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IMPLEMENTATION OF FIVE RIGHTS TO DRUG ADMINISTRATION BY NURSES IN A PRIVATE HOSPITAL IN WEST INDONESIA

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ABSTRACT

Intoduction: This study has purposed to observe nurse's behavior to implement of five rights. The first survey with observation to ten nurses in an inpatient department shwed 50 % of them did no follow hospital standard operating procedure when administrating the drugs to patients, more of them not followed five rights check before, that will be harmful for patients. **Method:** This study used quantitative descriptive method. Sample for this study is purposive sampling, researchers have observed 33 nurses in third departments as Emergency, Inpatient and Intensive Care Unit departments in a private hospital in west Indonesia. An instrument used hospital standard operating procedure document (Hospital's SOP). Researchers observed nurses without the nurses knowing when the day observing will began. **Result:** 84.85% of them have had working experience more than a year in hospital. 18.18% of nurses didn't check the point of right patient, 12.12% didn't check the right drug, 18.18% didn't check the right dose, 9.09% didn't given the medication at the right time and 3.03% didn't give the drug with the right route. **Conclusion:** From the 33 nurses, 33.33% didn't follow hospital standard operating procedure with implementing all five rights check before when administrating the drugs to patients. Suggestion: for the hospital, suggested to facilitate through training or workshop more about implemented five rights or about the role of nurses as medication administer.

Keywords: Drug Administration, Five Rights, Implementation, Nurses.

INTRODUCTION

Medication administration error common even in hospitals. Nurses have delegated by physician to administering drug to the patients, so physicians and nurses have been evolved in response (Cima and Clarke, 2012). Medication error are the common cause of patient harm, Huynh *et al.*, (2016) in United States, approximate 7.000 of patients be victims from the medication error by health care provider, 38% of that have been implemented by nurses. So, the problem be a big issue for medication patient's safety. Cheragi *et al.*, (2013)

reported that 64.55% medication error had been made by nurses, the common error because nurse do wrong dose and do wrong calculate the infusion drip.

Based on WHO (2017), medication error caused from some factor, the factors are about weak medication system, and the other factor is from human resources, fatigue dan environmental has been affected the error, and the error frequently happen during administration. The error can made serve harm and even death to the patients. Globally, the case of medication error estimated take cost until US\$ 42

billion. The patient safety challenge on medication safety globally, through focuses on improving medication safety by reducing medication error, reduce the level of serve avoid harm related medication by 50% over five years.

Indonesia does not have special system to record about medication error's data that had been happened. Manal and Hanan (2012), in their study explain, reporting the incident of medication error is very important, every hospital have legal report about any incident has been happen. The incident can be a based data about the problem and quality of service for prevent future error. But some of the health care provider afraid to reported the incident for fear being blamed.

Setianingsih and Septiyana (2020) reported 60% of nurses have been implemented six rights before and during administrate medication, but the percentage of nurses not implemented it have a high score 40%, most of half the nurses not implemented six right correctly. Budihardjo (2017) has been study research about the skills of nurses as a drug administrator to the patients in inpatient department in RSU Haji at Surabaya, the result showed 42,9% of nurses have enough skill and 57,9% have a good skill as nurses drug administrator. Other study about analysis of incident medication error in ICU patients at second hospitals shows the error more happened

during administration, at ICU RSUD Baubau 46,91% and ICU RS Santa Anna Kendari 42,6%, the factors such as professionalism health care providers, facilities and documentation (Hartati *et al.*, 2014).

Based on primary data from a private hospital in west Indonesia years 2018 – 2019, incident report about medication error have been reported by nurses are, eight cases nurses given wrong dose to the patient, forth cases wrong drugs and two cases wrong patients. So based on that data, researcher have been observed ten nurses in inpatient department to see how nurses implemented five right check before administrating drug to the patients, the result 50% of them didn't follow the hospital standard procedure when given the drugs. So, the data made researchers have interest to see more how the nurse's behavior to implement of five rights in three departments in that hospital.

METHOD

This study used quantitative descriptive method. Quantitative research is collecting numerical data to explain phenomena (Muijs, 2011). Researcher have been observed some population, especially nurses in some department as Inpatient, ICU and Emergency to see their behavior into five rights check before administrating

medication to their patients at a private hospital in west of Indonesia.

This study still uses ethical considerations based on Polit and Beck (2012) the principals ethical are beneficence, researcher use inform consent as the approval sheet, the sheet contains explanation about procedure of this research. Second about respect for human dignity, through the inform consent participants have a full choice to be respondent or avoid it in this study and in these principals, researcher just write the initial name of respondent in the observation sheet. Third are about justice, all the participants have same right, researcher should respect the values and cultures of respondents without discrimination.

Researcher just explain how long time the study will doing but not explain detail the actual time their will observe them, that did to avoid biased result, because if the nurses know when their will be observed, their will do according with the hospital procedure.

Population are the groups of subjects with a specific set of characteristics for a study (Hulley *et al.*, 2013). The population of this study are all the nurses in the third departments (Inpatient, ICU and Emergency) at a private hospital in West of Indonesia, totals of the population are 48 nurses.

Hulley *et al.* (2013) explain, the sample is the selecting criteria of population. Sample of this study use purposive sampling, the researcher has second inclusion criteria for respondents, the criteria are: 1) The nurses not in probation and 2) The sample should nurses associated not primary nurses. Total of the sample of this has completed the criteria for this study and has agreed to be respondent are 33 nurses. Researcher have been observed 33 nurses in the third departments (Inpatient, ICU, and Emergency), researcher just observe each nurse once time only.

This study wants to see the describe **implementation of five rights to drugs administration by nurses**, this study uses univariate analysis. The variables to be analyzed are **five rights** component, **right patients**, **right drug**, **right dose**, **right time** and **right route**. The result of analysis will be distributed with percentage every variable. Researchers add demographic data about long experience of nurses associated have been practiced in hospital.

This study uses Hospital Standard Operational Procedure (Hospital's SPO) which using at a private hospital in West of Indonesia. The hospital's SPO have fives criteria the criteria based on five right implementations, the criteria have explained be 21 steps what nurses should do

before and during administrate medication to the patients. The instrument will be checklist by researcher, if the nurses doing the step will checklist "Yes", if not doing it will checklist "No". This study uses ordinal scale, and the measurement results of the criteria get point 100% when the indicator implemented and 0% when indicator not implemented. The researcher observing each nurse once, the result of this study will show percentage the number of every criteria.

The instrument is the private document of the hospitals and it the standard procedure document for patient's safety, the points of procedures based on Nursing Intervention Classification years 2012 and has been recognized in Joint Commission International Accreditation years 2010 to ensure quality and patient's safety. Because the instrument is official document of hospitals, researcher not doing validity and reliability.

The researcher explains formally to all nurses about the purpose of their study, after explained researcher give inform consent in every nurse target of sample, in the form contain about purpose, ethical consideration, time study, common identity of respondent, demographic data such as working experience and sign about agreement. All the nurses have been agreed as a respondent will observe by researcher

before and during administrate medication to patients. Researcher will follow each nurse during preparing in clean utility and during administrate medication to patient, to avoid get bias data researcher following the nurses constantly for ten days and take randomly an event to observe when the nurses administrate medication. Researcher just bring a small note, the note contains hospital's SPO about nurses administrate medication, the note is a private, so no one not allowed to read or see the contains of the note except researcher. The researcher will checklist it not in front of the nurse being observed. All the data managed using computer through four steps; editing, coding, cleaning and scoring use SPSS version 18 software to get statistic data.

Researchers analyze the data with univariate analysis on each variable such as right patient, right drug, right dose, right time, and right route. Result of this analysis grouping by criteria and distribute frequency and percentage in every variable in the table. The table presented proportion and ratio. Descriptive analyze input manually with computer and counting the result of observe directly.

This study has been official approval by Reset Community Service and Training Committee (RCTC) by Faculty of Nursing Pelita Harapan University with ethical number No. 013/RCTC-

EC/R/SHTBBGR/VI/2019 and have been permitted by a private hospital in West of Indonesia.

RESULT

The result of this study through observed 33 nurses in three departments as Inpatient, ICU and Emergency about implementation five rights for patient's safety.

Respondent characteristics in this study based on demographic data such as gender, ages, working experience in hospital and working in the departments.

Table 1. Demographic Data Characteristics of Respondents (n=33)

Characteristics	Frequency (n)	Percentage (%)
Gender		
Male	11	33.33
Female	22	66.67
Age (year)		
17-25	15	45.45
26-35	16	48.48
36-45	2	6.07
Working Experience		
≤ 1 year	5	15.15
> 1 year	28	84.85
Departments		
Inpatient	15	54.55
ICU	8	24.24
Emergency	7	21.21

Based on the table above the result of respondents are more female with percentage 66.67% than male, 48.48% have age with range 26 – 35 years old, 85.85% of the respondents have working experience more than a year in hospital as nursing associated and 54.55% respondents working in inpatient department.

Implementation of the hospital procedure to five right divided into two assessments implemented or not implemented. Below the table show distributed implementation of five rights.

Tabel 2. Distribution of Respondents to Imlementation of Five Rights (n=33)

Characteristics	Frequency (n)	Percentage (%)
Right Patient		
Implemented	27	81.82
Non implemented	6	18.18
Right Drug		
Implemented	29	87.88
Non implemented	4	12.12
Right Dose		
Implemented	27	81.82
Non implemented	6	18.18
Right Time		
Implemented	30	90.91
Non implemented	3	9.09
Right Route		
Implemented	32	96.97
Non implemented	1	3.03

Based on the table above, 33 of the nurses have been implemented right patient with percentage 81.82%, 87.88% nurses implemented right drugs, 81.82% nurses implemented right dose, 90.91% implemented right time and 96.97% of nurses implemented right route. So from the data most of the nurses have been implemented five right before and during administration medication to the patients.

DISCUSSION

The analysis data about description implementation of five rights to drug administration by nurse in a private hospital

in West Indonesia have result, most of the nurses have been implemented five right before and during administration medication, all of the criteria have percentage more than 80 % implemented. Even the result has a good percentage, still have risk for medication harm. WHO (2017), all the medication errors should potentially avoidable, the potential risk of medication error can bring serious harm for patients, health care professional should not pose high risk to the patients, medication patient's safety should be a priority in health care services.

Once of the common error by nurses is medication error. The errors are administration without a valid prescription, wrong medication, route, patient, dose, and calculation, lately or early administration, medication administered to which the patient was allergic, omitted medication and failure to record (Cathala & Moorley, 2020). The other study by Shohani and Tavan (2018) reported, the factors affecting medication by nurses is from internal such as fatigue 58.5%, nurse personal neglect 56%, heavy workload 65.6%, inadequate staffing and high patient ratio 69.7%.

Study by Waluyo (2015) shows, nurse's medication error caused of some factors affecting, there are; the unsupportive environment, nurse position level, patient with elderly ages, pre admission medication reconciliation, lack of knowledge about

medication and not completely assessment about history and drug allergic. The incident about medication error not only harmful for patient, however bring disadvantages in material and quality of service.

The result criteria with low percentage implemented in this study are right patient and dose 81.82 %. The study by Anggraini and Fatimah (2016) show factor causes the nurses did not do the right patient because not implemented identification first before administration. Identification not done because of some problem such as language barrier, the patient not used patient's name bracelet and some nurses have wrong labelling the drugs.

Based on this study two of six nurses not calculating the dose of drugs and four of them do not double check with primary nurse (nurse in-charge). Medication error most common happen related with dose are the dose of infusion rate and 77.4% were inaccurate dosage calculation, it's caused lack of pharmacological knowledge and illegibility of patient's record (Enaam-Al-Hagh *et al.*, 2014). Study by Khairurrijal and Putriana (2018), shows some factors causes health care made dosing error because of them have less ability to calculate dosage due to lack of knowledge (Cheragi *et al.*, 2013), more of the health care provider not knowing how to convert to dose units, communication be a factor in

this case too, because of lack communication between nurses with other professionals cause miscommunication.

This study has been observed, two nurses do not give the medication in right time and three nurses left the medication on the patient's table without make sure the medicine is taken now at the medicine given. Study by Samiyu *et al.*, (2018) reported, the highest number of medication error in implemented five right is wrong time with percentage 52 %. Study Khairurrijal and Putriana (2018), explain some of the error happened when administration, in practice miss time administration often occurred, it caused because nurses cannot manage time properly, the high workload of nurses, lack of communication between nurses with other professionals and patients. The other study show 55.6 % of nurses giving drug too later or earlier than due time, it happen because of nurses fatigue, have heavy work and high patient to nurse ratio (Zarea *et al.*, 2018).

This limitation of this study, researchers did not see more deeply about the relationship between demographic data and behavioral to implementation five rights by nurses. This study just observes nurses with randomly time for ten days, because of the nurses knowing for ten days there will be observed, some of them sometimes realize of the presence of researchers, because of

that some of researchers unable to made close observations. The other limitation is, in the hospital's SPO have five criteria about five right and each criterion have other step with different point, researchers not counting specially each step of criteria, if the nurses did not implement a step, nurses considered not implemented a point of the criteria.

CONCLUSION

Nurses have a many role for patients as a health care provider, one of the nurse's role is to collaborate with physicians to administer medicine appropriately. The practice, nurses in inpatients administration medication to the patients more than once. Based on this study to describe about implementation of five rights to drugs administration by nurses in a private hospital at West of Indonesia show more the 80% of the nurses have been implemented five rights before and during administrate medication to the patients. It shows that the nurses understand and care about hospital's SPO for medication patient's safety. But the other fact shows some of nurses not implemented hospital's SPO completely because of some issue and causes and they do not realize how important to implemented five rights completely to avoid serve harm to patients,

the other that, the behavior can become a financial burden for the hospital.

For the other research, hopefully can dig deeper about this topic. For the hospital, suggested to facilitate through training or workshop more about implemented five rights or about the role of nurses as medication administer.

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