Planning the hospital discharge of patients with diabetes: the construction of a proposal*

PLANEJAMENTO DA ALTA HOSPITALAR DO PACIENTE DIABÉTICO: CONSTRUÇÃO DE UMA PROPOSTA

PLANEAMIENTO DEL ALTA HOSPITALARIA DEL PACIENTE DIABÉTICO: CONSTRUCCIÓN DE UNA PROPUESTA

Vanessa Ferraz Suzuki[1], Elenice Valentim Carmona[2], Maria Helena Melo Lima[3]

ABSTRACT

The acute and chronic complications that patients with diabetes and their families have to deal with after hospital discharge may be a consequence of the deficiencies in the educational process across hospitalization and the formal preparation for discharge. The objective of this study is to present a proposal of the plan for hospital discharge of adult patients with diabetes. A literature review on the hospital discharge of the assessed population was performed, including articles published between 2004 and February 2009. Taking the literature into consideration, a flier was created to guide the discharge process. The flier lists the information that should be collected and worked with the patient during the first four days of hospitalization, considering their individual needs and the *Ineffective self health management*. The discharge must be inserted in the Nursing Process, as nurses have an essential role in identifying the needs of patients and their families. The flier helps to identify the patient's needs and the actions to be performed by the team.

DESCRIPTORS

Diabetes mellitus
Patient discharge
Nursing process

RESUMO

As complicações agudas e crônicas enfrentadas pelo paciente diabético e sua família após a alta hospitalar podem ser consequência de deficiências no processo educativo ao longo da hospitalização e do preparo formal para alta. O objetivo deste estudo é apresentar uma proposta de planejamento da alta hospitalar do paciente diabético adulto. Foi realizada revisão de literatura sobre alta hospitalar da clientela em questão, selecionando-se artigos publicados de 2004 a fevereiro de 2009. Considerando a literatura, foi desenvolvido um impresso para nortear o planejamento da alta. Este abrange informações a serem colhidas e trabalhadas junto ao cliente, ao longo dos primeiros quatro dias de internação, considerando as necessidades individuais e o *Autocontrole ineficaz da saúde*. A alta precisa estar inserida no Processo de Enfermagem, uma vez que o enfermeiro tem papel fundamental na identificação das necessidades do paciente e família. O impresso auxilia a identificação das necessidades do cliente e das ações realizadas pela equipe.

DESCRITORES

Diabetes mellitus
Alta do paciente
Processos de enfermagem

RESUMEN

Las complicaciones agudas y crónicas enfrentadas por el paciente diabético y su familia luego del alta hospitalaria pueden derivar de deficiencias en el proceso educativo durante la hospitalización y de la preparación formal para el alta. Este estudio objetivó presentar una propuesta de planeamiento de alta hospitalaria del paciente diabético adulto. Se realizó revisión de literatura sobre alta hospitalaria de pacientes en cuestión, seleccionándose artículos publicados desde 2004 hasta febrero 2009. Según la literatura, se desarrolló un impreso para orientar el planeamiento del alta. Este incluye informaciones para recoger y trabajar junto al paciente, durante los primeros cuatro días de internación, considerando necesidades individuales y *Autocontrol ineficaz de la salud*. El alta necesita insertarse en el Proceso de Enfermería, toda vez que el enfermero tiene papel fundamental en identificación de necesidades del paciente y familia. El impreso ayuda a identificar las necesidades del paciente y las acciones del equipo.

DESCRIPTORES

Diabetes mellitus
Alta del paciente
Procesos de enfermería

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[1] Nursing undergradute, Campinas State University College of Medical Sciences. Campinas, SP, Brazil. vnsferraz@gmail.com [2] Nurse. Master in Nursing. Professor of the Depatment of Nursing at Campinas State University College of Medical Sciences. Campinas, SP, Brazil. elenice@fcm.unicamp.br [3] Nurse. PhD Professor in Nursing Fundamentals of the Depatment of Nursing at Campinas State University College of Medical Sciences. Campinas, SP, Brazil. melolima@fcm.unicamp.br

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INTRODUCTION

The number of individuals with Type 2 Diabetes Mellitus (Type 2 DM) is escalating and, therefore, so is the frequency of associated long-term complications. This implies that patients face the compromising of their productivity, quality of live and survival, in addition to and expensive treatment and follow up[1].

A recent study[2] shows that the main reason for diabetic patients to be admitted in emergency rooms is because of ineffective blood glucose control, associated with poor preparation of patients and their family for hospital discharge. Hence, considering the need to ensure continuous home care and avoid readmissions, which would increase health care costs even more, the hospital service should be reviewed so as to be organized, multidisciplinary and include preparing patients and their families for discharge[3-4].

Hospital discharge planning is a complex aspect of health care and is part of the Nursing Process. Nevertheless, it has not received priority among the activities of nurses[3], and it is also a subject that is not much addressed by nursing undergraduates[4]. The context of discharge planning has gone through significant changes over the last decades, considering there is a movement for keeping hospitalization time to as short as possible, with the purpose of avoiding hospital infections and reduce costs. In addition, technological and pharmaceutical advancements have helped to reduce mortality and increased the life expectancy of patients with chronic diseases. Hence, nurses working in hospitals frequently take care of patients with multiple chronic diseases and with needs that must be answered shortly. As a result, they tend to prioritize immediate aspects of health care, neglecting educational activities and preparation for discharge, as well as predicting problems that may occur at home and how to solve them[5].

Planning hospital discharge is a process of interdisciplinary responsibility. The nurse, however, has an essential role in identifying the patient's needs, educating relatives and, thus, coordinating the discharge planning.

Planning hospital discharge is a process of interdisciplinary responsibility. The nurse, however, has an essential role in identifying the patient's needs, educating relatives and, thus, coordinating the discharge planning[3,5]. The nurse should evaluate the patient's skills for self-care, as well as the interest and conditions of the family to assist him or her, as the discharge plan has the purpose to make patients independent in their home care and/or provide the family with the proper preparation to perform that care. Because the purpose of the discharge planning is to provide continuous home care, it is indispensible for the patient's family to become involved[5].

The justification for developing this proposal is that the early implementation of a protocol for hospital discharge planning improves patient outcomes, reduces readmissions, shortens the stay and lowers the costs with health care.

OBJETIVE

The objective of this study is to present a proposal for hospital discharge planning of patients with diabetes admitted to the general adult hospitalization unit of a public teaching hospital.

METHOD

This proposal of hospital discharge planning was constructed considering the context of care to patients with diabetes in an adult hospitalization unit of a public teaching hospital located in the State of São Paulo. To do that, the study was divided in two stages: the first consisted of a literature review about hospital discharge involving the referred patients, which grounded the development of the second stage, which consisted of constructing a document (Attachment) to guide the hospital discharge planning of diabetic patients.

In the first stage, computerized databases were used, and the searches were performed through the Virtual Health Library (www.bireme.br): Latin American and Caribbean Health Science Literature (LILACS) and Medical Literature and Retrieval System On-Line (MEDLINE). The search covered a five-year period (2004 to February 2009), aiming at the currentness of the consulted data.

The following Health Science Descriptors (DeCS) and their respective Portuguese versions were used: *hospital discharge*; *patient discharge*; *diabetes mellitus* and *hospitalization*. The articles that helped to construct this proposal were selected by first reading the abstracts, and then reading the full-text, considering the study objective. Hence, 39 articles were selected out of a total of nearly 300, which were not listed herein because of the limited space.

The exclusion criteria used for the articles were: not having an abstract; unavailable access to the electronic or printed full-text version; studies in other languages different than English or Portuguese which did not address the discharge process.

PRESENTATION AND DISCUSSION OF THE DISCHARGE PLAN PROPOSAL

We consider it opportune to comment herein that the Nursing Process is not a static activity; rather, it is extremely dynamic, and the stages, didactically described as subsequent and set apart in books, constantly interpose each other in clinical practice. Hence, o completing the proposed instrument and the analysis of its content allow to survey data, propose Nursing Diagnosis (ND), interventions and evaluations of the expected outcomes.

Among diabetic patients, according to the third author's clinical experience, it is common for them to have an *ineffective health maintenance*[6]. This ND, according to the 2009-2011 North American Nursing Diagnosis Association International Classification (NANDA – I), is defined as *organizing and integrating a therapeutic regime to treat disease and its complications that is unsatisfactory to achieve the specific health goals*. Thus, the proposed instrument is mainly aimed at questions regarding the therapy and preparing the patient to conduct it and/or be assisted.

Literature shows that nurses perform educational activities with the patient, which usually are not documented, which is a hindrance to team communication, following the patients' learning process, and the visibility of the nurse's work[5]. Therefore, to put the proposal discussed herein into operation, an instrument was created, based on the consulted literature, to record the data that will guide the decisions regarding patient discharge planning. The referred instrument has two pages, with four parts as identified follows: 1.Admission; 2. First hospitalization day; 3. First and/or second hospitalization day, and 4. Second and/or third hospitalization day. Each field of the hospital discharge plan is described and justified in the following section.

The *Admission* field is proposed to register the data regarding the patient's identification and the initial data survey about his or her needs: full name; date of birth; gender; weight; height; color/ethnicity; address and city of residence; phone number(s); name(s) of relative(s) and/or care giver(s); companion(s), as well as the kindred and if the patient and caregiver(s) are literate[4,7]. The data may have a further epidemiological use, in addition to direct the planning and use of financial resources in health[8-9]. Also concerning this item, the following information is also registered: `previous hospitalizations; current hospitalization; personal and family history; the patient's knowledge about his or her health condition and treatment; medications being used; allergies; water and food intake; urinary and bowel elimination, as well as the physical limitations that demand care by others.

The process of hospital discharge planning is similar to the nursing process and, in fact, is a part of it, thus demanding a survey of the complete patient history, the proposition of nursing diagnoses, care planning, implementation of care and evaluation of the results[8].

Literature points there is specific data relevant to learn about the patient's needs and, thus, for planning nursing care. Hence, nurses should know: how many times has the patient been hospitalized; if readmissions have been common, for how many days and in what specialty[3-5,7-9]; the reason for the previous hospitalization(s) and the reason for the current admission[10-11]. Other indispensible dados are the medications that the patient uses at home or at the institution he or she lives in[9], and at the hospital during the current hospitalization[12], as the pharmacological aspects should be considered, such as interactions, doses, if the patient is allergic to any food, chemical or any other medication, as well as the difficulties and limitations of the patient in handling the therapy[3,8,12-13].

Other data were included in this field, considering the importance of their being addressed in the initial investigation to plan the health care and the discharge, because it could demand preparation, adaptations, and changes in the patient's home before his or her discharge[11]. The following are some examples: eating habits; water intake; urinary and dowel habits; impaired listening, with or without a hearing aid; impairment vision, with or without glasses; limited physical mobility, with or without using a cane, crutches, wheelchair or using orthoses or prostheses[12-13].

The specific focus on DM-related issues is observed in the items directed to recording the *Orientations about diabetes management before this admission*: information regarding the insulin therapy, such as the type of insulin used, its storage, application strategy, application sites and their rotation; diet management; blood glucose control; exercising; identifying hypoglycemia signs and symptoms, and the use of oral hypoglycemiants. Furthermore, the patients doubts on any of the subjects[10,14-15] are identified and registered, as well as the information to whether there is a companion to receive instructions about the care, participate in the hospital discharge planning and perform the care at home after discharge[8,11,16].

The proposal in the *First hospitalization day* field is to survey data regarding the devices used by the patient and special care: presence of peripheral or central venous access; drain(s); catheter(s) and their location; nasogastric or nasoenteral tube; gastronomy; indwelling catheter or the need for relief tubes; jejunostomy or colostomy[7,9,10]. The nurse will certainly need to rely on the support of a multidisciplinary team to evaluate the patient, his or her care needs and to develop a joint therapy proposal[4,7,10,14,17]. There is a field on the proposed instrument to take note of the decisions reached in the team meetings for further reference in the discharge plan. Registering this information is necessary so every professional involved in the care plan are aware of the proposed conducts, and may, thus, discuss on them and suggest changes in the plan according to the evolution of the patient[5,8-9].

There is also a field to register the professionals who evaluated the patient, the conducts they recommended, as well as any other data considered essential for planning educational and care actions: the estimated days until hospital discharge[17]; if the patient will be submitted to any surgical procedure during the current hospitalization[5,9,13-14]; if there will be a need for any service that could extend the hospitalization such as antibiotic therapy, orthopedic traction, use of drains and/or catheters, special postsurgical dressings[7-12,17]. Therefore, to register the referred information, the team must be aware about the importance of constantly sharing information, which remains a challenge in the hospital routine.

Another important aspect that requires early investigation is the communication with a professional of reference in primary health care, for instance, the nurse from the health center near the patient's home or the institution where he or she lives[5,8,12,14,18].

In the field *First and/or Second Hospitalization day*, the focus is on health education for diabetic patients. Literature shows that this is perhaps the best moment to initiate education activities because today hospitalizations are short. Furthermore, here has already been a chance to get to know the patient a bit better, as well as his or her family, caregivers and health care needs[2,11,16]. The next step is to verify what the patient already knows about DM-related care, what to review and what new information should be provided[16]. The proposed themes are grounded on the consulted literature and there are fields in the instrument to mark whether the patient has that knowledge or not, and to register any doubts he or she might have: insulin therapy; blood glucose control; recognizing the signs and symptoms of hypoglycemia; recognizing the signs and symptoms of hyperglycemia; chronic complications; use of oral hypoglycemiants; diet management and exercising. The sub-items addressed in each theme are described in the next section.

The *Insulin therapy*[3] addresses conversations with the patient about: *types of insulin*; *action mechanism*; *application sites*; *site rotation*; *application technique*;*aseptic technique*; *prescribed doses and times*; *conservation and transportation*; *exercising* and *hypoglycemia episodes*. In *Blood glucose control*, it is suggested to address the *control frequency*; *times for testing*; *interpretation of the results* and *most important laboratory exams*. Literature recommends addressing *what hypoglycemia is*; *symptoms*; *prevention*; *solving the episode* and *searching Emergency Service*[2,15].

Considering *hyperglycemia signs and symptoms*, the aspects addressed are those which help patients to recognize them, besides *what to do in hyperglycemia* and *health hazards in the short, mid and long term*. As for *Chronic complications*, the proposal is to talk with patients about problems that diabetes may cause on their system: retinopathy; neuropathy; renal insufficiency; diabetic foot; vasculopathy; stoke, and myocardial infarction[3].

In the item *use of oral hypoglycemiants*, the following were addressed: *doses and times*; *action mechanism of the medication in use* and *adverse events* including hypoglycemia and diarrhea[2,13,15]. In *Eating and diabetic control*, the following are addressed: *appropriate foods*; *the importance of fractioning food*; *number of meals* and *the relationship between eating and the time of insulin application*[2,15]. As for *Exercising*, the following are explored: *type of exercise*; *benefits*; *hypoglycemia preventing and solution*; *suggested duration and times* and *contraindications*[15-16].

Another aspect addressed in this health education investigation process is approached by asking the patient knows which DM-related subjects he or she has doubts about and which have been solved already. This question was included because it is proposed in literature[14,16] as a form to monitor the extent to patients are able to identify and express their doubts, and evaluate the effectiveness of the educational process during hospitalization.

Other items are present in the instrument as per recommendations in the literature[3,12,14]: investigate if the patients know every medication they have received at the hospital, if their doubts have been solved and if they received instructions about the medications they will take after hospital discharge. Studies[8,11,17] show it is important for patients to know the medications and that their use is necessary, either during hospitalization or after discharge, as it is an indicator of the patients' involvement in their self care.

The field *Second and/or third hospitalization day* also performed a survey of data related to specific care (proposed therapy, necessary devices, among those reported above)[7,9-10]. In this field there is also room for registering laboratory test results common in the clinical follow up of diabetic patients, such as fasting blood glucose, glycosylated hemoglobin levels, complete blood test, total cholesterol and fractions, and triglycerides[13,15].

Authors[4] emphasize that providing information is the primary intervention in the discharge plan. Therefore, it is necessary to investigate and register the information that must be reviewed with patients as of the interview and in during the next hospitalization days, which is addressed using the propose instrument. Because care is not unilateral, both the health professional and the patient must cooperate with each other to achieve the same goal[8,17-18].

Studies[4,9-10,17] describe experiences of either weekly or daily multidisciplinary meetings. In this proposal, meetings would be weekly. During the meetings, among the many topics to be addressed, the *estimated discharge date* should be determined, which would make it possible for nurses to make the right preparation to guarantee that the necessary information be delivered to the patient within the established time[9,17].

The proposed instrument also has a section to describe if there was communication with the Primary Health Care Center, and who was the main contact there (nurse's name), considering that they might need home visits and expensive medications[8,12,18]. The discharge plan for diabetic patients must consider and ensure the patient is included in the primary health care service and is followed by the outpatient clinic[13,15]. These services should include medical and nursing appointments to ensure safe follow up and referral when needed[13], besides encouraging patients and their families to become involved with the therapy proposal, promoting the effectiveness of the health care plan in the post-discharge period.

It is recommended that hospital discharge planning be an activity included in the regular day of nurses and it should begin already during their undergraduate studies[7,9]. However, studies[5,8] show that nurses have little time available

to include hospital discharge planning in the Nursing Process. Factors such as excessive work and not knowing about the need to participate in the planning, communication problems among nursing team members and with other professionals, and in having multidisciplinary meetings are some of the hindrances to an effective participation of nurses in the process of preparing patients for discharge. Hence, professional experience and a literature review show that the information and orientation to be followed after discharge are often given by doctors, both orally and written[3,7,9]. In addition, nurses also receive a short notice about the patients' discharge, and prioritize the bureaucratic aspects of this process.

Registering data increases the commitment to doing the activities related to that record. Therefore, one important feature of this proposal is encouraging making records of the actions performed as answers to the identified problems. Thus, completing and reading the instrument gives evidence of the needs of patients and their families, as well as of the related actions, both those performed and those that are pending.

CONCLUSION

Literature presents many discussions on hospital discharge planning and the importance of the nurse's role in this process; however, in Brazil the documentation of nurses' experiences remains scarce.

The patient's readiness and security for discharge should result from a plan that deliberately ´prepares them, and evaluates both physical and psychosocial indicators, which nurses must know how to investigate and register, with the purpose of documenting the assistance that is provided and so data may be recovered and reevaluated, by either the nurse or the multidisciplinary team, with the purpose of improving the patient's well-being.

As pointed out in literature, it is important for the multidisciplinary team to have meetings that promote case discussion and on exchanging experiences in order to promote discussions that truly improve the patient's conditions and self care, and provide support for the family as well. The present proposal, however, has a limitation, as the implementation requires the involvement of a group of professionals, besides the nurse, which should embrace the proposal, and invest their time and knowledge. This is sometimes not feasible in the hospital setting, from the personal perspective of the professional involved and considering the work conditions to which they are imposed.

The aim of the present study was to present an initial proposal for documenting hospital discharge planning for diabetic patients, and, as such, will be adjusted according to the considerations obtained from its use, considering it is taking place in the referred unit. We hope the results of its reformulation and application will be disseminated in further articles, and that they inspire the development of other proposals in different health care contexts.

REFERENCES

1. King H, Aubert RE, Herman WH. Global burden of diabetes, 1995-2025: prevalence, numerical estimates and projections. Diabetes Care. 1998;21(9):1414-31.

2. Ginde AA, Pallin DJ, Camargo CA Jr. Hospitalization and discharge education of emergency department patients with hypoglycemia. Diabetes Educ. 2008;34(4):683-91 .

3. Miasso AI, Cassiani SHB. Administração de medicamentos: orientação final de enfermagem para alta hospitalar. Rev Esc Enferm USP. 2005;39(2):136-44.

4. Ganzella M, Zago MMF. A alta hospitalar na avaliação de pacientes e cuidadores: uma revisão integrativa da literatura. Acta Paul Enferm. 2008;21(2):351-5.

5. Foust JB. Discharge planning as part of daily nursing practice. Appl Nurs Res. 2007;20(2):72-7.

6. North American Nursing Diagnosis Association International. Diagnósticos de enfermagem da NANDA: definições e classificação, 2009-2011. Porto Alegre: Artmed; 2010.

7. Pompeo DA, Pinto MH, Cesarino CB, Araújo RRDF, Poletti NAA. Atuação do enfermeiro na alta hospitalar: reflexões a partir dos relatos dos pacientes. Acta Paul Enferm. 2007;20(3):345-50.

8. Watts R, Gardner H. Nurses perceptions of the discharge planning. Nurs Health Sci. 2005; 7(3):175-83.

9. Pereira APS, Tessarini MM, Pinto MH, Oliveira VDC. Alta hospitalar: visão de um grupo de enfermeiras. Rev Enferm UERJ. 2007;15(1):40-5.

10. Antony MK, Hudson-Barr D. A patient-centered model of care for hospital discharge. Clin Nurs Res. 2004;13(2):117-36.

11. Maloney LR, Weiss ME. Patients' perceptions of hospital discharge informational content. Clin Nurs Res. 2008;17(3):200-19.

12. Jack BW, Chetty VK, Anthony D, Greenwald JL, Sanchez GM, Johnson AE, et al. A reengineered hospital discharge program to decrease rehospitalization: a randomized trial. Ann Intern Med. 2009;150(3):178-87.

13. Maynard G, O'Malley CW, Kirsh SR. Perioperative care of the geriatric patient with diabetes or hyperglycemia. Clin Geriatr Med. 2008;24(4):649-65.

14. Walker C, Hogstel MO, Curry LC. Hospital discharge of older adults. Am J Nurs. 2007;107(6):60-70.

15. Lien LF, Bethel MA, Feinglos MN. In-hospital management of type 2 diabetes mellitus. Med Clin North Am. 2004;88(4):1085-105.

16. Wong FKY, Mok MPH, Chan T, Tsang MW. Nurse follow-up of patients with diabetes: randomized controlled trial. J Adv Nurs. 2005;50(4):391-402.

17. Macleod A. The nursing role in preventing delay in patient discharge. Nurs Stand. 2006;21(1):43-8.

18. Shepperd S, Parkes J, McClaran JJM, Phillips C. Discharge planning from hospital to home. Cochrane Database Sys Rev. 2004;(1):CD00013.

Correspondence addressed to: Elenice Valentim Carmona
Av. Dr. Luís de Tella, 788 - Cidade Universitária
CEP 13083-000 - Campinas, SP, Brazil