



ANALYSIS OF THE EFFECTIVENESS OF THE IMPLEMENTATION OF A NURSING CARE PLAN IN A GENERAL SURGERY DEPARTMENT

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Abstract: This article partially presents the study to investigate the effectiveness of the implementation of nursing care plans in a surgical department of a hospital unit. The part of the analysis carried out for the nursing diagnosis regarding the risk of falling (this being one of the biggest risks for patients in the surgery department) was highlighted. The data were collected from the care plans accomplished from January to March 2022. We defined a grid of analysis criteria, criteria defined on the basis of the care plan, which was made based on the standards and legal provisions in the field. The criteria defined for measurement are: assessment of fall risk on admission (CC1), possibility of alerting the medical staff by the patient (CC2), assessment of the risk of fall after surgery (CC3) and training of the patient on the use of support devices (CC4). The result of the study generally shows that the implementation of nursing care plans in the surgery department has an overall effectiveness of 99%. However, we identified deviations from the standard at the CC3 indicator, which has the highest degree of non-compliance: 3.4%. We identified causes and suggested improvement measures and actions. The results of the analysis carried out in this work are an effective means of obtaining the necessary data to improve the way nurses work in accordance with the standards and legislation in force to increase patient safety.

INTRODUCTION

The need to implement the nursing care plan was the requirement of the National Quality Management Authority regarding the application of specific criteria. In the Clinical Management reference, there is the requirement "The medical staff ensures the complete and personalized care of the patient". Thus, the nursing care plan becomes an integral part of the patient's case management and is part of the general clinical observation sheet.(1,2)

Through the implementation of the standards, criteria and indicators were established for the nursing care plans to help improve the quality of medical care in hospitals and to reduce the risks related to patient care. Care must be patient-centred, comply with medical recommendations and be documented according to specific legislation, evidence-based best practice guidelines and recommendations from national and international standards.(1,3,4)

In the stressful environment of healthcare in hospital surgical wards, there is a risk of gaps in raising awareness regarding human factors, cognitive overload, interruptions and distractions. However, the care plan helps us maintain vigilance in our focus on patient safety and optimal care outcomes.(5)

In daily activity, the result of patient care is impacted by a multitude of factors and the interaction between them: personnel, patients, infrastructure (equipment, materials), technology, methods and procedures, environment and organizational culture.

The variability of the medical practice of patient care generates vulnerabilities and risks for patients, for medical assistants and the increase in the costs of performing the healthcare procedure. To respond to this variability given by the

multitude of contributing factors, standard tools are used, such as the nursing care plan. The use of such standard tools allows us to keep under control the variability in the care system, respectively, to ensure the achievement of the expected outcome.

To analyse the effectiveness of the implementation of the nursing care plans, to identify vulnerabilities and dysfunctions in the way it is used and to identify ways to improve the way of working, we analysed the implementation of the nursing care plan in the general surgery department.

AIM

The aim of this study is to evaluate the effectiveness of the implementation of the nursing care plan and the continuity of its use.

The objectives of this study are the following:

- Appreciation of the degree of satisfaction of the patient as well as of the medical staff as a result of the application of the nursing care plan.
- Assessment of the patient's current or potential health status or illness following the application of the care plan.
- Identifying the particular reactions of the cared for person.
- Competence of the medical team in managing the nursing care plan.
- Identifying the activities that do not converge towards the fulfilment of the tasks in the care plan.

MATERIALS AND METHODS

The research was carried out by evaluating the care plans of patients in the general surgery department between

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January and March 2022. We chose this period after the effects of the pandemic subsided.

We evaluated the existing practice in the surgery department by referring it to the national standards, to the existing protocols and procedures at the hospital level that establish adequate measures to control the risks highlighted in the care plans.

We took into consideration the risk of falls, which appears in care plans and for which there is a rating scale.

We conducted this study to apply the proposed methodology with a view to extending it to the other risks as well.

The study carried out is a descriptive one through direct observation, and the tool used was the nursing care plan.

The assessment of the deficiencies in the way of applying the nursing care plan or the lack of actions undertaken for the management of the defined risks was done on the basis of an analysis grid.

For each assessed risk, we developed an analysis grid that includes four criteria, selected in accordance with the existing protocol at the hospital level and recorded in the existing risk prevention scale within the nursing care plan.

Each criterion that was met was marked with 1, while the criterion not met or resulting from observation with deficiencies, was marked with 0. The definition and structuring of the results tables allow statistical calculations and the aggregation of results on each risk and criterion in the grid.

RESULTS

To assess the risk of falling, we have developed a risk analysis grid, which is reproduced below with the four assessment criteria:

Table no. 1. Analysis grid for the risk of fall

Criterion	Code
1. The fall risk assessment on admission was recorded in the care plan	CC1
2. The patient has the possibility of alerting the medical staff/alert buttons placed at the end of the bed	CC2
3. The assessment of the risk of falling is carried out and recorded after the surgical intervention	CC3
4. Training on how to use supported devices is recorded	CC4

The first criterion (CC1) has the role of measuring whether the risk of falls is assessed on admission and whether it occurs and is treated by the nursing diagnosis. According to the procedures in the general surgery department, this initial fall risk assessment is mandatory.

A second criterion is CC2, and we introduced it in the evaluation grid to measure the existence of alerting means and systems from the part of the patient, an essential measure in limiting movements and reducing the risk of falling.

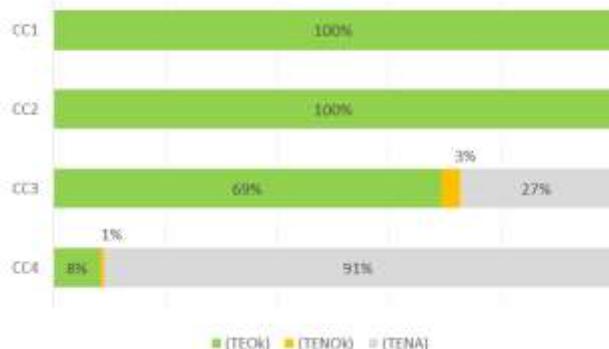
Criterion CC3 is introduced in the evaluation grid and aims at measuring the post-operative fall risk assessment activity. This is very important to reduce this risk. If, both during hospitalization and after surgery, an existing potential for falling is assessed and identified, it is necessary and mandatory for the patient to benefit from instructions on how to use support devices, a very important aspect in order to reduce the risk of falling. The procedure defines us who does this instruction, where and how.

Criterion CC4 measures the degree of fulfilment of this instruction, when the necessity of its existence emerged as a result of the existence of the risk of falling.

After centralizing the information from the 571 care plans for the first objective, we obtained the following data

(figure no. 1).

Figure no. 1. Measuring items according to fall risk criteria



- Criterion CC1 was met by assessing the risk of fall on admission, this was recorded by nurses in all care plans.
- Criterion CC2 was measured by direct observation. There are 55 beds in the general surgery department and all of them have bed alarms.
- For the CC3 criterion, measurement was ensured by analysing the nursing care plans. It was verified that the postoperative fall risk assessment was recorded. Not all patients who underwent surgery had a fall risk assessment completed after leaving the operating room. For these cases, the criterion was scored with 0 as not fulfilled.
- Criterion CC4 was measured by studying the information recorded in the care plans, namely for all patients assessed as being at risk of falling, if the necessary training was done. Training the patients with risk of falls on how to use medical devices was not documented in all care plans, so we assumed it was not done.

The results recorded for each care plan according to each criterion are as follows:

Table no. 2. Outcomes measured for the risk of fall

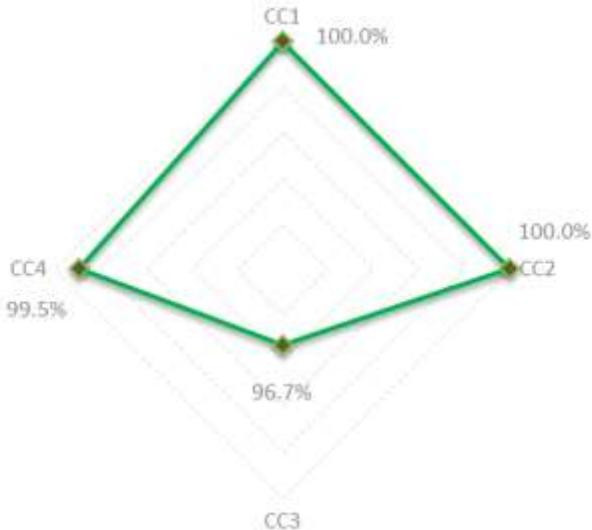
Risk of fall (NPLI)	CC1	CC2	CC3	CC4	Mean
Number of care plans reviewed	571	571	571	571	571
(TEOk)	571	571	396	48	97
(TENOk)	0	0	19	3	6
(TENA)	0	0	156	520	168
Standard required	100%	100%	100%	100%	100%
(Rate_Compliance_Criterion) Compliance result	100%	100%	96,7%	99,5%	99,0%
(Rate_Non- Compliance_Criterion) Non-compliance	0%	0%	3,4%	0,5%	1,0%

The assessment of fall risk in terms of recording it in the nursing care plan and managing this risk through this tool has an overall compliance result from the results table, namely 1% non-compliance in the use of the care plan for fall risk management in patients within the surgery department during the studied period (table no. 2).

Doing an analysis broken down by criteria, it turns out that this result of non-compliance is due to some non-conformities registered for criteria CC3 (post-operative fall risk assessment), namely 3.4% and CC4 (training on how to use support devices) having a non-compliance rate of 0.5%.

Criterion CC3 has this degree of non-compliance not due to a lack of assessment of post-operative risk of falls, but due to the fact that, after this assessment was carried out, the information and communication with the patient about this risk was not recorded. The compliance rate for each criterion defined for the risk of fall is represented in figure no. 2.

Figure no. 2. Compliance rate for fall risk criteria



It can be appreciated that the nursing care plan is an effective tool in the management of the risk of falls in the patients within the surgery department; an insignificant percentage of elements not accomplished according to the standard in the defined protocols was found.

The result obtained from the above analysis is also correlated with what happened in reality. During the analysed period of time, there was no sentinel event related to the risk of falling, that is, no patients who fell with long-term consequences were registered. However, during the analysed period, two falls and one near miss event related to the risk of falling were recorded. Two patients moved without announcing and/or without using the bed alarm button. None of these can be correlated with the outcome of the evaluation of criteria CC3 and CC4, which had a low non-compliance rate. Even though criterion CC2 has a degree of compliance of 100%, i.e. all beds in the hospital rooms have bed alarm buttons, they were not used in these cases.

Thus, as an improvement action, a review of the protocol in the nursing care plan is required, regarding the information about the bed alarm button and the lifting or movement of the patient with an assessed fall risk level (pre or post-operative) that needs to be assisted,

At the same time, due to the non-conformities for CC3 and CC4, a re-training of the care staff is necessary to ensure a good understanding of these requirements, on the one hand, and on the other hand, to train the staff on the importance of communication and training the patient regarding the assessed risk of falling, to the need to ask for help (by pressing the alarm button) and to announce that she/he wants to move.

DISCUSSIONS

The results obtained by applying the analysis grids for each of the risks considered in the surgical ward where I carry out my activity, allow the non-conformities to be highlighted in order to establish measures to correct or eliminate them.

From the analysis of the results, we identified possible causes of the non-conformities:

- professional reasons, due to lack of knowledge;

- lack of coordination regarding patient management due to lack of time, lack of organization or the way to use the work tools.

Incorrect completion of the nursing care plan can have several factors involved:

- Incorrect formulation of care diagnoses and inconsistency with the established objectives and applied tools;
- Deficient collection of information due to the patient's pathology and age;
- Lack of consistency in completing care plans in real time due to the high volume of work;
- Not including in staff sizing the need for rest, free time for recovery or even absenteeism due to staff medical leave.

Incorporating the nursing process into the care process supports a comprehensive approach and strategy and can mitigate delayed interventions and treatment, and possible related negative effects (adverse events).

Nurses have an important role in developing policies and procedures in nursing care. Their contribution supports the policy and aligns with the systematic and comprehensive approach recognized in the nursing process.(6)

Proactive approach to care, and use of process of care can ensure early identification of complications.(7)

For experienced nurses, the steps of the care process may flow easily, but there may be a sense of repetition in pre-and post-operative monitoring, as each patient is unique in how he/she responds to a surgical procedure.

Application of the nursing care plan supports high-quality patient care and helps nurses avoid falling into the trap of a reactive and task-focused approach regarding the health care process.

CONCLUSIONS

The results of the analysis carried out by this work are an effective means of obtaining the necessary data to improve the way nurses work in accordance with the standards and legislation in force to increase patient safety.

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