

Discharge Counseling Evaluation Done by Pharmacist at Dr. Cipto Mangunkusumo National Central Public Hospital General Hospital Jakarta

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Abstract:- Discharge counseling carried out by different functions of the pharmacist services performed at RSCM could impact patient's knowledge and satisfaction. This research aims are to compare patient's knowledge and satisfaction after being given discharge counseling by both pharmacists with different service functions. The research method used was a cross-sectional study using a questionnaire that had been tested for validity and reliability. The research subjects were inpatient hospitalized that would be discharged in building A in the internal medicine section of the RSCM from February to March 2020 with total 60 respondents. The data obtained were analyzed by univariate and bivariate using SPSS. The results showed the differences of patient's knowledge and patient's satisfaction is not statistically significant ($p = 0,605$ OR = 1,495; $p = 1,000$ OR = 2,071). The conclusion of this research is there was no differences in patient's knowledge and satisfaction after being given discharge counseling by different pharmacist services.

Keywords:- Discharge Counseling, Pharmacist In Clinical Role, Pharmacist In Management Role.

I. INTRODUCTION

Counseling is a fundamental skill that every pharmacist should have and can perform. Drug counseling for discharge patients is essential in educating patients about proper medication administration and proposing dietary and lifestyle changes. Discharge counseling is important because hospitalization and discharge are periods of high risk for potential confusion and medication errors [1,2]. Patients who go home are often given several home medications called polypharmacy, and this is associated with the readmission of the same patient to the hospital through the Emergency Room (ED) [3]. Patients who use many drugs often rely on pharmacists to explain to patients about drugs [4].

Pharmacy Installation of Dr. Cipto Mangunkusumo National Central Public Hospital, Jakarta (RSCM) carries out two functions of pharmacist services in hospitals, namely pharmacists for clinical pharmacy services and pharmacists for management services. Despite being split into two roles, each pharmacist can still provide counseling based on the clinical assignment letter issued by the hospital's credentialing staff and practice counseling as necessary. In order to fulfill the Key Performance Indicators (KPI) of the

RSCM Pharmacy Installation, the management service pharmacists are also assigned to provide medication counseling for going home on Saturdays.

The difference in the service function that is carried out between pharmacists in clinical pharmacy services and pharmacists in management services, can affect the knowledge and satisfaction of patients after being given drug counseling at home. Therefore, it is necessary to evaluate whether there are differences in patient drug knowledge and patient satisfaction after being given home counseling by each pharmacist with different service functions using a questionnaire.

II. METHODS

This research has been approved by the Health Research Ethics Commission, Faculty of Medicine, University of Indonesia with Letter Number KET-5/UN2.F1/ETIK/PPM.00.02/2019. This research was an observational study with a cross-sectional design using a questionnaire. The research was conducted at RSCM Jakarta from February to March 2020.

III. RESEARCH SAMPLE

The sample of this study were inpatients from building A in the internal medicine section of the RSCM who had been given home medication counseling by pharmacists for clinical pharmacy services and pharmacists for management services, each of which consisted of 30 patients with inclusion criteria of patients aged ≥ 18 and < 60 years old. Patients returning from the internal medicine department were those who are counseled by clinical pharmacy service pharmacists on Monday - Friday and management services on Saturdays with the last diploma of pharmacist profession graduate. Exclusion criteria were patients who were given counseling by pharmacists with master's or doctoral degrees, and patients who were given counseling but with conditions that made patients have difficulty communicating, did not speak Indonesian, patients with Alzheimer and dementia.

IV. RESEARCH INSTRUMENTS

The knowledge questionnaire (**Table 1**) which was asked to patients, was categorized as “adequate” with a score of 2 and “inadequate” with a score of 1 for each question. The conclusion of the patient's results including the category of understanding or not understanding is the sum of all points of the questionnaire question value is 9, then the patient is categorized as understanding.

The satisfaction questionnaire (**Table 2**), which was filled out by the patient, was scored 2 if the patient answered “agree” and scored 1 if the patient answered “disagree” for each question. The conclusion of the patient's results including the category of satisfied or dissatisfied is, the sum of all points of the questionnaire question value is > 8 , then it is categorized as satisfied. Then, the data were analyzed using Chi-Square test on SPSS for Windows Version 23.0.

V. RESULTS AND DISCUSSION

A. Results

Patient characteristics including gender, age, last education, duration of counseling, number of drugs taken home and number of new types of drugs brought home can be seen in **Table 3**. A total of 60 study subjects who met the inclusion criteria, it was found that for 18–44-year-old is the most studied, which is 75%. The research subjects as much as 85% took home 5 types of drugs home. A total of 66.6% of patients brought home < 4 types of new drugs from the hospital. The duration of counseling for patients going home in this study was 63.3% under 8 minutes. Patient education was divided into basic and advanced, with 70% of patients having advanced education. The types of drugs given home counseling can be seen in **Table 6**.

Knowledge bivariate analysis (**Table 4**) carried out with Chi-square test showed that there was no significant difference ($p > 0.05$) between counseling conducted by clinical pharmacy service pharmacists and management service pharmacists. The number of new types of discharge drugs showed that this variable caused a significant difference ($p < 0.05$) to patient knowledge. The last education variable and the patient's age even though they have a p value > 0.05 , these two variables have an Odd Ratio (OR) value greater than 1 which means that these two variables can influence the patient's knowledge.

Bivariate analysis for satisfaction was only carried out between the independent variables, namely counseling carried out by clinical pharmacy service pharmacists and management service pharmacists with satisfaction. The results of this analysis showed a non-significant difference ($p > 0.05$) and had an OR of 0.483, which means that it has no chance of influencing the patient's satisfaction response (**Table 5**).

B. Discussion

This is the first study to assess patient satisfaction and pharmacological knowledge after being counseled by two pharmacists who perform different service functions. When pharmacists conduct counseling, researchers do not participate in witnessing the pharmacist counseling process, because researchers feel this can cause bias when pharmacists do counseling and lead to an assessment of patient drug knowledge and also because of the limited time researchers have.

Pharmacists in hospitals, although functionally divided into two, but counseling is a basic competency that must be possessed by every pharmacist. This is a possible reason why there is no statistically significant difference ($p < 0.05$), however, the OR for this variable shows the number 1.495, which means that the counseling provided by pharmacists providing clinical pharmacy services is 1.495 times having an effect on the patient's drug knowledge. adequate compared to that provided by management pharmacist counseling.

Oncology pharmacist counseling has been shown to be useful in lowering patient fears and enhancing patient knowledge about the necessity for therapy, resulting in increased adherence [5]. Another study also found the same thing in 56% of patients who had been counseled by clinical pharmacists [6]. Research by Sapp, Francis & Hincapie, 2020 found more than 90% of patients agree that clinical pharmacists help them understand why they are taking their medicines, ensure that their medicines are safe, and feel confident managing their medicines [7]. Although there are research results like this, this kind of research has never been done before so it is difficult to find comparisons with the same literature as this study.

The bivariate analysis revealed that the kind of new discharge medication had a substantial impact on the patient's drug knowledge. In a study of outpatients at home, the number of drugs prescribed increased causing knowledge of medication to decrease [8]. The patient's new knowledge of the drug he has just received is sometimes inadequate because health workers do not provide complete information. A study of 103 patients who received 122 types of new drugs described non-compliance with patients experiencing difficulties due to side effects, difficulty reading drug leaflets, not knowing how to take drugs, not knowing when to take drugs [9].

The increase in the number of drugs has been shown to have a negative impact on patient knowledge and proper use of drugs. The number of drugs continues to increase with age, but research has found that knowledge about drugs appears to differ significantly with age. Knowledge of drugs decreases with age and at a very young age. Older people are less likely to understand the drugs they receive [10].

This study also obtained results from bivariate analysis that the counseling pharmacist, the respondent's last education, the type of discharge medication, and the new type of discharge drug had the opportunity to influence the patient's drug knowledge (OR > 1).

Meanwhile, for satisfaction, the results of the bivariate analysis did not significantly affect patient satisfaction, but the counseling pharmacist variable, patient gender, patient's last education, duration of counseling and type of new medication had OR > 1, which means that it has the opportunity to affect the dependent variable in the form of patient satisfaction. after being counseled.

Sapp, Francis & Hincapie, 2020 stated that there is a positive correlation between counseling providers, namely clinical pharmacists, and patient satisfaction. About 93% of patients agree that counseling is beneficial for them. Hospital research in China also found that 75% of patients were satisfied with the services provided by clinical pharmacists, one of which was counselling [11].

The results of the analysis of the independent variable on the dependent variable in the form of patient satisfaction gave the result that the independent variable had no significant effect on patient satisfaction after being given counseling, but this variable had an OR > 1 of 2.071 which means that counseling by pharmacists in clinical pharmacy services has the opportunity to affect patient satisfaction by 2.071 times. compared to counseling provided by management pharmacists. The results of this variable OR are supported by the statement that specialization is a strategy implemented to maximize and improve outcomes in an increasingly complex health care delivery system [12]. This also applies to pharmacists, performing tasks according to their respective functions will provide a good distribution of health services that are increasingly complex day by day.

VI. CONCLUSION

After being offered medication counseling for patients to go home by clinical pharmacy service pharmacists and management service pharmacists, there was no difference in drug knowledge or patient satisfaction ($p > 0.05$).

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Table 1. Patient Drugs Knowledge Questionnaire

No	Question	Description	Inadequate	Adequate
1	What are the names of the drugs you are currently taking?			
2	How many times a day do you take medicine			
3	What are the effects of the drugs you are taking			
4	Do you have side effects from the drugs you are taking? If yes please write it..			
5	If side effects occur, do you know what you should do?			
6	Do you know what to do if you miss the dose of the medicine you are taking?			

Table 2. Patient Satisfaction Questionnaire

No	Question	Disagree	Agree
1	The pharmacist's explanation helps me achieve my medical goal.		
2	The pharmacist's explanation helps me to understand the use of my medicine.		
3	I believe that my health will improve because of the explanation given by the pharmacist.		
4	I would like and want to be explained again by this pharmacist in the future		
5	Overall, I am satisfied with the explanation by the pharmacist.		

Table 3. Distribution of research subject characteristics

Variable	Counseling Pharmacist (n (%))		N	%
	Clinical Pharmacy Pharmacist	Management Services Pharmacist		
Patient's Gender				
Women	20 (54,1)	17 (43,3)	37	61,7
Men	10 (43,5)	13 (56,5)	23	38,3
Patient's Age				
18 – 44 years old	25 (55,6)	20 (44,4)	45	75
45 - 59 years old	5 (33,3)	10 (66,7)	15	25
Patient's Last Education				
Higher Education (High School – Academy/Bachelor)	26 (48,1)	16 (51,9)	42	70
Basic Education (Elementary School – Junior High School)	4 (66,7)	2 (33,3)	6	30
Counseling Duration				
>8 minutes	13 (59,1)	9 (40,9)	22	36,7
≤ 8 minutes	17 (44,7)	21 (55,3)	38	63,3
Number of drugs taken home				
< 5	2 (22,7)	7 (77,8)	9	15
≥ 5	28 (54,9)	23 (45,1)	51	85
number of new types of drugs brought home				
< 4	22 (55)	18 (45)	40	66,6
≥4	8 (40)	12 (60)	20	33,4

Table 4. Bivariate analysis of patient's drug knowledge

Variable	Knowledge (n (%))		P value	OR	IK 95%
	Adequate	Inadequate			
Counseling Pharmacist			0,605 ^a	1,495^d	0,540 – 4,136
Clinical Pharmacy Pharmacist	17 (56,7)	13 (43,3)			
Management Pharmacy Pharmacist	14 (46,7)	16 (53,3)			
Patient's Gender			0,743 ^a	0,729	0,256 – 2,075
Women	18 (48,6)	19 (51,4)			
Men	13 (56,5)	10 (43,5)			
Patient's Age			0,655 ^a	0,638	0,195 – 2,090
18 – 44 years old	22 (48,9)	23 (51,1)			
45 - 59 years old	9 (60)	6 (40)			
Patient's Last Education			0,417 ^b	2,320^d	0,391 – 13,753
Higher Education (High School – Academy/Bachelor)	29 (53,7)	25 (46,3)			
Basic Education (Elementary School – Junior High School)	2 (33,3)	4 (66,7)			
Counseling Duration			0,317 ^a	0,503	0,173 – 1,462
>8 minutes	9 (40,9)	13 (59,1)			
≤ 8 minutes	22 (57,9)	16 (42,1)			
Number of drugs taken home			0,148 ^b	3,938^d	0,745 – 20,810
< 5	7 (77,8)	2 (22,2)			
≥ 5	24 (51,7)	27 (52,9)			
number of new types of drugs brought home			0,017^{a,c}	4,853^d	1,458 – 16,157
< 4	26 (63,4)	15 (36,6)			
≥4	5 (26,3)	14 (73,7)			

TABLE 5. Bivariate analysis of patient's satisfaction

Variable	Satisfaction (n (%))		P value	OR	IK 95%
	Satisfied	Dissatisfied			
Counseling Pharmacist			1,000	2,071^d	0,178 – 24,148
Clinical Pharmacy Pharmacist	29 (96,7)	1 (3,3)			
Management Pharmacy Pharmacist	28 (93,3)	2 (6,7)			
Patient's Gender			0,552 ^b	3,429^d	0,293 – 40,133
Women	36 (97,3)	1 (2,7)			
Men	21 (91,3)	2 (8,7)			
Patient's Age			0,566 ^b	0,933	0,863 – 1,009
18 – 44 years old	42 (93,3)	3 (6,7)			
45 - 59 years old	15 (100)	0 (0)			
Patient's Last Education			0,275 ^b	5,200^d	0,398 – 67,935
Higher Education (High School – Academy/Bachelor)	52 (96,3)	2 (3,7)			
Basic Education (Elementary School – Junior High School)	5 (83,3)	1 (16,7)			
Counseling Duration			1,000 ^b	1,167^d	0,100 – 13,656
>8 minutes	21 (95,5)	1 (4,5)			
≤ 8 minutes	36 (94,7)	2 (5,3)			
Number of drugs taken home			0,391 ^b	0,327	0,026 – 4,034
< 5	8 (88,9)	1 (11,1)			
≥ 5	49 (96,1)	2 (3,9)			
number of new types of drugs brought home			0,233 ^b	4,706^d	0,399 – 55,447
< 4	40 (97,6)	1 (2,4)			
≥4	17 (89,5)	2 (10,5)			

Description :

^aContinuity Correction^bFisher's Exact^cP value < 0,05 (statistically significant)^dOR > 1 (means having the opportunity to influence the patient's knowledge of the question)

TABLE 6.. Types of drugs given discharge counseling

No	Drug Type	Amount	No	Drug Type	Amount
1	Immunosupresant	9	21	Anti diabetic	12
2	Corticosteroid	9	22	Analgesic	24
3	Antianemic	2	23	Antiulcerant	83
4	Antidiarrhea	2	24	Vitamin/Mineral	34
5	Antiemetic	7	25	Antiseptic	2
6	Mucolytic	3	26	Anti Parkinson	3
7	BPH Agents	2	27	Anti convulsant	7
8	OAINS	2	28	Antifibrinolytic	3
9	Urinary alkalinizing agent	10	29	External medicine	7
10	Cytotoxic	1	30	Anti glaucoma	2
11	Antidyslipidemia	11	31	Anti angina	1
12	Laxative	21	32	Anti-dementia	1
13	Antithyroid	1	33	Hormon drug	1
14	Antimalarial	2	34	Anti-hemorrhoid	1
15	Atypical antipsychotics	5	35	Anti-hypertension agent	82
16	Coagulant	2	36	Antibiotics	31
17	Bile acid agent	2	37	Anti-virus	4
18	Antidepressant	1	38	Anti-fungi	2
19	Anti-inflammatory	2	39	Anti-platelet	22
20	Bronchodilator	1			