Original Article

Completeness Documentation of Fall Risk Management: A Cross-Sectional Study

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Abstract

Background: Patient safety management includes the documentation of fall risks. This study aims to portray the nurses' performance toward the risk of falling management in hospitals. **Materials and Methods:** A cross-sectional approach was used as the study design to measure the documentation completeness of the nursing process toward the risk of falling at hospitals during 2020. There are 110 selected medical records of hospitalized patients based on inclusion criteria such as low-risk medical records, hospitalization within 3 days, and a maximum hospitalization length of one year after the beginning of the data collection procedure. Univariate analysis is chosen to analyze the data. **Results:** The results showed that nurses were inconsistent in implementing fall risk management. Furthermore, the assessment was 68.18%, where 45.45% of nurses made the nursing diagnosis, 4.55% described the problems and etiology, and also 32.72% evaluated patients' integrated records. **Conclusions:** The incomplete documentation of fall risk describes the nonoptimal risk management implementation. The head nurse should develop a dynamic interaction with the fall risk patients, as well as increase nursing coordination and integration.

Keywords: *Accidental falls, documentation, medical records, nursing diagnosis, risk management, safety management*

Introduction

Patient safety is a significant priority and one of the requirements for accreditation.[1] Falls are common in hospitals, specifically in inpatient rooms.[2] The patient safety program minimizes the fall risk to prevent injuries and complex problems affecting the length of stay.[3] Fall cases are the most frequently reported and potentially life-threatening incidents among hospitalized patients.[4] The prevalence is approximately 37.3 million every year, and it is the second leading cause of death due to injury or accidental accidents.[4] Neri *et al*. (2018)[5] stated that there were seven incidents in the hospital for the last 2 (two) years. These include five and two patients who fell in the bathroom and dropped out of bed, respectively. By the demands from society for patients' safety, hospitals should intervene in the prevention of falls.[6] As a profession on call 24-hour a day, nurses ensure patient safety in hospitals.[7] The part of nurses in preventing falls is managing the risk through practical strategies to create patient safety.[8]

Patient safety implementation can be conducted by reducing the risk of injury, hospitals should evaluate the risk of falling and take actions to mitigate these risks. The implementation of fall risk management has not been optimal yet. Based on Neri *et al.* (2018),[5] nurses have not filled out the format of fall risk assessment in the medical record file. The incidents are not over, and they occur six times a year at Hospital X in Jakarta.[9] Based on the case study, the implementation of the fall risk assessment at Hospital X in Jakarta is still low at 36%.[10] Previous study showed that 93% had no documented history of falls. However, this does not mean that no case exists, as fall risk factors have been found but remain unrecorded.[6] The implementation program needs to be improved by increasing the attention of the nursing team with a high chance of fall risk.[11]

In Jakarta, Hospital X is a type A hospital that has developed into a national referral center. A previous study found six accidents in one of the inpatient buildings

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within the past 6 months. This case indicates the need for improvement toward risk management. However, many studies have not entirely documented the fall risk. Therefore, this study aims to discover the overview of the fall risk implementation through documentation techniques starting from the assessment, diagnosis, intervention, implementation, and evaluation.

Materials and Methods

This study used a cross-sectional approach in Jakarta, Indonesia, from July to August 2020. The population was the medical record files of the patients treated at Hospital X in Jakarta. The results obtained 110 medical records from 6 inpatient rooms using the purposive sampling method. We use the rule of thumb reference for determine our sample. Rule of thumb is required 5 to 50 times the number of independent variables, with the recommended maximum number being 10 times the number of independent variables. In this study, we have three independent variables, therefore it can be concluded that the number of samples ranged from 15 to 150 samples. The inclusion criteria are patients' medical record files with the high-risk falls, namely the minimum time for a patient is 3 days of hospitalization, and the maximum storage period is one year since collecting the data. The instrument was an observation form developed from implementing the fall risk management form at Hospital X in Jakarta. The form consisted of 14 statement items by the Guttman scale, 0 for not taking action and 1 for taking action. This instrument has been tested for validity, and the instrument testing was conducted on 30 medical record files. The validity test of all questionnaires has a Pearson correlation value of more than r table, with a range of 0.263-0925, therefore, all the questions were declared valid. The reliability test, which employs the Kuder–Richardson approach, yields a value of 0.76, and the instrument was declared reliable.

The data were collected from patients who had been hospitalized for a maximum of 1 year. After collecting the data, the analysis used IBM SPSS Statistic 23 with a univariate and bivariate analysis test to describe the variables using frequency distribution tables and the Kruskal–Wallis test for the relationship between unit and nurse obedience. This study also used Mann–Whitney test for the relationship between gender and nurses' roles. There was no significant relationship between nurse characteristics (gender, unit type, and position) with nurses' compliance with falling risk documentation (p=>0.05).

Ethical considerations

This study has been approved by the nursing department of the Faculty Ethics Committee, the University of Indonesia, with the credential ethic number KET-853/UN2.F1/ETHICS/PPM.00.02/2020. The medical record files were not opened in front of patients to protect privacy. The observations of medical records were checked in a closed room and full of deprivation. In addition, patients' names the were not mentioned, but their medical records were pointed out. Intervention was not required, therefore there was no Hawthorne effect.

Results

The results include the practice process of fall risk management by nurses toward the patients at the stages of assessment, diagnosis, planning, implementation, and evaluation. For example, Tables 1 and 2 show 41.07 as the mean age of the patients and the length of nursing was 9.25 days. Meanwhile, respondents with a low (score 0-24) were 0%, medium (score of 25-50) were 39 (35.45%), and high risk of falling were 71 (64.55%).

Table 3 shows nurses' compliance in documenting the risk of falling on the characteristics of nurses. There was no significant relationship between nurse characteristics (gender, work unit, and position) with nurse compliance in documenting the risk of falling (p = 0.06; p = 0.104; p = 0.401). Tables 4 and 5 show the implementation of fall risk management based on the nursing documentation completeness. Overall, the average completeness of documentation was 8.92 (63.71%). A total of 75 (68.18%) of nurses documented the fall risk assessment in patients. Nurses identified a fall risk diagnosis of approximately 45.45%. Meanwhile, the percentage of completeness of nursing diagnoses on the risk of falling

Table 1: Patient demographic (n=110)

Variable	Mean (SD)	95% CI
Age	41.07 (10.75)	36.9-45.24
Length of stay	9.25 (3.82)	7.76-10.63

Table 2: Patient fall risk category

Patient fall risk	*n* (%)
Medium risk	39 (35.50)
High risk	71 (64.50)

Table 3: Nurse compliance in fall risk documentation to nurses' characteristics (n=110)

Variables	*n* (%)	Mean (SD)	*p*
Nurse gender			
Male	11 (10)	66.82	0.206
Female	99 (90)	54.24	
Type of unit			
High care unit	20 (18.20)	62.10	0.104
Geriatric ward	6 (5.50)	63.25	
Medical surgical ward	69 (62.70)	52.53	
Neurology ward	9 (8.20)	73.11	
Isolation ward	6 (5.50)	33.50	
Position			
Primary nurses	36 (32.70)	51.90	0.401
Associate nurses	74 (67.30)	57.25	

Table 4: Nurse compliance in fall risk documentation

Variable	Mean (SD)	95% CI	*n* (%)
Fall risk documentation	8.92 (3.01)	8.35-9.49	110 (63.71)

Table 5: Implementing fall risk management based on completeness of nursing documentation (*n*=110)

Variables	*n* (%)
Assessment	
Nurses ask the patient's recent fall history	75 (68.18)
Nurses identify the use of assistive devices in patients	75 (68.18)
Nurses identify the patient's gait	75 (68.18)
Nurses identify the patient's mental status	75 (68.18)
The fall risk assessment is entirely done	75 (68.18)
Making a fall risk diagnosis	
The fall risk nursing diagnosis is made	50 (45.45)
Nursing diagnoses reflect problems and etiology	5 (4.55)
Nursing planning at risk of falling	
The action plan describes the involvement of the patient/family	110 (100)
Implementation	
There is documentation evidence of the patient implementation being placed in a safe position	108 (98.18)
There is documentation evidence of the Side rail installation	108 (98.18)
There is evidence of using yellow wristband (a fall risk warning sign) documentation/A fall risk warning signs	104 (94.55)
Nurses provide education to patients and families related to fall risk prevention and patient safety.	98 (89.09)
There is evidence of explanation to the patient regarding the purpose of fall risk sign	98 (89.09)
Evaluation	
Nurses evaluate according to the plan in the integrated record (checklist form)	36 (32.72)

by reflecting the problem and etiology is only 4.55%. All nurses (100%) had implemented the nursing plan, while the documentation for installing side rails was 98.18%. A total of 94.55% of nurses documented the installation of fall risk warning signs, and 89.09% carried out the education, while the evaluation of planning in the integrated patient progress record was 32.72%. Further data showed no significant relationship between nurses' gender, the type of wards, and the nurses' role in taking the fall risk documentation.

Discussion

The description of nurses' performance in applying fall risk management can be seen based on the evidence of the implementation through the documentation of nursing care at fall risk patients. The results showed that nurses' documentation was still incomplete, as seen by the fall risk assessment results, which indicated a value of 68.18%. The evaluation is essential as the first stage in nursing care, and it will contribute to the accuracy of the data, ensuring that actions made avoid the danger of injury.[12]

Based on the results, 68.18% of nurses had not conducted the initial and follow-up assessments, even though the initial was a series of fall risk assessment processes that had to be completed within 24 hours.[13] Nurses tend to carry out fall risk assessments only as a routine to decrease compliance with fall risk assessments.[14] Socialization needs to be improved because it can affect compliance in assessing patients with fall risk.[15] Creating a conducive work environment, staff development and fulfilling facilities are expected to overcome saturation. In addition, hospitals should also make regulations regarding competent care professionals in conducting initial assessments and reassessments.[16] Reassessment reduces falls accompanied by injury,[17,18,19] and identifying patients at high risk of falling is a nursing task to develop appropriate interventions.[19] Nurses should be competent and understand how to conduct a fall risk assessment.[20]

A nursing diagnosis is a clinical assessment of the human response to a health condition by an individual, family, group, or community.[21] Based on the study results, 54.5% of nurses had not made a fall risk diagnosis. Only 4.55% made a complete fall risk diagnosis and listed the problem and etiology. The diagnosis serves as the foundation for determining the nursing interventions necessary to attain the outcomes nurses should account for.[21] Most diagnoses are made after a fall with a proper clinical assessment to trigger a preventive action to reduce falls.

This study found that 100% of nurses made plans to risk falling. Respondents completed a fall risk nursing plan involving patients and family, but it was not always detailed. The planning formulation should be measurable and involve the patient and family in fall prevention.[19] Every patient care plan should be made and documented based on the accreditation standard to get optimal clinical results.[16]

The analysis results showed no relationship between the nurses' gender and the risk of falling documentation. This is in line with Ha & Lee (2019)[22] and Moon & Lee (2017)[23] where there is no significant difference in the implementation of patient safety for men or women. Gender cannot be a decisive factor in assessing how nurses risk falling documentation.

The analysis results also showed no relationship between unit type and the fall risk documentation. This is in line with Ünver & Yeniğün (2020),[24] which states no relationship between workplace units and nurses' safety attitudes. In another study, Lee *et al.* (2018)[22] found no association between work units and nurse activities in maintaining patient safety. Meanwhile, Ko *et al.* (2018)[25] stated significant differences in the implementation of patient safety between nurses in the inpatient room and other

rooms. The work unit has a substantial influence on the implementation of patient safety. The intensive care unit is where the highest safety implementation is conducted (β =0.28).[26] This can be caused by cultural variances within each department, influencing the nursing staff's approach toward patient safety.[27]

The results also showed no relationship between the nurse's role and the fall risk documentation. This is in line with Galleryzki *et al*. (2021),[28] which stated no significant relationship between the nurse's role and the implementation of patient safety. Meanwhile, Al-Mugheed & Bayraktar (2020)[29] stated a significant relationship between nurses' safety attitudes. The practitioner nurses have a higher value than the head nurse. This is because the nursing staff have a higher sensitivity due to directly providing care to patients.[29] Higher roles have better average scores because they are often involved and aware of improving the quality of care and patient safety during the workshops or meetings.[30]

Environmental management can be the form of interventions that make patients feel safe. In this study, the implementation of the patient was placed safely, and the side rail installation was sound (98.18%). The structure of bed rails is the most common practice performed to reduce falls in hospitals, especially in the inpatient rooms.[31] Providing education concerning fall risk prevention and explaining the purpose of installing signs that have been carried out correctly (89.09%) is the most widely used strategy to increase the awareness of the risk of falling. Patients and families should understand the risk factors and what to do.[19] Fall risk management begins with an initial fall risk assessment when patients are admitted to the hospital. This is part of implementing hospital patient safety, which impacts achieving the hospital quality goals.[1] However, other studies showed that providing education using the lecture method is considered to cause boredom for patients and families. Therefore, verbal and nonverbal communication should be maintained by paying attention to patients' responses to prevent falls.[32]

According to the integrated patient progress record plan, the evaluation recording was still low (32.72%). The evaluation is essential to know the effectiveness of nursing actions. Meanwhile, the evaluation of fall risk intervention is very relevant for prevention.[19] Recording patient evaluations in the integrated patient progress record is an element of integrated patient care.[16] The low evaluation of nursing care in patients at risk of falling shows that nurses are not optimal in integrating care. The head nurses play a crucial role in improving the documentation of integrated patient progress records. A dynamic relationship is needed between the head nurse and the nurse as a nursing as a care provider.[33]

The limitations of this study consist of (a) the limited settings which include only six rooms in hospital X in Jakarta. Therefore, the results cannot be generalized to other health services with relatively different nursing systems. (b) There are no direct observations due to the pandemic, hence, analysis with medical records was conducted.

Conclusion

The results indicated that nurses had not performed fall risk management consistently, specifically at the assessment, diagnosis, and nursing evaluation stages. The head nurse needs to create dynamic relationships and improve coordination and integration of care for patients at risk of falling. Further study should be conducted to determine how adherence to the implementation is related to the intention and reassessment of patients at risk of falling.

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Conflicts of interest

Nothing to declare.

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