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Determinants of Approval Claims at Hospital Among COVID-19 Patients

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ABSTRACT

The COVID-19 pandemic is an issue that is being faced by Indonesia and even most countries in the world. The impact due to the COVID-19 pandemic is disruption of hospital with cash flow. It was caused by the delay in hospital payment of claims which are not approved by *Badan Penyelenggara Jaminan Sosial* (*BPJS Kesehatan*). Siloam Sentosa Hospital Bekasi provides services for COVID-19 patients. However, out 81 claims of COVID-19 patients in August-October 2020, there were 65 claims (80.25%) not approved by BPJS Kesehatan. The purpose of this study was to analyze the factors that affect the approval claims among patients with COVID-19 at Siloam Sentosa Hospital Bekasi. This type of research was descriptive analysis with a quantitative approach. The research popula-tion was 108 claims and the sample used the total population. A Logistic regression test was used to analyze the data. The results of the study explained the completeness of claims, the quality of the medical resume, the completeness of filling out the epidemiological investigation form, and the quality of clinical coding that affected the approval claims. The study showed 21.5% of other factors that are not examined can affect the approval claims. Socialization of policies related to payment of claims to hospitals as well as monitor and evaluate from both hospitals and *BPJS Kesehatan* need to be improved to prevent claims that are not approved.

INTRODUCTION

Since March 11, 2020, the World Health Organization (WHO) has declared that Coronavirus Disease (COVID-19) is a pandemic. It is called a pandemic because as happened on March 31, 2020, more than 720,000 cases were reported and more than 203 countries were affected by COVID-19. COVID-19 by SARS-COV2 is very easily spread through small droplets from the nose and mouth when coughing or sneezing.[1,2] In Indonesia, the first case of COVID-19 appeared in March 2020. Since that moment, the spread of COVID-19 has been increasingly widespread until now. Currently, the number of positive cases of COVID-19 in Indonesia has reached 4.26 million with death cases reaching 144 thousand.[3]

Regarding the finance of COVID-19 claims, the government has issued various policies with reference to the Regulation of the Minister of Health Number *59 of 2016/PERMENKES RI No. 59 Tahun 2016* concerning Exemption of Payment for Certain Emerging Infectious Diseases of patients. Meanwhile, during the pandemic, claims for financing from health facilities were verified by *BPJS Kesehatan*.[4] The policy regarding the claim process for the COVID-19 hospital service payment in Indonesia was originally stated in *KMK No. HK.01.07/MENKES/238/2020* which was published on April 6, 2020 and revised with *KMK No. HK.01.07/MENKES/446/2020* which was published on July 22, 2020, and lastly on April 5, 2021, with *KMK No. HK.01.07/MENKES/4344/2021* which replaces the previous KMK.[5] These changes were made as a form of improvement and follow-up to the previous policy.

The total claims to *BPJS Kesehatan* up to the end of December 2020 were 433,077 with a claim fee for 27 trillion rupiahs. The number of claims increased from March to August and peaked in September, covering both inpatient and outpatient claims. From October to December, there was a decrease in the number of claims. The problem with submitting COVID-19 claims is a mismatch between the hospital and BPJS Kesehatan so that payments are delayed. On November 8, 2020, *BPJS Kesehatan* stated that there were still 37% of claims that were still delaying payment due to disputes.[4]

The claims approved in this study refer to *KMK No. HK.01.07/MENKES/4344/2021* which applies nationally regarding the Expired Period of Claims for COVID-19 Patient Service Fees that expedite verification and accelerate claim payments, it is expected that hospitals that provide COVID-19 services to submit claims: 1) Month of service in 2020: no later than May 15, 2021; 2) Month of service January-19 April 2021: no later than May 31, 2021; 3) Month of service > April 19, 2021: no later than 2 months since service health is complete given.[6]

The results of the analysis conducted by BPJS Health stated that claims that were not approved could be caused by 1) The identity is not in accordance with the provisions; 2) the criteria for the participants of the covid guarantee do not comply with the provisions; 3) the laboratory investigations are not in accordance with the provisions; 4) the isolation procedure is not in accordance with the provisions in the Guidelines of COVID-19 Disease Control and Prevention; 5) incomplete claim file; 6). the diagnosis of comorbidities/complications is part of the main diagnosis (signs and symptoms); 7). the comorbid diagnoses are not in accordance with the provisions; 8). the hospitalization is carried out outside the isolation room; laboratory investigations are not in accordance with the provisions, 9). the radiological investigations are not in accordance with the specific provisions; 10). the claims are not appropriate due to problems with the application (e-claim).[4,7] Other studies also conclude that membership verification, administrative verification, and service verification have an effect on approval claims.[8–12]

Siloam Sentosa Bekasi Hospital is a hospital in Bekasi City and also handles COVID-19 cases. From August to October 2020, 16 claims of COVID-19 patients were approved (19.75%), while 65 claims (80.25%) were not approved. The purpose of this study was to analyze the factors that influence the approval claims of COVID-19 patients at Siloam Sentosa Hospital Bekasi.

MATERIAL AND METHOD

This study used a quantitative analysis approach. The design of this study was cross-sectional. This study was conducted at Siloam Sentosa Hospital Bekasi in April – September 2021. This study has passed the ethical review by the Research Ethics Commission of Universitas Esa Unggul with letter number 0384-21384 /DPKE-KEP/FINAL-EA/UEU/XI/2021. The population in this study were all claims of COVID-19 patients in January and February 2021 which

were 108 claims. The sample used in this study is a saturated sample where all members of the population are used as samples. So that the sample in this study amounted to 108 claims.

Data collection techniques using document review checklists to analyze patient claims according to research variables. The independent variables are the completeness of the claim file, the quality of the medical resume, the completeness of filling out epidemiological investigation form and the dependent variable are the approval claim of COVID-19. The data analysis was carried out first by describing the results of each variable then statistical tests using logistic regression were used to analyze the effect of the independent variables with the dependent variable.

Furthermore, the presentation of the data is made into frequency distribution tables for descriptive analysis and tables to see the effect between variables on bivariate analysis. In addition, the table is equipped with narration to explain the data analysis.

RESULTS

Approval claims are categorized into approved and disapproved. It is categorized as approved if the claim submission is appropriate and does not pass the expired date of the COVID-19 patient service payment claim until May 31, 2021. Based on Table 1. the approved claims are 68 claims (62.96%) and disapproved are 40 claims (37.04%).

The completeness of claims for COVID-19 patients is categorized as complete if the claim file was received and not returned by the *BPJS Kesehatan* categorized into complete and incomplete. Can verifier including medical resume, notes of the ward signed by the hospital leadership, laboratory results, radiology results, other supporting results, prescription medicines/medical devices, hospital bills, patient identity card, and death certificate if the patient dies. Based on Table 2 the completeness of claims on laboratory results was the lowest with 84 claims (77.78%) followed by radiology results with 98 claims (90.74%).

The completeness of the epidemiological investigation form is categorized into complete and incomplete. Categorized as complete if the components on the epidemiological investigation form are complete including patient identification (name, id no, date of birth, gender), important reports (clinical information, laboratory examination, contact/exposure factors, close contact list of cases, patient records), authentication (name of health provider, name of interviewer), and good filling (no correction and no blank space). Based on Table 2. the completeness of important reports was the lowest complete with average of 99 claims (91.67%) followed by patient identification, authentication, and good filling with average of 106 claims (98.15%).

Table 1. Distribution of COVID-19 Claims Approved at Siloam Sentosa Hospital Bekasi in January and February

Claims	n = 108	%
Approved	68	62.96
Not Approved	40	37.04

Source: Primary Data, 2021

Table 2. Distribution of COVID-19 Claim and Epidemiological Investigation Completeness at Siloam Sentosa Hospital Bekasi in January and February

Description	Form Completeness			
	Complete		Incomplete	
	n	%	n	%
Claim				
Medical Resume	104	96.30	4	3.70
Notes of the Ward	104	96.30	4	3.70
Laboratory Results	84	77.78	24	22.23
Radiology Results	98	90.74	10	9.26
Other Supporting Results	104	96.30	4	3.70
Prescription Medicines	106	98.15	2	1.85
Hospital Billing	104	96.30	4	3.70
Patient Identity Card	104	96.30	4	3.70
Death Certificate	105	97.23	3	2.77
Epidemiological Investigation				
Patient Identification	106	98.15	2	1.85
Important Reports	99	91.67	9	8.33
Authentication	106	98.15	2	1.85
Good Filling	106	98.15	2	1.85

Source: Primary Data, 2021

The quality of the medical resume is categorized into qualified and not qualified. It is categorized as qualified if the components on the medical resume are filled in and matched, there are no blanks or none that are not appropriate, including the completeness and consistency in disease diagnosis with record review, the recording consistency review, and the recording practice review. Based on Table 3. the completeness and consistent disease diagnosis record review with was the lowest qualification with average of 91 claims (84.26%) followed by recording consistent review with average of 96 claims (88.89%).

Clinical coding quality was categorized into qualified and not qualified. It can be categorized as qualified if the elements of reliability (entrance diagnosis, main diagnosis, entry diagnosis code and main diagnosis), validity (code accuracy) and completeness (completeness of diagnosis filling). Based on Table 3. validity and completeness were the lowest qualification with average of 100 claims (92.59%) followed by reliability with average of 101 claims (93.52%).

The results of hypothesis testing using logistic regression show the completeness of the claims, the quality of medical resume, the completeness of filling out epidemiological investigation form, and the quality of clinical coding affected the approval claim (*p-value* < 0.05). The Nagelkerke R-Square value shows 0.785 which means that the completeness of the claim, the quality of medical resume, the completeness of filling out epidemiological investigation form, and the quality of clinical coding affect the approval claim factor which is 78.5%. So the percentage of other factors that can affect the approval claim is 21.5%.

Partial completeness of claims, quality of medical resumes, completeness of filling out epidemiological investigation forms, and quality of clinical codes significantly affected the approved COVID-19 claims. The highest significance value on the completeness of the claim (*p-value* = 0.000) (Table 4.). The model of factors that affect the approval claims of COVID-19 in this study can be formed as follows:

$$\textbf{\textit{Approval Claim}} = -8.251 + 3.111\,(Completeness\ of\ the\ claim) + 3.025\,(Quality\ of\ medical\ record) + 2.815\,(Completeness\ of\ filling\ out\ the\ epidemiological\ investigation\ form + 2.596\,(Quality\ of\ clinical\ coding)$$

Table 3. Distribution of COVID-19 Medical Records and Clinical Coding Quality at Siloam Sentosa Hospital Bekasi in January and February

Description	Claim Quality			
	Qualified		Not Qualified	
	n	%	n	%
Quality of medical record				
Completeness and Consistency Disease Diagnosis Record Review	91	84.26	18	16.67
Recording Consistency Review	96	88.89	12	11.11
Recording Practice Review	105	97.22	3	2.78
Quality of clinical coding				
Reliability	101	93.52	7	6.48
Validity	100	92.59	8	7.41
Completeness	100	92.59	8	7.41

Source: Primary Data, 2021

Table 4. Analysis Model Determinants of Approval Claims among Patients with COVID-19

Variable	B	*p-value*	OR	95% CI	
				Lower	Upper
Completeness of the claim	3.111	0.000	22.448	4.446	113.335
Quality of medical record	3.025	0.007	20.597	2.317	183.132
Completeness of filling out the epidemiological investigation form	2.815	0.003	16.687	2.548	109.270
Quality of clinical coding	2.596	0.014	13.408	1.707	105.329

Source: Primary Data, 2021

DISCUSSION

The policies issued by the Indonesian government in the payment of COVID-19 claims that continue to change have confused hospital management. The technical verification of COVID-19 claims in the policy requires hospitals to complete the requirements according to the latest policies, which sometimes socialization of the policy is not optimal. The impact is clear that the claim is not approved and reimbursement to the hospital is delayed.[13,14] This also happened at the Siloam Bekasi Hospital where the completeness of the claim is a problem that is very concerned at the hospital.

The results of this study explain that the completeness of claim affects the approval claim with an OR of 22.448 (95% CI 4.446-113.335). This means that complete claims significantly affect on approval claims with a tendency of 22 times greater than incomplete claims. The results are in line with a previous study conducted by Muroli, et.al which stated that the claim was incomplete and can affect a pending claim with a p-value of 0.016 and an OR of 5.542 at RSAB Harapan Kita.[8] A study by Ayu Fiska Putri and Savitri Citra Budi, also proved that there is an affect of completeness of claim requirements on claim approval by BPJS Kesehatan verifier at RSUP dr. Soeradji Tirtonegoro Klaten.[15] The dissimilarity of perception from internal hospitals to the policy for completeness of claims requested by BPJS Kesehatan often causes claims to be incomplete.[16]

The results of this study explain that the quality of medical records has an effect on the approval claim with an OR 20.597 (95% CI 2.317-183.132). This means that a qualified medical record could significantly affect approval claims with a tendency of 21 times greater than the not qualified medical records. The role of health information management professionals is very important in maintaining the quality of medical records.[17] The quality of medical records describes the quality in the hospital, so that the health information management professional in analyzing medical records plays a role so that the documented records are complete and accurate.[18]

The results of this study explain that the completeness of filling out the epidemiological investigation form has an effect on the approved claim with an OR 16.687 (95% CI 2.548-109.270). This means that the complete form could have a significant effect to approved claims with a tendency of 17 times greater than the incomplete forms.

The results of this study explain that the quality of clinical coding has an effect on the approval claim with an OR 13.408 (95% CI 1.707-105.329). This means that a qualified clinical coding could significantly affect approval claims with a tendency of 13 times greater than the not qualified clinical coding. One of the competencies of health information management professionals in hospitals is to ensure the quality of clinical coding is good because it will have an impact on claims that will be paid by BPJS Kesehatan to the hospital.[19] The accuracy of the clinical code entered by the health information management professional is often constrained when the claim file and supporting documents for establishing a patient's diagnosis are incomplete.[20] The financing of health services using Case Based Groups (CBG) is largely determined by clinical data (especially diagnostic codes and medical procedures) that are entered into the INA-CBG software for the process of selecting the diagnosis code and its actions. The amount of the claim paid depends on the generated code grouping. So the deficiency in the quality of this diagnostic code will have a major impact on hospital revenues.[21]

CONCLUSION AND RECOMMENDATION

The completeness of the claims, the quality of the medical resume, the completeness of filling out the epidemiological investigation form, and the quality of clinical coding that affected the approval claims which had an effect value of 78.5%. The research suggests that a discussion forum should be held between the health information management professional team (case-mix) and doctors managed by hospital management as a strategy to disseminate policies so that the completeness, consistency and accuracy of filling out medical resumes can run well. Furthermore, health information management professionals must to cross-check the completeness of claims, especially on laboratory and radiological results.

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AUTHOR CONTRIBUTIONS

Peter Herey and Nauri Anggita Temesvari contributed to research conceptualization; Peter Herey collected and validated the data; Peter Herey and Nauri Anggita Temesvari analyzed the data; Nauri Anggita Temesvari wrote the manuscript. All authors have read and agreed to the published version of the manuscript.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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