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The Relationship between Supervision on Nursing Care Done by the Head of Room and the Implementation of Standard Operational Procedure of Parenteral Drug Administration

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Abstract

Purpose: This research aims at discovering the relationship between nursing care supervision done by chief nurse and the implementation of Standard Operational Procedure of parenteral drug giving at RSUD Solok. **Method:** The research method is descriptive analytic with cross sectional design. It was done from July until August 2014 by using questionnaire and observation to 96 nurses in charge. The sample was taken by using proportional sampling from each in-patient room. The data were analyzed by using chi-square and logistic regression analysis. **Result:** The result shows that there was a correlation between Head of Room supervision, which includes planning with p value=0,004, implementation with p value=0,001, evaluation and feed back with p value=0,012 and documentation with p value= 0,037, towards the implementation of Standard Operational Procedure of parenteral drug administration. The dominant variable of the implementation of Standard Operational Procedure of parenteral drug is supervision, with p value = 0,001 and OR=4,14. **Conclusion:** From the result, it can be concluded that chief nurse supervision has a meaningful correlation towards the implementation of Standard Operational Procedure of parenteral drug.

Keywords: Chief Nurses, Supervision, Parenteral drug

INTRODUCTION

The first priority in health care delivery and nursing services at the hospital must be patient safety. Hence, Ballard (2003) states that patient safety is an important and vital component in the quality of nursing care. In addition, patient safety is also the first critical step to improve the quality of services as well as related to the quality and image of the hospital (Depkes, 2008).

However, it is possible that nurses cause some errors in delivering nursing care. Yet, medication errors are threat to patient safety and the distress experienced by nurses affects their confidence and practice (Molloy, 2017). More over, errors in medication may be harmful to the patient and even cause death. Errors in drug administration included inaccurate recipe, inappropriate drug, and also wrong pathway, interval and dosage (Potter, 2010). Errors in drug administration mostly occur because the nurses do not consistently apply the principle of drug administration, meanwhile the nurses can avoid this by following the procedure.

An investigation done by WHO in 2011 found incorrect injection contributes to 40%of death worldwide due to unsterile instruments (Herwina, 2012). More over, it is predicted that 1,3 million death each year take place as a result of unsafe injection. Based on the Report of National Map of Patient Safety Incident in Kongres PERSI (September 2007), errors in drug administration was on the first rank (24,8%) of 10 most reported incidents. Furthermore, a research conducted by Diogja found out that medication error in ICU reaches 96% including wrong indication, dosage, and illogic poly pharmacy.

Besides, Lestari (2009), from her

research done at Mardi Rahayu Kudus hospital, found out that 30% of the medications were not documented, 15% were given inappropriately, 23% were not given on time, 12% were given with the wrong dosage, and 2% were not even given. In addition, Schnock et al (2015) involve 10 hospitals in USA on their researh to find out the frequency of intravenous medication administration errors related to smart infusion pumps. The result shows that a total of 478 patients and 1164 medication administrations were assessed. Of the observed infusions, 699 (60%) had one or more errors associatiated with their administration.

Furthermore, one of the important elements of briefing is supervision which has to be done by a manager so that procedure applied by the staffs or nurses follow exactly what the Standard Operational Procedure has been set. Supervision is one of the briefing function done by a supervisor to improve efficiency and effectiveness of the staff performance (Huber, 2006).

Supervision done by Head of Room on drug administration is very crucial to maintain patient safety and to improve the quality of nursing services Moreover, supervision is an attempt to monitor, evaluate, and communicate how to give nursing services which meets the standard of service and professionalism to the nursing staff (Cham, 2008). In addition, Wijaya (2008) and Saljan (2005) state that supervision done by the Head of Room involves planning, implementing, evaluating, providing feed back and documenting the result.

In accordance, one of the researchers has done an observation during her residency in RSUD Solok (November 2013- January 2014). From this observation, she found out that supervision in RSUD Solok has not yet optimally done. The Head of Room did not set any schedule for either direct or indirect supervision, yet it was also found that 50% of them have modelled to the nurse how to perform nursing care and also reminded them to work based on the Standard Operational Procedure has been set. Moreover, from the observation, it was also found that there were incidents involving lack of supervision that caused miscommunication between nurses in the time of handover. As a result, the patient received the medicine late or with the wrong dosage.

Beside ddistributing the qquestionnaire to the Head of Room, the reseachers also distributed it to the nurses. To sum up, 77,3% of the nurses pay attention to the principle of 6 rights in drug administration, 70,5% of the nurses ask the doctor for futher explanation if the instruction is not clear, 40,9% of the nurses put marks on the medicine with similar shape, appearance, and name, 61% of the nurses store the medicine with similar shape and name separately.

METHOD

The design of this study is descriptive and analytic by using cross sectional analysis. The data were gathered from July until August 2014 in RSUD Solok. There were 96 nurses on the hospital, and after applying proportional sampling, the respondents were chosen from each room by using simple random sampling technique. The data were collected by using observation and by distributing questionnaire after the validity and reliability were tested. Chi-square was used with 95% of confidence level and p value 0,05 . If $p \leq 0,05$, there is significant correlation between nursing supervision done by the Head of Room and the implementation of Standard Operational Procedure of parenteral drug administration, and then meltivariate analysis was done by using regressional correlation to determine the dominant supervision variable after being contrrolled with age, gender, educational background, and working periode.

RESULTS

The result includes univariate, bivariate and multivariate analysis as show in the table below.

Table 1. Characteristic of Respondent based on Age and Working Periode

No	Variable	Mean	Median	Min	Max	SD
1	Age	30,17	30,00	23	45	4,39
2	Working periode	5,45	4,00	1	20	3,93

Based on the table above, it can be concluded that the average of nurse age is 30,17, the youngest is 23 years old, and the oldest is 45 years old, with deviation standard 4,39 years. Meanwhile, the average working periode 5,45 years, the shortest is 1 year and the longest is 20 years, with deviation standard 3,93 years.

Table 2 Respondent Distribution based on Sex and Educational Background

No	Nurse Characteristics		Frequency	%
1	Sex	Male	4	4,2
		Female	92	95,8
2	Education	Nursing High School	2	2,1
		Diploma	63	65,6
		Bachelor	31	32,3

The table shows that most nurses are female (95,8%) and most nurses (65,6%) are holding nurse diploma.

Table 3. Respondent Distribution based on The Implementation of Standard Operational Procedure on Parenteral Drug Administration

No	Standar Operational procedures of parenteral drugs	Frequency	%
1	Good	46	47,9
2	Not good	50	52,1
	Jumlah	96	100,0

The table shows that more than half (52,1%) of the nurses did not perform the Standard Operational Procedure (SOP) well.

Table 4. Respondent Distribution based on Supervision by Head of Room

No	The Supervison Of Chief Nurse	Criteria	Frequency	%
1	Supervison Palnning	Good	50	52,1
		Not good	46	47,9
2	Supervision Implementation	Good	52	54,2
		Not good	44	45,8
3	Evalution and Follw up Supervison	Good	54	56,3
		Not good	42	43,8
4	The result of supervison Documentation	Good	52	54,2
		Not good	44	45,8

From the table, it can be summarized that the Head of Room supervision planning is categorized good (52,1%). For the implemetation, the Head of Room is categorized good (54,2%). Moreover, the evaluation and feed back is categorized good (56,3%). Last, documentation receives the same result; good (54,2%).

Table 5. The Relationship between Head of Room Supervision and the Implementation of Standard Operational Procedure on Parenteral Drug

The Supervision Proces	criteria	Apply Giving Medicine Operational Apply giving medicine Operational Standard by Parenteral						p value	0R (CI 95%)
		Good		Not good		Frequency			
		N	%	N	%	n	%		
Supervison Planning	Good	31	62,0	19	38,0	50	100	0,004	**3,37**
	Not good	15	32,6	31	67,4	46	100		1,45:7,81
	Total	46	47,9	50	52,1	96	100		
Supervision Implementation	Good	33	63,5	19	36,5	52	100	0,001	4,14
	Not good	13	29,5	31	70,5	44	100		1,7 : 9,7
	Total	46	47,9	50	52,1	96	100		
Evalution and follow up Supervison	Good	32	59,3	22	40,7	54	100	0,012	2,9
	Not good	14	66,7	28	33,3	42	100		1,2:6,7
	Total	46	47,9	50	52,1	96	100		
The Result of Supervision Documentation	Good	30	57,7	22	42,3	52	100	0,037	2,3
	Not good	16	36,4	28	63,6	44	100		1,0:5,4
	Total	46	47,9	50	52,1	96	100		

The above table shows that there is relationship between supervision which includes planning (p=0,004), implementation (p=0,001), evaluation and feedback (p=0,012) and also documentation (p=0,037), and the implementation of Standard Operational Procedure on parenteral drug administration.

Table 6. The Result of Logistic Regression Analysis Relation of Independent Variable with Dependent Variable

Variable	B	p wald	p *Value*	OR	95 %	C.I
Implementation	1,42	10,51	0,001	4,14	1,75	9,77
Constan	-2,29	10,09	0,001	0,101		

Variable with p < 0,05 is the dominant variable, thus, the implementation of supervision is the dominant variable affecting the implementation of Standard Operational Procedure of parenteral drug administration. In addition, the nurses, who view that the Head of Room has implemented supervision well, tend to perform the Standard Operational Procedure 4,14 times better than those who view it other way.

DISCUSSION

RSUD Solok has established the Standard Operational Procedure in giving nursing care when the hospital received the accreditation in 2007. This Standard Operational Procedure has been known by both the Head of Room and the nursing staff. Unfortunately, the result of this study shows that more than half the nurses did not perform the procedure well in relation to parenteral drug administration. From the observation, it can be conduded that the nurses did not perform the prosedure well when administering parenteral drug through intravena (52,2%), intramuscular (44,9), subcutan (28,6%), and intracutan (73.1%).

Looking at this finding deeper and thoroughly, we found that the nurses performed the procedure “not good” due to instrument issues. Apart from the lack of the instruments, the nurses had followed the Standard Operational Procedures set by the hospital. For instance, most of the nurses did not wash their hands before giving the treatment in relation to incomplete instruments, such as hand wash or hand scrub.

Then, from the research, it was found that there is significant correlation between Head of Room supervision (planning, implementing, evaluating and feedback, and documenting) and the implementation of Standard Operational Procedure of parenteral drug administration,with p value ≤ 0.05 which means the better the supervision is carried on, the better the Standard Operational Procedure is implemented, and vice versa.

Lastly, the result shows that the implementation of supervision is the dominant variable on the proces of supervision. This includes greeting she nurses being supervised, making contract on documentation of the supervision, identifying the documentation equipment along with the nurses, discussing achievement which needs to be improved, giving guidance, and making the reports of the result of supervision.

CONCLUSIONS

In administering parenteral drug, the nurses mosty did not perform well. There is a relationship between the process of supervision and the implementation of Standard Operational Procedure. The dominant element of supervision that affects implementation of Standard Operational Procedure the most is the implementation of supervision after being controlled with the characteristics of the nurses (age, sex, educational background, and working periode)

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