



Elaboration of a instrument for nursing care in the hemodialysis unit

Elaboração de um instrumento da assistência de enfermagem na unidade de hemodiálise

Elaboración de un instrumento para la asistencia de enfermería en la unidad de hemodiálisis

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ABSTRACT

This study aimed at developing an instrument to record nursing assistance systematization in a hemodialysis unit. For this development, we used the instrument formulated from literature on nursing diagnosis in nephropathic patients. The record instrument has been analyzed according to: layout and process facilitation. The process relied on the Basic Human Needs Theory and the taxonomy of the North American Nursing Diagnosis Association. The instrument has been facilitating the implementation of the nursing process in the hemodialysis unit. It was possible to record the data in a organized and concise fashion and use key information to plan and evaluate the assistance offered.

Keywords: Hemodialysis units, hospital; Renal dialysis/nursing; Nursing care; Nursing diagnosis

RESUMO

O objetivo deste estudo é relatar a experiência de construção de um instrumento para registro da sistematização da assistência de enfermagem em uma unidade de tratamento dialítico. Para esta construção, utilizou-se o instrumento formulado com base na literatura sobre diagnósticos de enfermagem em pacientes nefropatas. O instrumento de registro foi analisado conforme: diagramação e facilitação do processo. O processo teve como norteador a teoria das Necessidades Humanas Básicas e a taxonomia da North American Nursing Diagnosis Association. O instrumento tem facilitado a implantação do processo de enfermagem na unidade de hemodiálise. Com o seu uso, foi possível o registro organizado e conciso dos dados e uso de informações importantes para o planejamento e avaliação da assistência prestada.

Descritores: Unidades hospitalares de hemodiálise; Diálise renal/enfermagem; Assistência de enfermagem; Diagnóstico de enfermagem

RESUMEN

El objetivo en este estudio fue la construcción de un instrumento para el registro de la sistematización de la atención de enfermería en una unidad de tratamiento dialítico. Para esta construcción, se utilizó el instrumento formulado con base en la literatura sobre diagnósticos de enfermería en pacientes con nefropatías. El instrumento de registro fue analizado conforme: diagramación y facilitación del proceso. El proceso tuvo como norteador la teoría de las Necesidades Humanas Básicas y la taxonomía de la North American Nursing Diagnosis Association. El instrumento ha facilitado la implantación del proceso de enfermería en la unidad de hemodiálisis. Con su uso, fue posible el registro organizado y conciso de los datos y uso de informaciones importantes para la planificación y evaluación de la asistencia prestada.

Descriptores: Unidades hospitalarias de hemodiálisis; Diálisis renal/enfermería; Asistencia de enfermería; Diagnóstico de enfermería

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INTRODUCTION

The nurse is an agent of change, and through the nursing activities, they aim at finding relations between men and the environment, in the vital process, in order to gather new knowledge in the instructing process to find a way to act⁽¹⁾.

The use of a Nursing Assistance Systematization (NAS) is one of the forms the nurses have to apply their knowledge to patient assistance and characterize their professional practice, helping define their role. The nurses need to be aware of the phases of the nursing process, under a theoretical background, therefore promoting healthcare and patient recovery⁽²⁾.

The NAS is a dynamic method, characterized by the inter-relations and dynamism of its phases in an organized way. The nursing process is one of the ways to systematize assistance. It is divided into five phases: data collection, diagnosis, action plan, evolution and implementation⁽³⁾.

Its use is being more and more recognized by the institutions, which value its application, providing trust to the places where it is used, mainly, for auditing and consulting services, since it is an accurate report for refund⁽⁴⁾.

The Hemodialysis Sector has been one of the places where nurses were interested in implanting the process. The goal of nursing assistance in this sector is to identify and monitor the adverse effects of hemodialysis and complications derived from the disease, developing educational initiatives to promote, prevent and treat. In this sector, there are several specific interventions performed by the nurse, but due to the high demand of consultations, record-taking takes too long, since it is carried out in a descriptive way. As such, there has been interest in starting the nursing process in this place in order to elaborate a specific assistance plan and organize data recording.

Unfortunately, there are no accurate data about the incidence and prevalence of terminal chronic renal insufficiency in Brazil. The incidence – the number of patients that join the dialysis program every year – is estimated to be 70 per million, which indicates 10.500 new patients a year joining the dialysis treatment⁽⁵⁾.

In this context, the NAS had to be implanted as soon as possible, since it is indeed an effective communication instrument in the activities of nurses in caring for patients, promoting the basis for planning, coordinating and evaluating their actions, prioritizing the client consultations. This process relies on carrying out the project of a recording instrument, making it valid according to legal determinations and institution approval and unit managers. The NAS will favor the identification of strategies to increase quality when dealing

with the patient, enhancing quality of life and everyday activities, time-compromised, for chronic renal insufficiency patients⁽⁶⁻⁷⁾.

OBJECTIVES

To develop an instrument to record the nursing assistance systematization in a hemodialysis unit, identify the most frequent nursing diagnoses and test the instrument in terms of its contents and layout.

METHODS

It is a cross-section prospective study, using a cut-point to develop an instrument for the NAS to be applied three days a week. For data collection, we used the instrument formulated from literature on nursing diagnosis in nephropathic patients. The process relied on the Basic Human Needs Theory and the taxonomy of the North American Nursing Diagnosis Association for the nursing diagnoses⁽³⁻⁸⁾.

The patients are subjected to hemodialysis four hours a day, three times a week. For this reason, the instrument is meant to be applied weekly, due to the turnover caused by the short stay in the unit and the sector dynamics. After an explanation and authorization in a term of consent, the instrument was applied in 36 patients.

In the beginning of each week, the data collection phases, nursing diagnosis and nursing prescription were carried out, and the nursing evolution was carried out on the weekend, yielding information that will guide the NAS in the following week.

The temporary instrument was divided in two parts: the first containing the items for data collection, physical exam, nursing diagnostic and nursing evolution, and the second containing the nursing prescription. The records have been organized so as to be resorted to whenever possible for checking, with some gaps for complementary information such as defining characteristics and related factors. The record instrument has been analyzed by the unit nurses, considering information clearness, reading easiness, comprehension and the instrument itself. After being subjected to apparent and content evaluation, it was analyzed according to layout and process facilitation.

RESULTS

For the layout, CorelDraw – a two-dimensional vector-based drawing software for graphic design – was used. The analysis of previously used instruments in other institution sectors was performed, aiming at gathering information regarding drawbacks in the implementation process, and guide the layout (default) of the printed

forms.

It was necessary to perform some modifications, which were pre-tested again, until the present model was obtained. The modifications took place after some suggestions and discussions related to content and form layout by the unit nurses, after having used it. The repetition of information contained in other forms previously used in the unit was avoided.

There has been restriction on the number of pages when developing the instrument by the Record Commission, due to an increase in forms at the Statistical and Medical Archiving Service, is the place in charge of keeping and preserving all the records of the hospital patients. Such restriction made the development of the first process step (data collection) costly, since it should concentrate as much information as possible about the patient, in order to develop an individualized assistance.

Each step of the process was developed in a way so that necessary and significant information stood out, according to the characteristics of the renal insufficiency patient. This step planning will be described afterwards.

Data collection: data collection is essential for setting goals and implementing prescription. The physiological needs were focused, having Wanda Horta's Basic Human Needs Theory as background. In this theory, such needs make up the individual survival⁽³⁾. Due to the limited number of pages, general and open questions were asked concerning breathing, circulation, waste releasing, sleep, resting, physical activity, hydration, nutrition and hygiene. In addition, identification data, such as full name and form number have been included. Age is a risk factor for a range of metabolic and hemodynamic changes that may cause alterations in the heart anatomy and function, common in chronic renal insufficiency (CRI) patients in hemodialysis⁽⁹⁾.

The place of origin is important for appointment scheduling, exams, transport or hemodialysis session shift rearrangements, when necessary. Knowing about previous diseases avoids adverse reactions to the treatment employed; The base disease detects the main causes of CRI in the study place.

The dry weight is estimated by the medical team, from the clinical signs evaluation of hydration and blood pressure behavior. It is vital to determine the volume to be taken for ultrafiltration⁽¹⁰⁾. Through dry weight, residual diuresis and the amount of hydric intake, the nurse controls the hydric balance and evaluates the patients hydration.

Evaluating the motor skill helps identifying the locomotion limitations, promoting suitable transport and actions that provide comfort during the hemodialysis session. The same occurs to vision-, hearing-, and speech-impaired patients, who require a different consultation.

Knowing the patient's allergic reactions will prevent

exposure to the triggering agent, such as certain types of medication and dialyzer membrane components.

The dialysis access is the condition for the beginning and maintenance of hemodialysis treatment. Identifying the access type will guide the strategy planning for maintenance, allowing the suitable functioning and a raise in the useful life, besides preventing complications such as stenosis, infections, thrombosis, venous hypertension, flow steal, low flow, aneurysms, heart overload and access loss⁽¹¹⁾.

The skin evaluation must be performed to search of wounds made by uremic itch and other clinical findings, common in people with CRI, such as hyperpigmented spots, neurofibromas, decreasing turgor, edema, vasculitis, equimosis and necrosis. Such findings may cause the skin to break, leading to skin injuries and infection⁽¹²⁾.

Nursing diagnostic: 20 diagnostics that the specialized nurses judged more frequent in the hemodialysis sector have been selected, according to the NANDA taxonomy. The inclusion criteria for the diagnostics was the minimum percentage $\geq 2.56\%$. Those considered important should be identified at least once. After the application of the instrument, 14 nursing diagnostics were selected, and two that did not belong to previously selected diagnostics were added, making up a total of 16 nursing diagnostics.

Nursing evolution: Horta⁽³⁾ states that the evolution is the daily or periodic report of the changes occurring to the human being while under professional assistance. It is a synthesis, a global evaluation of the healthcare plan. In the evolution, relevant data identified during the nursing evaluation have been included, so to say: improvement, worsening or maintenance of the previous status, obeying the previously prescribed recommendations and the appearance of new problems. Throughout the evolution, the assistance provided has been evaluated. The assistance plan has been altered, aiming at reaching the desired results.

Nursing prescription: it is the daily routine that coordinates the action of the nursing team with the appropriate care when dealing with basic and specific needs of the human being⁽³⁾.

The nursing prescription has been formulated from nursing actions incorporated to the needs of chronic renal patients, from information gathered aiming to monitor, control and soothe the adverse effects caused by hemodialysis.

The pre-session weight determines the amount of ultrafiltration (UF) to be taken during the session, subtracting the patient's dry weight (current weight – dry weight). The post-session weight verifies the UF goal accomplishment (item 1)⁽¹²⁾.

Hypotension during the session is one of the most

common complications, justifying regular blood pressure monitoring (item 1 of the form). Items 2, 5, 10, 12 and 17 refer to dialysis access care. Items 6, 13, 14, 18 and 22 control the adverse effects of hemodialysis such as hypotension, muscle cramps, restless legs syndrome, nausea, vomiting, headaches, chest pain, lumbar pain, itching, hypertension, dialyser reactions, hemolysis, gas embolism, hypoxemia, arrhythmia, among others.

According to regulation #82/2000 of the Ministry of Health, which establishes technical rules for the substitutive renal therapy services to work, it is compulsory for the dialysis unit to perform periodic laboratory exams on the patients in order to guarantee the evolution, along with the dialysis treatment. Item 3 of prescription guarantees compliance to the rules according to exam periodicity, that can happen every month, every three months, every six months and every year.

The solutions used in hemodialysis therapy work as solute replacements and removal by diffusion, and their composition should be closer to the desired plasmatic concentration.

The concentration is determined by the medical team and the nursing team is supposed to ensure its compliance, as well as replacement medications such as erithropoetin, calcium carbonate and endovenous iron (items 4 and 9).

Heparin control (item 8) maintains the system free of clot formation, prolongs the filter lifespan and minimizes the appearance of side effects. There are not probing data, but the administration of heparin in the unit is avoided when BP \geq 200/120mmhg. In case of a stroke, heparin may cause hemorrhage complications.

The system checking (capillary/line) and the equipment parameters (vein pressure, blood pressure, transmembrane pressure, dialysate temperature, sodium concentration and UF) must be carried out by the nursing team before the dialysis system is activated. Nevertheless, these parameters are checked by the nurse at the moment of the nursing visit.

A specific item has been included (item 19) to monitor venous pressure, because it is a complication related to vascular access. The prolonged use of these accesses may lead to complications such as venous hypertension, and defines the absence of spontaneous venous pressure and pressure lower than 100 mmHg at the blood flow extremity⁽¹³⁾ as ideal conditions.

The prescription items have been altered according to their order of execution, in order to facilitate the checking.

The employees have been questioned about SAE prior to the instrument application, aiming to raise subject awareness and demonstrate the importance of using the process when doing their activities. This clarification was

essential for participation and use of the new instrument. There has been resistance from some of the employees, claiming it was one more task to their heavy workload, in a sector characterized by high turnover, large numbers of patients and limited human resources.

Parallel to the SAE implementation in the sectors that experienced this process, a group was created for the nursing process approach, with nurses from several sectors. This group planned three days of expositive classes. The nurses had no difficulties to carry out the nursing process, although it was a general approach about SAE. This previous training favors the nurses' emotional dimension in face of the changes⁽¹⁴⁾.

DISCUSSION

During the instrument application in the hemodialysis unit, the nurses showed interest and initial motivation, which later turned into apathy. They reported the instrument is suitable to the process but it is time-consuming, due to the number of patients per session and few nurses on shift.

This fact matches the findings of a study done in a large philanthropic hospital, in which 88% of the nurses reported difficulties in implementing the process related to work overload, associated to job deviations and even to an insufficient number of professionals to perform this activity. In the same study, it was reported that these difficulties may be associated with particular resistance, such as those related to professional formation⁽¹⁵⁾.

Another author reports that the nursing process approach during undergraduate studies often takes place superficially, focusing solely on theory. The professionals realize the importance of the process only when they experience the practice⁽¹⁶⁾.

The lack of familiarity with the process causes the nurses to spend more time to elaborate the diagnostic, goals and care planning⁽¹⁶⁾.

Despite the difficulties reported, the studies are alike. The gradual results after the training process show the positive transformation in relation to the SAE implementation.

FINAL COMMENTS

This experience has been worthwhile, not only for the unit, but also for the hospital that needs instruments to facilitate both data recording and retrieving, qualifying the nursing assistance, cost control and auditing.

The SAE is necessary to value the nurse and their role in society. However, the professional should understand their duties so as to make it important and effective. Despite being known, the SAE is not used in an effective way by nurses. The nurse professional

activities include many administrative, bureaucratic and educational activities, besides patient-oriented practices. The excess of duties contributes to increase the distance between the professional and the patient. Direct patient attention should push the implementation of the desired nursing assistance.

The instrument has made it easier to implement the nursing process in the Hemodialysis Unit, despite the

difficulties for its elaboration, which required restrictions and constant changes. With its use, organized and concise data recording and important information to plan and assess the assistance provided will be possible. However, it will be necessary to break paradigms in the way of being and thinking the role of the nurse in the healthcare practice, whose process is slow when compared to the nurse professional advances.

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