



Analysis of the Implementation of Manic-Type Schizoaffective's Clinical Pathway

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ARTICLE INFO	ABSTRACT
Publication Online: 23 July 2021	Hospitals control costs without reducing the service quality by using clinical pathways. Clinical pathways control the quality and cost of cases that consume large resources. According to Presidential Regulation No. 12 of 2013 regarding Health Insurance, the implementation of clinical pathways to diagnosis that consumes large resources is an effort to control costs and quality of patient services in the INA CBGs system. The preliminary study conducted found a large difference between the real hospital rate and the INA CBGs rate on the diagnosis of Manic Type Schizoaffective Disorder for 3 (three) consecutive years. If this situation continues, the impact will be financial losses for the hospital. The purpose of the study is to analyze the implementation of the Manic Type Schizoaffective's clinical pathway at the Grhasia Mental Hospital. This research method is qualitative with a case study approach. The results of the Clinical Pathway study can reduce the length of stay for Manic Type Schizoaffective patients but it is not yet effective for patient care costs.
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KEYWORDS: Clinical Pathway; Schizoaffective Disorder, Manic Type; Length Of Stay; Treatment Costs	

I. INTRODUCTION

Hospitals are required to perform emergency, outpatient, and inpatient services that are safe, quality, and effective by prioritizing the interests of patients according to hospital minimum service standards (Law Number 44, 2009). Hospitals control costs without reducing service quality by using clinical pathways (CP). This has been proven in studies of acute ischemic stroke cases, that clinical pathways reduce treatment costs (Iroth et al., 2017).

A clinical pathway is a detailed plan for patients with certain diagnoses to obtain a standard length of care and the use of procedures to reduce variation to obtain savings in hospital infrastructure and reduce patient care costs (Djasri, 2006). Clinical pathways control quality and costs for cases that consume large resources (Nurfarida, 2014). Previous research on hospitalized patients with a diagnosis of Hebephrenic Schizophrenia found a negative difference of 55.26% for the INA-CBGs rate for term 1 compared to the real rate (Basirun, 2012). The results of the research above prove that Hebephrenic Schizophrenia is a mental disorder that can absorb large resources. Meanwhile, research on the manic-type schizoaffective disorder in hospitals is rarely done to analyze the effectiveness of the services provided.

Grhasia Mental Hospital Special Region of Yogyakarta is implementing clinical pathways at the 4 (four) diagnoses of schizophrenia which are schizoaffective manic type, schizoaffective type of depressive, and bipolar affective disorder manic episode with psychotic symptoms presented since 2018. A preliminary study conducted by researchers discovered the problems on their Inefficient financing inpatient care with National Health Insurance (JKN) insurance, namely in the case of patients with a diagnosis of Manic Type Schizoaffective Disorder and bipolar affective disorder now manic episodes with psychotic symptoms where the hospital has implemented a clinical pathway since 2018.

Based on the e-claim software at the hospital, the biggest difference was found between the real rate and the INA CBGs rate on the diagnosis of Manic Type Schizoaffective Disorder for 3 (three) consecutive years. In 2018, there was a difference of IDR 265,805,935, - between the real rate and the INA CBGs rate with an average length of stay of 31 days. In 2019 there was a difference in Rp. 129.533,311,- between the real rate and the INA CBGs rate with an average length of stay of 27 days. In 2020, there is a difference of IDR 228,134,040, - between the real rate and the INA CBGs rate with an average length of stay of 23 days. If this situation continues, the impact will be financial

losses for the hospital. The implementation of clinical pathways in the diagnosis of Manic Type Schizoaffective disorder can reduce the length of treatment but is not efficient in terms of treatment costs.

II. RESEARCH METHOD

This research is qualitative research within a case study. This research is using secondary data from medical records of patients, clinical pathways forms, Hospital Integrated System Hospital (HIS RS), and the e-claims software, performed on inpatients with a diagnosis of schizoaffective manic type, ICD code F25.0, INA code CBGs F-4-13-I/II/III. This research began with observations for quantitative data collection, then the data were processed using Tableau, one of the software used as BI (Business Intelligence) analysis to analyze the implementation of the Manic Type Schizoaffective clinical pathway on patient’s length of stay, patient’s care costs, use of medication variants and description of patient criteria based on age, gender and class of treatment. The validation test uses source triangulation, namely by comparing the information obtained from different sources. Researchers also use theoretical triangulation by utilizing two or more theories to be combined to provide more comprehensive results.

III. RESULT AND DISCUSSION

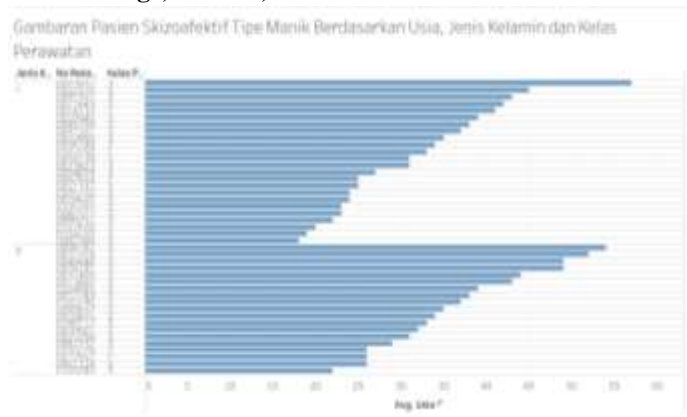
The description of the research subjects is shown in Table 1 regarding the characteristics of respondents.

Table 1. Respondents characteristic

Gender	Age			Total
	15-24 Year	25-44 Year	45-64 Year	
Male	8	15	2	25
Female	1	17	5	23

Based on table 1, it is known that the respondents who suffer from Manic Type Schizoaffective Disorder in 2020 are mostly female respondents with an age range of 25 - 44 years.

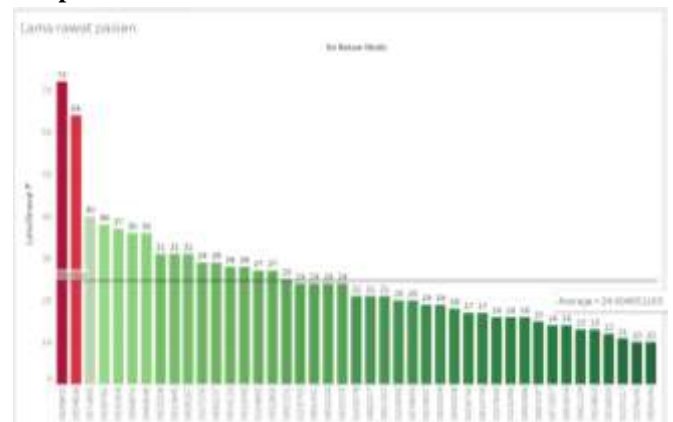
A. Description of Manic Type Schizoaffective Patients Based on Age, Gender, and Treatment Class



Graphic 4.1 Graphic of schizoaffective manic type patients by Age, Gender and Class Treatment

Figure 4.1 shows the description of manic type Schizoaffective patients in the January to December 2020 hospitalization period, totaling 48 patients consisting of 25 male patients and 23 female patients. The description of the age of the manic type Schizoaffective patients shows that the age range of 15-24 years in 9 patients, aged 25-44 years is 32 patients and aged 45-64 in 7 patients. The lowest patient age was 18 years and the highest was 57 years. The treatment class at Grhasia Hospital is divided into 3 treatment classes, namely class 1, class 2, and class 3. Based on the results of the study in Graphic 4.1, the most common treatment class is class 3, which is 43 patients, while class 2 in 4 patients and class 1 which is 1 patient.

B. Analysis of the Implementation of the Manic Type Schizoaffective Clinical Pathway on the Length of Hospitalization of Patients



Graphic 4.2 Analysis graphic of the Implementation of the Manic Type Schizoaffective Clinical Pathway Towards Patient's Length of Care

The prediction of length of stay applied to the Manic Type Schizoaffective clinical pathway guide at Grhasia Hospital is 28 days. Graphic 4.2 shows a description of the length of stay for Manic Type Schizoaffective patients in January to December 2020 hospitalization period at Grhasia Hospital, the shortest length of stay was 10 days and the longest length of stay was 72 days, with the average length of stay for patients was 25 days.

The benefits of the implementation of clinical pathways are the quality improvement of health services, the certainty of patient management, reducing the length of treated patients, and the controlled cost. Thus, the burden of hospital costs can be reduced and patient turnover is relatively fast with a short length of stay. The use of clinical pathways plays a role in increasing the efficiency and quality of health services, controlling service costs, and length of hospitalization (Frei et al, 2011).

Evaluation in the application of clinical pathways is carried out regularly and continuously. As stated in the results of previous research, that in-hospital business management, clinical pathways contain strategic management instruments as instruments for continuous cost control and can

contribute to transparency in service provision (Roymeke & Stummer, 2012).

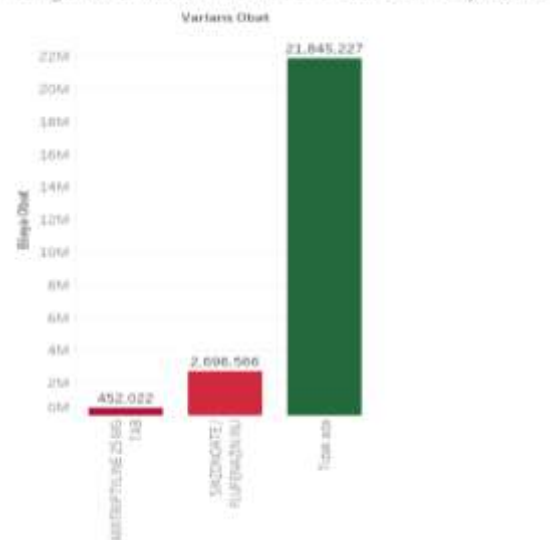
Evaluation of clinical pathways at Grhasia Hospital has not been done regularly and continuously. Evaluation of clinical pathways is the responsibility of the Quality Improvement and Patient Safety Committee (PMKP), the Medical Committee, and the Patient Service Manager (MPP). Evaluation of clinical pathway implementation at Grhasia Hospital is still limited to indicators of suitability for a length of stay.

RSJ Grhasia applies the prediction that the length of stay that is applied through the clinical pathway guidelines for Manic Type Schizoaffective is 28 days. Based on the results of observations made by researchers, the average length of stay for Manic Type Affective Schizophrenia patients is 25 days.

This shows that the application of clinical pathways can reduce the length of stay of patients in the hospital. The clinical pathway if applied can reduce the length of stay and have effects on reducing the cost of care (Cannon et al., 2002).

C. Analysis of the Implementation of the Manic Type Schizoaffective Clinical Pathway on the Use of Drug Variance

Penggunaan Variasi obat berdasarkan Biaya obat



Graphic 4.3 Analysis graphic of the Implementation of the Manic Type Schizoaffective Clinical Pathway on the Use of Drug Variance

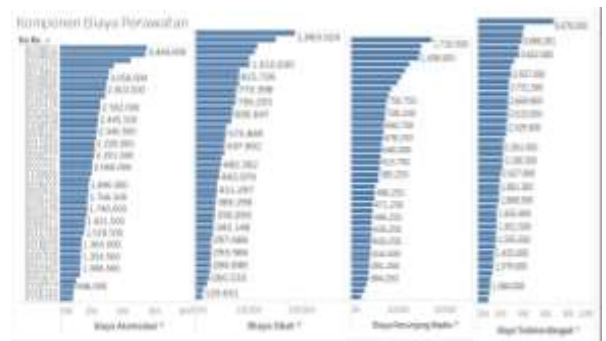
Graphic 4.3 shows a description of the use of drug variance used in Manic Type Schizoaffective patients in the January to December 2020 inpatient period at Grhasia Hospital, which only found 2 types of drugs used outside the formulary in the *clinical pathway*, namely 3 patients using SIKZONOATE / FLUFENAZIN INJ, and 1 patient using the drug AMITRIPTYLINE 25 MG TAB. The variance of the drug user does not affect the cost of the drug because the majority of Schizoaffective Manic Type patients use drugs according to the *clinical pathway* formulary.

The effort to improve quality in hospitals can be achieved through clinical governance, namely with a commitment to improve the quality of services and continuous patient care, provide patient-focused services, and prevent clinical medical errors. Reducing variation in medical procedures is also an effective way to improve service quality.

The use of drug variance found outside the formulary in the Manic Type Schizoaffective clinical pathway at Grhasia Hospital, namely SIKZONOATE/FLUFENAZINE INJ and AMITRIPTYLINE 25 MG TAB.

Clinical pathways can accommodate variations so that clinical pathways should be flexible in their use. The Clinical pathway must be able to anticipate variations in 20-40% of the patient population (Cheah, 2000). Variations in the application of clinical pathways can be used as a tool for medical audit and management to improve service quality.

D. Component Analysis of Manic Type Schizoaffective Treatment Costs



Graphic 4.4 Analysis graphic of the Cost Components of Manic Type Schizoaffective Treatment

Graphic 4.4 shows an overview of the components of the cost of treating patients with Schizoaffective manic type in the inpatient period from January to December 2020, the highest Accommodation Cost is Rp. 5,494,000, the highest Drug Cost is Rp. 1,863,524, the highest Medical Support Cost is Rp. The highest Ward Action is IDR 6,676,000. Of the four components of the treatment cost, the cost of ward procedures ranks first with the highest cost, followed by accommodation costs, drug costs, and medical support costs.

The benefit of implementing clinical pathways in addition to improving the quality of health services is cost-effectiveness. In the era of National Health Insurance that uses the DRG-Casemix system (with disease codes based on ICD 10 and ICD 9-CM for code of action procedures), clinical pathways can be used to conduct medical audits to improve service quality and reduce treatment costs.

Drafting and implementation of clinical pathways which is based on evidence and standardized can reduce maintenance costs, decrease time care, improve clinical outcomes and reduce unnecessary actions to the patient during treatment.

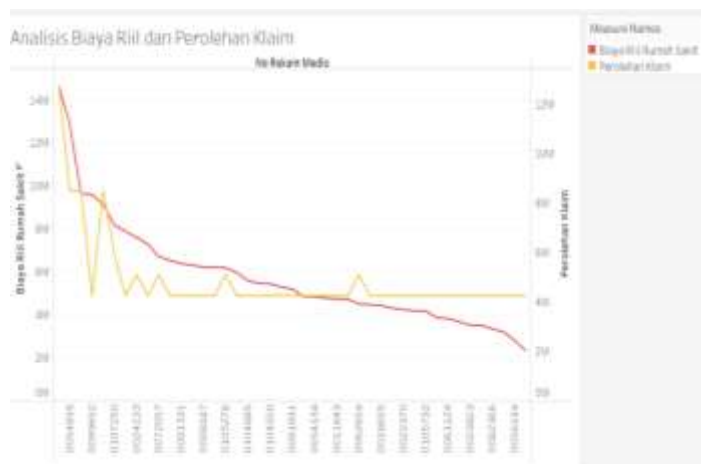
The components of care costs of patients with manic type schizoaffective in Grhasia Mental Hospital include

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accommodation costs, costs of drugs, medical support costs, and costs of action ward. Of the four components of treatment costs, the cost of ward action is the component that has the highest impact on treatment costs. Enforcement of clinical pathways has not been proved to improve clinical outcomes in the long decline treatment, surgical wound infection when patients return and the cost of treatment, however, a clinical pathway is proven in the improvement of antibiotic therapy (Rahmawati et al., 2017).

In the era of National Health Insurance, the hospital must enforce a clinical pathway that can be customized with the BPJS budget so that the costs of action and clinical procedures do not exceed the budget and do not cause any harm to the hospital.

E. Analysis of claim acquisition against real hospital costs



Graphic 4.5 Analysis graphic of Claims on Real Hospital Costs

The claim acquisition of BPJS is a package rate consisting of all components of hospital resources used in medical or non-medical services. Graphic 4.5 shows an overview of claim acquisition against hospital real costs, hospital real costs are greater than claim acquisition for INA CBGs. The highest real hospital cost was Rp 9,600,145 while the claim for INA CBGs was Rp 4,254,300.

The obstacle that has occurred since the implementation of the Diagnosis Related Group in 2008 is that there is a rate gap between the real hospital costs and the INA-CBGs rate, which causes hospitals to bear financial risks. Some groups which are diagnosed with CBGs suffered losses with real hospital costs greater than the INA-CBGs rate.

The acquisition of BPJS claims a rate package consists of all the components of the resource hospital services used in medical or non-medical services. The real cost of treating Manic Type Schizoffective patients at Grhasia Hospital is greater than the acquisition of BPJS claims.

The clinical pathway can reduce variations in treatment costs, while still prioritizing the quality of patients served. The clinical pathway ensures the effective integration and coordination of services by using the

available hospital resources efficiently. This is in line with research, there is a relationship between compliance with the implementation of clinical pathways to therapeutic outcomes and the total real cost of cesarean section patients (Haninditya, 2019).

IV. CONCLUSION

The Manic Type Schizoffective *Clinical Pathway* was able to reduce the length of stay of patients, with an average length of stay of 25 days. There is a step deviation in the use of drug variants, however, it does not affect the amount of the drug cost component. The cost component of the ward action is the component with the highest cost that affects the number of patient care costs. The real cost of the hospital is greater than the acquisition of INA-CBGs claims so that the implementation of the Manic Type Schizoffective *clinical pathway* has not been effective in terms of patient care costs.

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