

Individualization Process of the Standardized Care Plan through an Electronic Health Record. A Qualitative Study

Mònica Castellà-Creus^{1*}, Maria-Eulàlia Juvé-Udina², Maribel González-Samartino³ and Pilar Delgado-Hito⁴

¹Deputy Director of Nursing, Hospital Universitari Germans Trias i Pujol, Catalan Institute of Health, Badalona, Catalonia, Spain

²Assistant professor, Department of Fundamental Care and Medical-Surgical Nursing. Faculty of Medicine and Health Sciences, University of Barcelona, L'Hospitalet de Llobregat, Catalonia, Spain

³Unit Nurse Manager, Hospital Universitari de Bellvitge, Department of Health Information Systems, Catalan Institute of Health, L'Hospitalet de Llobregat, Catalonia, Spain

⁴Director and Professor, Department of Fundamental Care and Medical-Surgical Nursing. Faculty of Medicine and Health Sciences, University of Barcelona, L'Hospitalet de Llobregat, Catalonia, Spain

***Corresponding Author:** Mònica Castellà-Creus, Deputy Director of Nursing, Hospital Universitari Germans Trias i Pujol, Catalan Institute of Health, Badalona, Catalonia, Spain.

Received: October 01, 2020; **Published:** November 07, 2020

Abstract

Introduction: Understanding the method used by nurses in the individualization process of the Standardized Care Plan is essential to improve the delivery of nursing care and be more competent to know what patients need.

Aim: To describe the stages of the Standardized Care Plan individualization process used by nurses in acute hospitalization wards.

Method: A qualitative study in accordance with Strauss and Corbin's Grounded Theory was undertaken. Theoretical sampling with maximum variation was used to select nurses from adult units in three hospitals. In-depth individual interviews, participant observation and a focus group discussion were employed to obtain data. Constant comparison was used for analysis. Open, axial and selective coding were performed until data saturation was reached.

Results: Thirty-nine nurses participated between in-depth individual interviews and a focus group. Additionally, the researchers carried out 65 hours of participant observation. The analysis allowed the emergence of a core category: "adapting the standard to patient's needs" that describes the meaning of the Standardized Care Plan individualization process given by nurses. In addition, three thematic categories were also identified: "clinical reasoning", "individualization attributes" and "instrumental procedure". Clinical reasoning enables the nurse to decide the appropriate Standardized Care Plan according to the reason for admission and then adjust its elements according to the patient's comprehensive assessment. Individualization attributes describes some characteristics of this process like the prioritization of the life-threatening diagnoses and willingness to involve the patient and family. Finally, this individualization process also includes an instrumental procedure that is used to reflect the individualization record in the Electronic Health Record.

Conclusion: All of these steps are necessary in order to deliver and record a delivery of care that takes into account the needs and preferences of the patient and their family through an individualized care plan.

Keywords: Electronic Health Records; Nursing Care Plans; Nursing Process; Nursing Records; Qualitative Research

Abbreviations

SCP: Standardized Care Plan; EHR: Electronic Health Record; ICNP: International Classification for Nursing Practice; COREQ: Consolidated Criteria for Reporting Qualitative Research

Introduction

The conceptualization of the Nursing Process considers the patient as an individual person who should be allowed to become involved in their own healthcare [1]. In recent years, this humanist view of nursing practice has been based on the growing number of scientific papers published in relation to patient/family-centered care. To provide care according to this model, nurses need to consider the needs, preferences, willingness and experiences of the patients and their families [2]. Planning and delivering nursing care involving patient and family may have benefits for them, as the importance of their contribution is acknowledged. It is also beneficial for nurses as it is more satisfying when results are achieved with the people who have benefited from the care [1].

Among other factors, the planning stage of the Nursing Process includes deciding which diagnoses must be prioritized, either due to their impact on the patient's health condition or because immediate care is required, together with the individualization of the care plan. This individualization is carried out by adapting a Standardized Care Plan (SCP) to the patient's condition or creating a *de novo* care plan [1]. The way nurses individualize the SCP and the manner in which they record it in the Electronic Health Record (EHR) are questions that this study aims to answer.

Background

According to Juvé-Udina "rather than a record of tasks, a nursing care plan is a care agreement between the nurse and the patient/family, in which a clinical judgment is created and the care is prescribed and agreed in the form of interventions that once they have been implemented they will be reassessed" ([3], p. 65). The care plan "is a dynamic disciplinary knowledge tool that answers the questions: Why must it be done? (diagnosis/results), What must be done? (interventions), When must it be done? (intervention schedule) and Who must do it? (professional or carer who will perform it)" ([4], p. 120).

To facilitate the implementation and recording of the diagnoses, planning and evaluation stages of the Nursing Process, it is advisable to use SCP [5]. Very few papers have conceptualized an SCP [6-8]. Juvé-Udina defines an SCP as "structured synthesis of actual and/or risk nursing diagnoses and the nursing interventions required to obtain health outcomes from a defined population based on the reason for the care" ([9], p. 41). Nursing practice benefits from SCP as they make it possible to provide holistic, measurable and evidenced-based care [5]. In addition, novice and advanced beginner nurses in any setting may use them as a guideline to orient the usual care delivered to a group of patients; they also save time when writing records, as their structure contains the most common diagnoses and interventions for this group of patients [10].

According to the scientific literature, there are two elements that influence the use of SCP: the use of controlled nursing language systems and the computerization of clinical records [11]. Nursing languages allow the body of nursing knowledge to be named and described [12]. The American Nurses Association recognizes 12 nursing languages considered classifications, such as the International Classification for Nursing Practice (ICNP) and the NANDA International Taxonomy (NANDA-I) [13]. In addition, other types of vocabularies have

also been developed and implemented in the nursing discipline, such as interface terminologies; conceptual systems that act as a bridge between natural language used by nurses and EHR coding requirements; this is the case of the ATIC terminology [14]. ATIC is the terminology used by the participants of this study and its name is the acronym in the Catalan spelling of Architecture (Arquitectura), Terminology (Terminologia), Interface (Interfase), Information (Informació), Nursing (Infermeria) and Knowledge (Coneixement).

This terminology, evaluated for validity and reliability [9], contains elements for representing the nursing process and its results with a more specific degree of granularity than other vocabularies [14]. It also facilitates the individualization of the SCP as regards recording patients' complications or adverse events [15]. Its diagnostic area is structured into seven dimensions that come from the interpretative conceptualization of the disciplinary metaparadigm constructs (person, health, environment and nursing) [16,17].

Likewise, the need to transform data into information and knowledge led paper-based health records to evolve into electronic format [18]. This enables nurses to use electronic SCP that can record the individualization of the care, taking into account that the design of the EHR should include the functionality to allow the update and modification of the care plan in accordance with patient health status' progress [19].

Studies that propose or explain methods of individualization of the standardized care plan are scarce and they usually use a clinical case to facilitate their understanding [20-23]. Consequently, it might be necessary to research and obtain in-depth understanding of this phenomenon, as well as find out how nurses make the transfer from an SCP to an individualized care plan in an EHR.

Purpose of the Study

The purpose of this study was to describe the stages of the SCP individualization process used by nurses in acute hospitalization wards.

Methods

Study design

A qualitative study based on Strauss and Corbin's Grounded Theory was undertaken [24].

EQUATOR guidelines for qualitative research 'Consolidated Criteria for Reporting Qualitative Research' (COREQ) were applied [25].

Sample/participants

The participants were registered nurses selected by theoretical sampling with maximum variation. Nurses were included from the four professional nursing career groups that exist in our public health system. The first level encompasses up to 10 years' experience, the second group 11 years or more, the third category 18 years or more, and the fourth level 25 years or more. The participants fulfilled the following characteristics: a) they had worked for over six consecutive months in the same hospital; b) they had worked with electronic care plans and c) they worked in a medical, surgical or medical-surgical hospitalization ward. Paediatric and outpatient wards were excluded. Participants were included until the point of theoretical saturation of data was reached. The participant recruitment process was carried out by unit nurse managers and knowledge and information system nurses, also known as superusers, who were responsible for proposing ward nurses to participate in the study and putting them in contact with the researchers.

Setting

The study was carried out in three metropolitan hospitals in Barcelona (Catalonia). Two facilities are tertiary hospitals, and the third is a basic general hospital. The three centers complied with accessibility criteria for the researchers. They use the same EHR for nursing records and share the same electronic SCP, built using the ATIC terminology [14].

Data collection

Data were collected during two years, from September 2015 to October 2017, and three data collection techniques were employed as follows.

Individual in-depth interviews: The interviews were conducted by the principal researcher in meeting rooms in each hospital and lasted for approximately one hour. They were recorded and transcribed verbatim. Nurses were asked the following questions: What do you understand by SCP individualization? How do you individualize a SCP? Which steps do you take in the EHR to individualize an SCP?

Participant observation: Conducted in several wards between the three hospitals: General Surgery, Trauma, Gynaecology, Vascular Surgery, Neurology and Neurosurgery, Cardiology and Cardiac Surgery, Nephrology and Urology, Respiratory and Internal Medicine. The unit nurse managers inform nurses that the observation was going to take place and explained them the reason, without going into details. The researchers were allowed to talk to the participants during the observation. The observations were conducted by the principal researcher except in two occasions that were conducted simultaneously by the principal researcher and another researcher so as to contrast the data. All the researchers took field notes for subsequent analysis.

Focus group: It was held in a meeting room in the head office of the hospitals and lasted for two hours. Principal researcher performed the duties of a moderator and another acted as the observer. The latter took notes of the subjects she considered important, as well as of the interactions established between the participants. It was recorded and transcribed verbatim. The purpose was to validate the data that had been obtained with the previous data collection techniques and increase the information for the codes that had not reached saturation.

Data analysis

The data were collected and analyzed simultaneously using constant comparison. The text of the interview transcriptions and focus group discussion, as well as the field notes of the participant observation was analyzed. First, open coding was carried out, which consisted in the micro-analysis of the texts to create codes. Second, axial coding was performed in order to classify the codes into categories and subcategories and third, the selective coding process was completed to establish the core category and the thematic categories and explain their meaning. Nvivo v.10 software was used for the analysis.

Ethical considerations

The study was approved by the Clinical Research Ethics Committee of the participating hospitals (PI-15-089) and (PR234/15). Nurses participated voluntarily in the interviews and focus group discussion. First, the purpose of the study was explained to them verbally and in writing, then the informed consent process was carried out. In accordance with the applicable European legislation on data protection, alphanumeric codes were used to guarantee the confidentiality of the information provided and the participants' anonymity.

Rigour

The study was conducted following Guba and Lincoln's criteria for trustworthiness and authenticity [26]. To increase the level of rigour, the researchers, data and data collection techniques were triangulated. The transcription was sent by email to the people participating in the interview and focus group discussion so they could confirm its content. The analysis was supported by the memorandums written during the entire analytical process. During the analysis, the researchers applied reflexivity so as to minimize biases related to their experience of the phenomenon under study [27].

Results

A total of 39 nurses participated in the study. Twenty-eight (71%) participated in the individual in-depth interviews and 11 (29%) in the focus group discussion. Ninety per cent were women aged between 23 and 59. Fifteen nurses (38.5%) worked on the morning shift, ten participants (25.6%) worked in the afternoon, eight (20.5%) at night and six nurses (15.4%) worked in the 12-hour shift. As regards the years of experience in the hospital, 12 nurses had up to 10 years' experience (30.8%), 12 had 11 years or more (30.8%), seven had 18 years or more (17.9%) and eight had over 25 years of experience (20.5%). Of the total number of nurses, 15 had previously worked with paper-based care plans (38.5%). Participant observation, lasting for a total of 65 hours, was conducted in 11 hospitalization wards mentioned above. From data analysis arose a core category: "adapting the standard to patient's needs" which is constituted by three thematic categories that describe the individualization process of the SCP drawn up by nurses: "clinical reasoning", "individualization attributes" and "instrumental procedure" carried out in the EHR.

Adapting the standard to patient's needs

The core category describes the meaning of the SCP individualization process given by nurses. This process of individualization is conceived as an adaptation to the SCP to the individual needs of each patient. This individualization is considered essential to deliver a patient-centered care and contemplate every patient like a particular person: "...that the care plan of each patient has what is appropriate to their current health status... of a general care plan, adapt it to the needs of each patient. That is, a specific plan for that particular patient" (N20- Interview).

"...it is to reflect on what the patient needs. For me this is individualizing, thinking about the patient and taking into account their preferences" (N28- Interview).

Clinical reasoning

Understood as a set of thought and decision-taking processes related to the individualization of an SCP that enables the nurse to decide on the SCP they deem appropriate and to adapt it to the patient's status so as to individualize it.

To start this process, nurses state that first they need the patient's data, which they obtain through the interview that can also include the family. They also obtain information from the physical examination, the medical records and, if the patient has been transferred from another unit, such as intensive care or emergency department, the information is also obtained by the verbal communication from the nurse issuing the transfer: "A good interview is important and provides a lot of information. If the patient is disoriented, I ask the family and then I look at the patient from top to bottom... I also read the medical reports and the nursing records" (N11-Interview).

A patient who has suffered an acute myocardial infarction is going to be transferred from the coronary unit to the cardiology unit. The nurse issuing the transfer calls the receiving nurse to explain the patient's health condition and the required care (Participant observation 4).

Nurses use all this information to make a comprehensive assessment of the person and chart it in the EHR: "When the patient arrives to the ward, first I make an assessment based on the information I have read in the reports, the information the patient tells me and what I can see" (N24-Interview).

Likewise, they identify the reason for admission, which is the main reason for hospitalizing the patient: "I look for the reason for admission in the medical report" (N6-Interview).

Based on the reason for admission in the hospitalization ward, nurses decide on the most appropriate SCP for the patient: "...I use the medical diagnosis or diagnostic impression as a guide to know which SCP I have to apply" (N16-Interview).

Nurses subsequently individualize the plan, bearing in mind the data of the comprehensive assessment and adapting the content of the SCP to the patient's specific condition: "I adapt the care plan to the patient I have in front of me....I have to individualize the SCP so it contains the specific care required by a certain patient" (N13-Interview).

"...It entails giving great thought to the care the patient in question needs. There are people that have undergone hip replacement surgery who are very dependant, while others are more autonomous, and for this reason, they don't require the same care" (N36-Focus group discussion).

Nurses emphasize that it is important to regularly update the individualization, to keep up with changes in the patient's status, which imply modifying the previous clinical judgments issued by other nurses and/or the planning of the care. They state that individualization must be carried out on an ongoing basis until the patient is discharged from the hospital: "It is necessary to keep modifying the care plan to keep up with the patient's evolution until the day they are discharged" (N3-Interview).

Individualization attributes

Nurses express their willingness to involve the patient and their family in the care individualization, especially as regards care aimed towards encouraging autonomy: "...I give the family health education. I teach them how to dress the wound or mobilize the patient" (N32-Focus group discussion).

However, the nurses state that they sometimes find it difficult to involve the family due to its absence or because family misunderstandings on the nurses' role: "...but sometimes you don't know who the family members are because they are at work and, on occasions, due to lack of education or information they refuse and tell us that looking after patients is our job and not theirs" (N34-Focus group discussion).

Nurses also express that they deliver planned care in order of priority according to the life-threatening risk it implies for each person: "I place greater importance on life-threatening factors. The most useful thing for a patient that is admitted to hospital in acute condition" (N30-Focus group discussion).

In addition, this prioritization also occurs when the nurses individualize the care plan: "We prioritize the care records that concern physical factors, such as vital signs, dressing wounds or taking care of catheters and drainage tubes" (N32-Focus group discussion).

They likewise take into account the psychological and family-related aspects when it comes to delivering the care. Although they state that recording it is of secondary importance: "I think that we do provide care related to anxiety or addressed to how the family is dealing with the illness. But afterwards we don't record it in the care plan in the way we would like to" (N36-Focus group discussion).

Instrumental procedure

The nurses participating in this study use the same EHR that contains the necessary structure to show the Nursing Process record. Included is the ‘Care Plan’ section that makes it possible to choose an SCP from among the 700 contained in the Care Standards Harmonization Programme of the Catalan Institute of Health [4] and individualize its structural elements related to diagnoses, interventions and activities. In the next quotations, diagnoses, interventions and activities used as examples belong to ATIC terminology.

The progression of the steps the nurses take in this EHR, when they individualize the SCP of a patient who has just been admitted, is as follows.

First, they select an SCP from among those contained in the EHR database: A patient from emergency department is admitted with an Acute Pulmonary Oedema. In the “Care Plan” section, the nurse open the plan browser and enters the SCP for Acute pulmonary oedema_Unstable stage (Participant observation 3).

Second, they eliminate the diagnoses the patient does not present and the care they do not require from the SCP.

“I read the plan and I delete everything that is not necessary (depending on the assessment). For example, a patient who has undergone an operation, if they have already urinated for the first time, I delete the activity “First micturition: assessment”, but if the patient is receiving opioid analgesics I keep the diagnosis “Risk of urinary retention” with the activity “Bladder distention: assess”” (N14-Interview).

Third, they add new diagnoses according to their judgement and the interventions required, not contained in the structure of the SCP.

“...I add whatever is missing to the plan. Regardless their reason for admission, if the patient is diabetic and the SCP does not contain glycaemic controls, I add the diagnosis “Risk of hyper/hypoglycaemia” with the intervention “Capillary glycaemia: control” or if the patient is disoriented I add the diagnosis “Disorientation” with the interventions to prevent its consequences” (N23-Interview).

Fourth, program the care to tally with the appropriate administration frequency.

“If I have to change the time schedule to treat a pressure sore every 48 hours, then I modify the treatment schedule in the care plan” (N10-Interview).

This four-step sequence known as SEAP (Select, Eliminate, Add, Program) is not always fully completed. Sometimes upon establishing the SCP it is not necessary, due to the fact the standard matches the patient’s requirements and no element needs to be deleted, added or rescheduled; in subsequent updates of the plan, it might only be necessary to add diagnoses or interventions, or simply because the patient’s condition does not imply selecting a new SCP.

Figure 1 shows the diagram of the SCP individualization process.

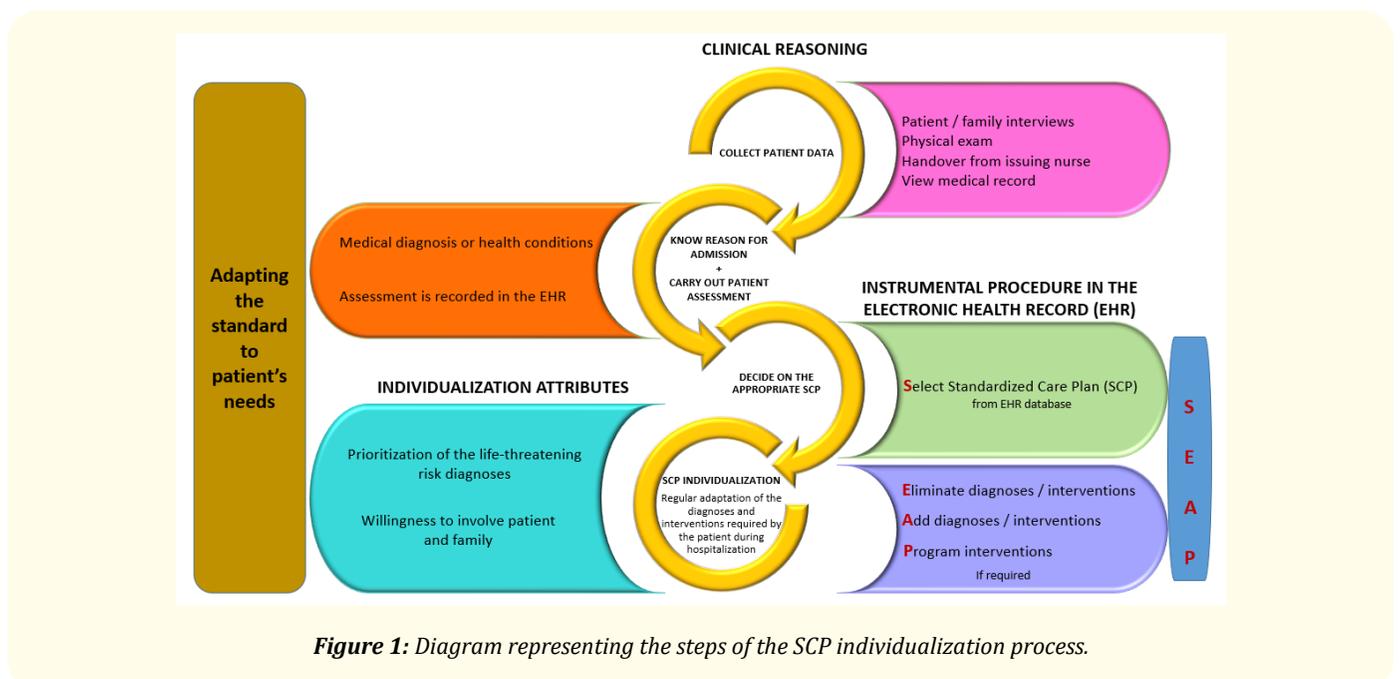


Figure 1: Diagram representing the steps of the SCP individualization process.

Discussion

Nurses participating in this study use a specific method to individualize the SCP. This method includes clinical reasoning, as well as the instrumental procedure employed in the EHR to decide the appropriate SCP and be able to individualize it according to each patient health status and progress. The selection of the SCP is linked to the reason for admission. This may coincide with the medical diagnosis or be related to a health or social situation [4]. It is important to ensure that decision-making regarding individualization is not only related to the reason for admission [28,29], but also to the comprehensive assessment [4,20,21] to thus be able consider the patient's characteristics that will condition individualization.

Some barriers and facilitators influence the result of the individualization process [30], considering all these factors, nurses stressed that the individualization must be recorded periodically, in accordance with the changes in the patient's health status. This guarantees that the information offered by the care plan is updated [5]. According to Juvé-Udina [4] there are two factors that influence the frequency of the individualization; the patient's stability and nurse's expertise as regards the intensity and depth of the assessments they make of the patient. Regarding the patient's stability, the fewer modifications patient health status presents, the less adequacy of the care plan it will require because it will not be necessary to modify the diagnoses and planned interventions. In reference to the nurse expertise, a greater capacity for clinical discernment and understanding of the patient's health status in a given context will influence the performance of a more precise assessment, as well as the establishment of the frequency of reassessments and patient evaluation and better interpretation and prioritization of the data obtained.

The results of this study suggest that nurses provide the patient and their family with the opportunity to participate in the care individualization, especially as regards encouraging autonomy. According to Náfrádi, *et al.* [31], autonomy benefits the patient health status. For this, it is necessary to produce a patient empowerment, understood as the control that the patient exercises over decisions about their health and which, at the same time, are shared by health professionals [32,33].

Conversely to the study by Andersen, *et al.* [34], in which family members admit that they want to be recognized as a resource by health professionals, participants of the present study report reluctance on the part of some family members in relation to participating in the patient's care during their admission to the hospital due to social beliefs about the nurse's responsibilities. Researchers in other studies affirm that to make families become involved, nurses need to establish a relationship with them and maintain effective communication [34,35].

On the other hand, prioritizing is the ability to interpret information and choose the most suitable diagnoses and interventions for the patient's individual needs [36]. In the individualization process, nurses in this study prioritize the diagnoses of the "Being physical" dimension of the ATIC terminology. This means that in a context of hospitalized acute care patients and according to the assessment carried out, nurses give preference to diagnoses that involve a life-threatening risk due to their impact on the patient's mortality risk [36]. However, prioritizing these diagnoses does not imply ignoring the secondary diagnoses, as long as a holistic nursing philosophy is adopted that considers the person in their integrity [36,37].

Another factor to consider in the individualization process of the SCP is the design of the EHR. Unlike the EHR from other studies that do not allow users to update the care plan unless a new one is created with the consequent time that this requires [38], the EHR of the hospitals participating in this study have been specially designed to enable SCP individualization and its updating. Currently, the record

of the Nursing Process should be considered essential when a center acquires or designs an EHR for the record of the delivery of nursing care. On the contrary, the old nursing charts are simply being computerized, based largely on the vital signs, nursing notes and the record of activities or tasks to be performed.

In this study, nurses perform an instrumental procedure in the EHR, named SEAP (Select, Eliminate, Add, Program) [22] that consists of selecting a SCP from among those introduced in the database, eliminate and/or add elements to its structure, and even modify its scheduling. This functional design is essential for the record of the SCP individualization and thus be able to reflect the clinical reasoning and the methodology of nursing practice [18,39]. However, it is also part of SCP individualization process to consider whether the diagnoses and interventions included in the standard are appropriate to the problems and care that the patient needs; elements that, in the absence of a standard, the nurse would include in an individualized care plan created from the beginning of care delivery [14].

Limitations of the Study

Despite the application of rigorous criteria throughout the research process, this study has a series of limitations that must be recognized.

First, it should be borne in mind that the results of this research emerge from a qualitative study, carried out in a specific context and population. The study did not pursue the generalization of the results, but rather to deepen the understanding of the SCP individualization process to the specific needs of each patient attended in the hospital setting. Second, this study focuses on three hospitals that share the same EHR, use the same nursing terminology and the same nursing knowledge management model. For this reason, the study covered hospitals of different levels of care and a variety of wards in order to try to find the maximum variability considering these characteristics. Finally, unit nurse managers and knowledge and information system nurses acted as key people in accessing the study participants. Although they were given very precise indications of the characteristics that the participating nurses who would make up the sample should have, the possibility that these key professionals carried out some control in the selection of the participants cannot be excluded.

Conclusion

The SCP individualization process includes clinical reasoning to enable the nurse to decide the appropriate SCP, basing their initial decision on the reason for admission. They use the comprehensive assessment of the patient' health status to adapt the diagnoses and interventions of the SCP to the patient's needs, thus creating an individualized care plan. This adaptation must be carried out periodically throughout the entire hospital stay, according to the continuous assessment of the patient's condition.

The individualization process also includes an instrumental procedure that is used to reflect the individualization record in the EHR, by selecting the SCP and deleting, adding and/or scheduling the diagnoses and/or interventions.

In this process, nurses prioritize the diagnoses related to life-threatening risk that belong to 'Being Physical' ATIC terminology human dimension and pursue to foster the participation of the patient and their family.

All of these steps are necessary in order to deliver and record a delivery of care that takes into account the needs and preferences of the patient and their family through an individualized care plan.

Acknowledgements

The authors would like to thank Ms Isabel Andrés-Martínez for her support as Nursing Director of Hospital Universitari Germans Trias i Pujol for the development of this study, as well as the funding provided by the Health Department of the Government of Catalonia by way of a peer review process and under the funding initiative "Strategic Plan for Research and Innovation in Health (PERIS) 2016-2020" Protocol number: SLT002/16/00024.

Conflict of Interest

No conflict of interest has been declared by the authors.

Bibliography

1. Alfaro-LeFevre R. "Applying Nursing Process. Promoting collaborative care". Philadelphia, PA: Lippincott Williams and Wilkins (2009).
2. Bokhour BG, *et al.* "How can healthcare organizations implement patient-centered care? Examining a large-scale cultural transformation". *BMC Health Services Research* 18.1 (2018): 168.
3. Juvé-Udina ME. "Evaluación inductiva de la estructura de una terminología enfermera de interfase: conceptualización del proceso enfermero". ["Inductive evaluation of the structure of a nursing interface terminology: conceptualization of the nursing process"]. *Nursing (Spanish ed.)* 30.7 (2012): 62-66.
4. Juvé-Udina ME. "Plans de cures estandarditzats per a malalts hospitalitzats. [Standardized care plans for inpatients]". Barcelona, Catalonia: Generalitat de Catalunya, Departament de Salut, Institut Català de la Salut (2013).
5. Ballantyne H. "Developing nursing care plans". *Nursing Standard* 30.26 (2016): 51-60.
6. Jakobsson J and Wann-Hansson C. "Nurses' perceptions of working according to standardized care plans: a questionnaire study". *Scandinavian Journal of Caring Sciences* 27.4 (2013): 945-952.
7. Pöder U, *et al.* "Implementation of a multi-professional standardized care plan in electronic health records for the care of stroke patients". *Journal of Nursing Management* 19.6 (2011): 810-819.
8. Svensson S, *et al.* "Development and implementation of a standardized care plan for carotid endarterectomy". *Journal of Vascular Nursing* 30.2 (2012): 44-53.
9. Juvé-Udina ME. "Evaluación de la validez de una terminología enfermera de interfase". ["Validity evaluation of an interface nursing terminology"] PhD diss., Universitat de Barcelona (2012).
10. Carpenito LH. "Nursing Diagnoses. Application to Clinical Practice". Philadelphia, PA: Wolters Kluwer (2016).
11. Thoroddsen A, *et al.* "Content and completeness of care plans after implementation of standardized nursing terminologies and computerized records". *Computers, Informatics, Nursing* 29.10 (2011): 599-607.
12. Törnvall E and Jansson I. "Preliminary Evidence for the Usefulness of Standardized Nursing Terminologies in Different Fields of Application: A Literature Review". *International Journal of Nursing Knowledge* 28.2 (2017): 109-119.
13. American Nurses Association. "Nursing: Scope and Standards of Practice". Silver Spring, MD: ANA (2015).
14. Juvé-Udina ME. "What patients' problems do nurses e-chart? Longitudinal study to evaluate the usability of an interface terminology". *International Journal of Nursing Studies* 50.12 (2013): 1698-1710.
15. González-Samartino, *et al.* "Accuracy and completeness of records of adverse events through interface terminology". *Revista da Escola de Enfermagem USP* 52 (2018): e03306.
16. Juvé-Udina ME. "ATIC®. Una terminología enfermera de interfase (II)". ["ATIC®. A nursing interface terminology (II)"]. *Revista ROL de Enfermería* 35.5 (2012): 368-375.

Citation: Monica Castella-Creus, *et al.* "Individualization Process of the Standardized Care Plan through an Electronic Health Record. A Qualitative Study". *EC Nursing and Healthcare* 2.12 (2020): 09-20.

17. Juvé-Udina ME. "Salud, entorno y enfermería. Fundamentos teóricos y metodológicos para el desarrollo y la validación de una Terminología Enfermera de interfase (III)". ["Health, environment and nursing. Philosophical and theoretical foundations for the development and validation of a nursing interface terminology. Part III"]. *Revista ROL de Enfermería* 35.6 (2012): 409-416.
18. Akhu-Zaheya L, et al. "Quality of nursing documentation: Paper-based health records versus electronic-based health records". *Journal of Clinical Nursing* 27.34 (2018): e578-e589.
19. Rouleau G, et al. "Impact of Information and Communication Technologies on Nursing Care: Results of an Overview of Systematic Reviews". *Journal of Medical Internet Research* 19.4 (2017): e122.
20. Ammenwerth E, et al. "Nursing process documentation systems in clinical routine--prerequisites and experiences". *International Journal of Medical Informatics* 64.2-3 (2001):187-200.
21. Mayilvaganan V. "Steps in individualizing a standardized care plan". *Nursing Journal of India* 93.2 (2002): 33-35.
22. Castellà-Creus M, et al. "Proceso de individualización de un plan de cuidados estandarizado mediante un sistema de información. Caso clínico: ictus". ["Individualization process of the standardized care plan through an electronic health record. Clinical case: ictus"]. *Nursing* 29.9 (2011): 60-66.
23. Desai S, et al. "A review for development of concise nursing care plan (CNCP)". *International Journal of Advances in Nursing Management* 7.4 (2019): 371-377.
24. Strauss A and Corbin J. "Bases de la investigación cualitativa: técnicas y procedimientos para desarrollar la teoría fundamentada" ["Qualitative research basis: techniques and procedures to develop a grounded theory"]. Medellín: Universidad de Antioquía (2002).
25. Tong A, et al. "Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups". *International Journal of Qualitative Health Care* 19.6 (2007): 349-357.
26. Guba EG and Lincoln YS. "Paradigmatic controversies, contradictions, and emerging confluences". In Denzin NK, Lincoln YS (Editions.), *The sage handbook of qualitative research*. London: SAGE Publications (2000).
27. Rettke H, et al. "Using reflexive thinking to establish rigour in qualitative research". *Nursing Research* 67.6 (2018): 490-497.
28. Olsson PT, et al. "Standardized care plans in Swedish health care: their quality and the extent to which they are used". *Scandinavian Journal of Caring Sciences* 23.4 (2009): 820-825.
29. Thoroddsen A, et al. "Content and completeness of care plans after implementation of standardized nursing terminologies and computerized records". *Computers, Informatics, Nursing* 29.10 (2011): 599-607.
30. Castellà-Creus Mònica, et al. "Barriers and facilitators involved in standardised care plan individualisation process in acute hospitalisation wards: A grounded theory approach". *Journal of Clinical Nursing* 28 (2019): 4606-4620.
31. Náfrádi L, et al. "Is patient empowerment the key to promote adherence? A systematic review of the relationship between self-efficacy, health locus of control and medication adherence". *PLoS One* 12.10 (2017): e0186458.
32. Bravo P, et al. "Conceptualising patient empowerment: a mixed methods study". *BMC Health Services Research* 15 (2015): 252.

33. Risling T, *et al.* "Evaluating Patient Empowerment in Association With eHealth Technology: Scoping Review". *Journal of Medical Internet Research* 219.9 (2017): e329.
34. Andersen IC, *et al.* "Patients' and their family members' experiences of participation in care following an acute exacerbation in chronic obstructive pulmonary disease: A phenomenological-hermeneutic study". *Journal of Clinical Nursing* 26.23-24 (2017): 4877-4889.
35. Mackie BR, *et al.* "Acute care nurses' views on family participation and collaboration in fundamental care". *Journal of Clinical Nursing* 27.11-12 (2018): 2346-2359.
36. Ramóns-Garzón X. "Reflexiones sobre el proceso de Enfermería. Desafío para estudiantes, docentes y profesionales de la práctica clínica" ["Reflections on the Nursing Process. Challenge for students, teachers and professionals of clinical practice"]. *Metas de Enfermería* 20 (2017): 75-78.
37. Juvé-Udina ME. "Capacidad discriminante del diagnóstico enfermero principal con el uso de la terminología ATIC: estimación ponderal preliminar". ["Discriminant capability of the main nursing diagnosis using the ATIC terminology: Preliminary weight estimation"]. *ENE Revista de Enfermería* 11.3 (2017).
38. Yu P, *et al.* "Unintended adverse consequences of introducing electronic health records in residential aged care homes". *International Journal of Medical Informatics* 82.9 (2013): 772-788.
39. Lima AF and de Oliveira Melo T. "Percepção de enfermeiros em relação à implementação da informatização da documentação clínica de enfermagem" ["Nurses' perception regarding the implementation of computer-based clinical nursing documentation"]. *Revista da Escola de Enfermagem USP* 46.1 (2012): 175-183.

Volume 2 Issue 12 December 2020

©All rights reserved by Monica Castella-Creus, *et al.*