clear definition of an agreed level of performance for practitioners and offers a measure against which current practice can be compared^(٥,٢٩,٣٠). Standard is defined as “a basis for measurement, an established or accepted model; aimed at a definite level of excellence or adequacy required^(٣١). Donabedian defined standards that are “professionally developed expressions of the range of acceptable variations from a norm or criterion. Furthermore, standards may be defined as “benchmark of achievement which is based on desired level of excellence. Standards are authoritative statements that describe a level of care or performance common to a profession for which practitioners are accountable and quality of care can be judged^(٢٢,٣١-٣٥).

A standard is an expectation of quality that is implicit (understood) or explicit (written). “Implicit” health care standards are derived from the expertise of professionals who work in a specific environment. “Explicit” health care standards are appeared in many forms such as: protocols, procedures, or clinical practice guidelines. These standards are developed by ministries of Health, professional organization as (International Council of Nurses), International Organizations (World Health Organization), accrediting organizations (Joint Commission International), or by a hospital itself^(٣٦,٣٧).

Because standards are used as measurement tools, they must be based on the most up-to-date research and should be: valid, reliable, clear, realistic and measurable. A valid standard is one that is based on scientific evidence or other acceptable experience. A

reliable standard leads to the same result every time it is applied under the circumstances for which it was designed. A clear standard is understood in the same way by everyone concerned and is not subject to distortion or misinterpretation. A realistic standard can be followed or achieved with existing resources. Measurable standard means that performance according to the standard may be assessed and quantified^(٢٦,٢٨).

There are two terms regarding standards: standards of care and standards of practice. Standard of care describes an acceptable level of patient's care. Added to that standard of care focuses on the patient, it is outcome oriented and relates to what patient expects. Standards of care are pervasive and fundamental to be the basis for both job descriptions and for the standards of nursing practice. A standard of practice focuses on the nurse as a provider; it is process oriented and relates to what is expected of the provider to achieve the standards of care. All standards of practice provide a guide to the knowledge, skills, judgment and attitudes that are needed to practice safely^(٢٤,٢٥).

As an independent profession, nursing has increasingly set its own standards for practice^(٢٧). The American Nurses Association (ANA) is a professional association for registered nurses has the responsibility for developing standards of nursing care that can be applied to all professional nurses in various areas of practice and many specialties such as: standards of community health nursing practice, gerontological nursing, medical surgical nursing, oncology nursing, rehabilitation nursing and perioperative nursing^(٢٩,٤٠). Based on the ANA document (٢٠٠٤) "Scope and Standards for Nurse Administrators", standards are divided into: standards of practice and standards of professional performance^(٢٧,٢٩,٤٠). The standards of practice concentrate on patient outcomes and describe a competent level of nursing care. The levels of care are demonstrated through the nursing process: assessment, diagnosis, outcome identification, planning, implementation and evaluation. Whereas standards of professional performance focus on clinical performance by the nurse and describes a competent level of behavior in the professional role, including activities related to quality of care, performance appraisal, education, collegiality, ethics, collaborative, research and resource utilization^(٢٢,٢٣,٢٩,٤٠).

On the other hand, nursing standards developed by the Joint Commission on Accreditation of Health Care Organizations (JCAHO) focus on the nursing department as a whole its structure, functions, responsibilities, personnel, policies, records, departmental meetings and conferences^(٢١,٤١). Based on that, (JCAHO) requires that accredited hospitals have written nursing policies and procedures which detail how nurses are perform their duties. These internal standards of care are quite specific and accessible for all nursing units^(٢,٢٢,٢٣). In addition to standards developed by the professional organization, nurses in each health agency should develop setting specific nursing practice and care standards^(٢٩,٤١).

The importance of standards to the nursing profession has been recognized historically. Nursing Care Standards are designed as benchmarks to measure a nurse's performance but are also used as the foundation for the development of nursing competencies and guidelines for practice. Therefore, nursing standards are useful tools for nurses in determining what knowledge and skills are required to provide quality care^(٤٢,٤٣). Nursing care standards are developed to guide and direct nursing practice. They promote professional nursing practice, facilitate its evaluation and enable patient to judge the adequacy of nursing care given. On the other hand, nursing care standards provide guidelines to the researcher nurse to identify and explore the relationships between nursing practice and patient care outcomes. Moreover, standard is considered a control device

through which nurses can direct their self assessment and self regulation over their professional practice. Finally, standards provide nurses with a framework for developing specialty nursing standards and facilitate articulation of the role of nursing within the health care team^(٢٠,٢٢,٢٩).

Nursing Care Standards have two main types: normative standards and empirical standards. Normative standards describe practices considered “good or ideal” by same authoritative group, whereas empirical standards describe practices actually observed in a large number of patient care setting, therefore normative standards describe a higher quality of performance than empirical standard^(٢٠,٢٢,٤١).

Standards cannot be valid unless they contain criteria to enable care to be measured and evaluated in terms of effectiveness and quality. Criteria are stated measurable elements of care against which actual health services may be compared. A criterion is a means or standard of judging; a test or a rule. Criteria make standards work because they are detailed indicators of the standards and can be specific to an area or type of patient. Criteria have many synonymous terms such as interpretations, cues, characteristics or items. In simple words standards are statements of intent and criteria are the means of measuring which reflect the intent of a standard and determine whether the standard has been reached or not^(٢٠,٢٢,٢١).

Principles of developing standards:

The standard should be developed under accepted set of principles. The International Society for Quality in Health Care published the principles for health care standards to be used as a guide for standard development and revision. They are six principles, each one attached to number of criteria, they include:^(٤٤)

- ١- Standards are designed to encourage health care organizations to improve quality and performance.
- ٢- Standards are designed with a focus of patients/service and reflect the user continuum of care.
- ٣- Standards assess the capacity and efficiency of health care organizations.
- ٤- Standards include measures to protect and improve safety of patients/service users, staff and visitors to the organization.
- ٥- Standards are planned, formulated and evaluated through a defined and rigorous process.
- ٦- Standards enable consistent and transparent rating and measurement of achievement

Furthermore, standards should be developed by an expert nurse in the specialty, be research based, be continually updated, be sufficiently broad and flexible to achieve their objective and at the same time permit freedom for growth and change. They should be communicated to practitioners to promote universal levels of performance and encourage professional identity. Standards have to be formulated according to the requirements which facilitate their applicability^(٢١,٤١).

Standards development cycle:

The United States Agency for International Development (USAID) Health Care Improvement Project developed the process of setting standards and called it "Standards Development Cycle" which provides a flexible process for setting standards that can be adapted to each specific situation^(٢٧).

The standard development cycle is composed of six steps; define and agree, select who should be involved, gather information, draft standards, test standards and finally communicate the standards^(٢٧).

Step (١): Define and agree. The area or topic for which standards are being developed.

Step (٢) Select who should be involved: The stakeholders' expectations should be incorporated in the consensus and approval process of standards development.

Step (٣) Gather information: The working group gathers information about the topic under review and other resources that can help define the key elements that should be included in the standards.

Step (٤) Draft standards: There are several components to drafting standards.

- Decide the structure and format the standards, depending on their purpose. After the format is decided, the working group drafts the standards develop indicators/criteria to measure performance according to the standards.
- Prior to field testing, the draft standards should be evaluated internally for quality.

Step (٥) Test the standards: The working group must decide whether a field test is needed.

Step (٦) Communicate the standards: Although the standards-setting process might be completed with the approval of the standards, the impact of the well-developed standards depends on health care providers using the standards. Standards communication and implementation strategies are critical to achieving health care provider performance according to the standards. A well thought-out communication plan is needed to identify how the correct persons will receive the correct information, so they will perform the correct tasks related to the standards.

When attempting to set standards, there is a need to select a framework that enables those setting standards to consider all the various components necessary for meeting that standard. A number of different frameworks can be used to set standards as: Crosby process model worksheet, Maxwell's six dimensions of quality, Duffy's quality caring model, Deming framework and Donabedian's model. Donabedian's framework is one of the first models to evaluate health care quality which include the elements of structure, process and outcomes (SPO). This framework is a well known model used in establishing nursing care standards and in conducting nursing research as well^(٢٢,٢٦,٤٥).

Donabedian explained that standards are directed toward structure, process and outcome (SPO). Structure standards focus on the internal characteristics of the organization and its personnel. They answer the question is the structure of the organization set up to allow quality of care?, thus organized structure and presence of suitable resources facilitate provision the patient with quality of care. Structure standards describe the resources and the framework of the health care system as: equipment and facilities, human resources such as qualifications of professional; staff, numbers, skill mix, training expertise, performance review and kinds of supervision; and policies, mission, philosophy and goals. ^(٢٦,٤٥).

Process measures refer to the performance. They focus on whether the activities within an organization are being conducted appropriately? Process standards include: assessment techniques, procedures, practice guidelines, plans and protocols of nursing care, methods of interventions, documentation system, evaluation of the competencies of staff carrying out nursing care and how resources are used.

Outcome standards indicate the combined effects and end results of structure and process standards on the patient. Outcome standard is in terms of patient's behavior, responses, change level of knowledge, improved health status and patient satisfaction^(٢٦, ٤٥-٤٧).

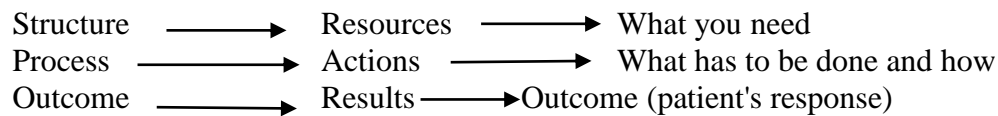


Illustration to the framework of Donabedian^(٢٦)

The standards must be written, regularly reviewed and well known by the nursing staff. Standards must also be specific, measurable, achievable, relevant and theoretically based which is (SMART) ^(٢٠, ٤٥).

Regarding the advantages of standards, the use of standards is beneficial to the patient, the nurse, and the organization. From the patient's perspective, standards provide continuity and consistency of expected nursing care. From the nurses and organization perspectives, standards increase autonomy, promote competency, assist in job description development, provide a basis for performance appraisal and facilitate quality improvement and minimize the incidence of complications. On the other hand, the disadvantages of the standard are that problems can arise from badly written or poorly articulated standards and there is time consuming to set standards effectively^(٢١, ٢٢, ٤١, ٤٥).

Competency of care:

The nurses' ability to provide competent care to stroke patient is very important. Competency can be described as a person's actual performance in a particular situation. Moreover, it is a single, observable or definable skill that can further be classified as consisting of knowledge, skills, attitudes and intellectual strategies. The word "Competence" is applied to overall capacity of people to perform global behaviors and activities, such as "provides care to stroke patients". This definition implies the ability to apply knowledge and skills successfully to new or familiar tasks for which prescribed standards exist^(٤١, ٢٢, ٤٤). The nurses must have the competencies necessary to perform their jobs according to standards in order to provide quality care. Competence measurement is critical to ensure that all nursing staff performs their assigned duties and responsibilities and to meet performance standards.

Competencies can be assessed using a written test which determines whether the nurses have the cognitive knowledge required to meet competent patient's care. As well as to evaluate the nurse's performance that is to say psychomotor skill-based competencies using simulation exercises and observational checklists. If the results of nurses assessments are incompetent whether in knowledge or performance, follow up and provision of guidance as well as repractice according to a standardized plan of care are all essential to maintain both nurse's knowledge and clinical skills that lead to quality of stroke patient care^(٢٢, ٤٤).

According to the work of American Heart Association (AHA) and American College of Cardiology (ACC) Forum on Stroke ^(٢٠٠٠), there is a great need for developing and evaluating structure, process and outcomes measures in the setting of acute ischemic stroke care. Also, they recommended that all institutions should have a standardized plan of care for patients with acute ischemic stroke^(٢٦, ٢٧). Added to that, providing standardized coordinated care is the fundamental concept for the Disease-Specific Care Certification (DSC) offered by JCAHO for any stroke care setting^(٢٧).

Cerebrovascular stroke:

Cerebrovascular stroke (CVS) or what is being now termed as “brain attack” is a sudden impairment of the blood supply in one or more blood vessels of the brain resulting in diminished oxygen supply causing serious damage or necrosis in the brain tissues. According to the World Health Organization (WHO) stroke is defined as a clinical syndrome typified to rapidly developing signs of focal or global disturbances of cerebral function, lasting more than 24 hours or leading to death, with no apparent causes other than vascular origin^(٥٠,٥١). According to the WHO stroke is the second leading cause of death worldwide after ischemic heart disease, and it is the third leading cause of death after heart disease and cancer in the United States. Approximately ١٦٠,٠٠٠ die of a stroke each year. It is the leading cause of serious and long term neurological disability. Each year, about ٧٠٠,٠٠٠ people suffer from stroke in the United States^(٥١-٥٢).

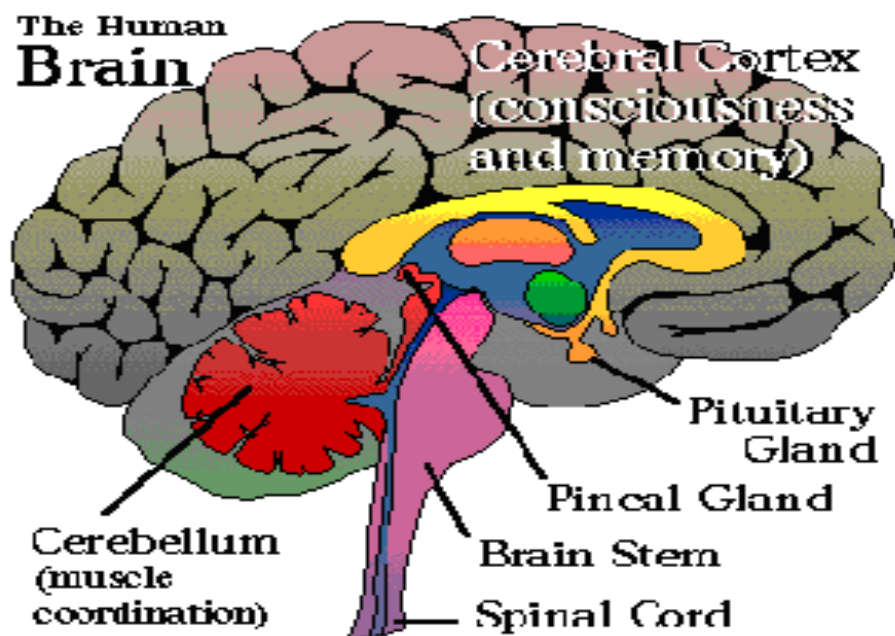


Figure (١) Parts of brain^(٥٢)

In Egypt the incidence of stroke per year was ١,٨% in suburban regions, ٢,١% in rural regions, and recorded as only ١,٥% in the urban population^(٥٤).

Classification of stroke:

Stroke is classified according to the type, the cause and/or to the time course. According to the type stroke is classified into two main types: ischemic or hemorrhagic. Ischemic stroke accounts for ٨٨% of all strokes in which a significant hypoperfusion to the brain occurs secondary to partial or complete occlusion of a cerebral artery. Ischemic stroke can be divided into two subtypes; thrombotic or embolic^(٥٢,٥٣).

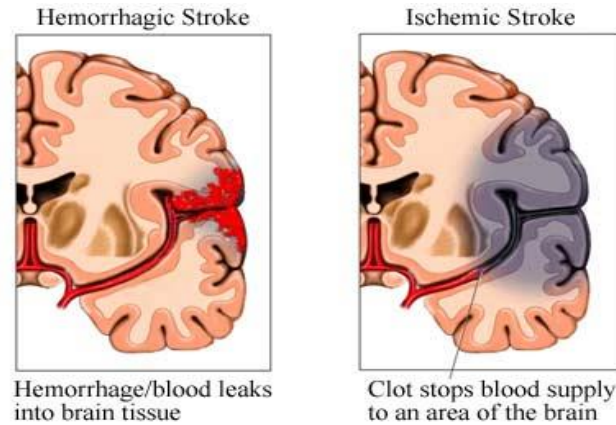


Figure (۲) Hemorrhagic and Ischemic stroke^(۵۲)

Thrombotic stroke is clinically referred to as cerebral thrombosis or cerebral infarction and occurs when a diseased or damaged cerebral artery becomes blocked by the formation of a blood clot within the brain. As for embolic stroke, it is caused by a clot within an artery located somewhere else than the brain itself. Hemorrhagic stroke occurs when there is an extravasation of blood into the brain. It is typically classified by the location of bleeding namely: subarchanoid hemorrhagic stroke and intracranial hemorrhagic stroke^(۵۳,۵۴).

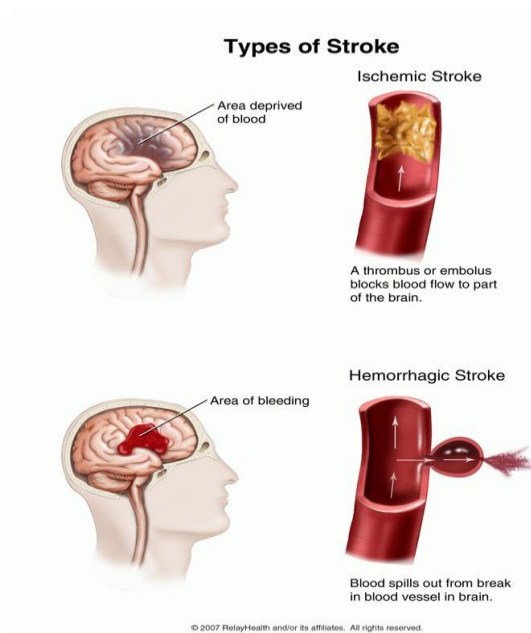


Figure (۳) Types of stroke^(۵۳)

According to the cause the major types of stroke which are ischemic and hemorrhagic are further subdivided. Ischemic strokes are subdivided into the different types: large artery thrombosis, small penetrating artery thrombosis, cardiogenic embolus and other causes. Large artery thrombotic strokes are due to atherosclerosis plaques in large blood vessels of the brain which result in infarction. Small penetrating artery thrombotic strokes, which are also called lacunar infarctions or strokes, affect one or more vessels and are the most common type of ischemic stroke. Cardiogenic embolic strokes result from emboli originating in the heart and circulating to the cerebral vasculature. The