FACTORS CAUSING INACCURACY IN DISEASE DIAGNOSIS CODES IN OUTPATIENT BPJS PATIENTS BASED ON THE ICD-10 BOOK

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ABSTRACT

Coding of disease diagnosis is an important process in the health care system that aims to classify and record patient disease information accurately. The purpose of this study was to identify the implementation of disease diagnosis coding and the factors causing inaccuracy of disease diagnosis codes in outpatient BPJS patients at the Siompu Barat Health Center, this study used a descriptive quantitative approach method with a sample of 89 medical record files of outpatient BPJS patients. Data collection methods were interviews, observations, and documentation studies, data analysis using source triangulation techniques. The results of the study showed that the coding process was carried out by searching for disease diagnosis codes using a book containing a list of previously existing patient diagnosis codes, which were recorded by coding officers as a guide, and by searching for the diagnosis code using Google. The accuracy of the disease diagnosis code was 45 diagnosis codes that were in accordance with ICD-10, while 44 others were not in accordance with the ICD-10 book. Factors that influence code inaccuracy include human factors, namely lack of knowledge and training of coding officers, material factors, namely non-specific diagnosis writing and unavailability of ICD-10 books, money factors, namely no budget related to coding training and budget for procuring ICD-10 books. It is expected that the Siompu Barat Health Center will hold routine training for officers, ensure the availability of a budget related to training and a budget related to procuring ICD-10 books so that the accuracy of disease diagnosis codes can be achieved as expected.

INTRODUCTION

The Community Health Center is one of the strategic health service facilities, to support the realization of optimal health changes, efforts are needed to develop a basic health service system that can meet the needs of the community, including improving the quality of medical recording activities.(Badriwarman, 2021). Medical records are documents in the form of records of patient identity, patient examination results and treatment.(Fahmi, 2018). Medical records are notes and documents in the form of files that contain patient identity, examination data, treatment, and data on medical actions carried out while the patient is receiving services.(Putranto et al., 2017).

ICD is an international standard for collecting health and disease statistics data, both at primary, secondary and tertiary levels.(WHO, 2021). The ICD defines various types of diseases, disorders, injuries, and other health conditions listed hierarchically. Based on researchLusi Rusliyanti et al. (2016), the number of incorrect and inappropriate diagnosis codes according to the ICD-10 book is greater than the number of correct diagnosis codes. The diagnosis codes that are in accordance with the ICD-10 book are 9 files, while the incorrect diagnosis codes are 77 medical record files.

Based on researchThe Last Supper (2022), the number of inaccuracies in disease diagnosis codes in outpatients at the Pleret Health Center with a sample of 99 medical record files was 59 files with a percentage of 59.6%, while the accuracy of disease diagnosis codes in outpatients was 40 files of medical colleagues with a percentage of 40.4%.

Based on the research resultsEiska Rohmania et al (2024), the number of accurate disease diagnosis codes in outpatients at the Pandawangi Health Center in Malang City with a sample of 98 medical record files, namely 40 medical record files with a percentage of 40.8%, while the inaccuracy of the disease diagnosis code was 58 with a percentage of 59.2%.

Based on the results of initial observations conducted by researchers at the Siompu Barat Health Center in the medical record room, the implementation of disease coding in medical record files was not carried out using the ICD-10 guideline book, but rather the implementation of coding

patient disease diagnoses via Google. So that the coding officers at the Siompu Barat Health Center do not know whether the disease diagnosis code for the patient is accurate or not because the officers have never analyzed the accuracy of the patient's disease diagnosis code using the ICD-10 book.

METHODOLOGY

This study uses a descriptive quantitative approach research method. The research design uses a Cross-Sectional research design which is a research design that involves collecting data from subjects at a certain point in time to describe the condition or characteristics of the population at that time. The subjects of this study were 2 coding officers and 1 head of the medical records room, with the research object being the diagnosis of diseases of outpatient BPJS patients in medical record files carried out at the Siompu Barat Health Center in April-June 2024.

Data processing in this study was done by obtaining interview results, observation checklist results, and document studies, then processing them by coding and organizing them into tables and narratives.

RESULTS AND DISCUSSION

Table 1. Number of Accuracy and Inaccuracy of Disease Diagnosis Codes

Disease Diagnosis Code	
Accurate	44
Not accurate	45
Amount	89

Source: Primary Data, 2024

Based on research conducted by researchers at the Siompu Barat Health Center, the implementation of coding medical record files is carried out by doctors and P-Care officers, namely midwives, P-Care officers code by searching for the disease diagnosis code through a help book that has been written by P-Care officers which contains the patient's disease diagnosis code along with the patient's disease diagnosis codes that have existed, but if there is no patient's disease diagnosis in the book, the officer searches for the disease diagnosis code via Google, when after the patient's disease code is obtained, the P-Care officer sometimes no longer writes the disease diagnosis code in the patient's medical record file, but directly inputs the disease diagnosis code into the P-Care application. The implementation of disease diagnosis coding at the Siompu Barat Health Center has not been carried out in accordance with the coding procedures in the ICD-10 book.

This is not in accordance with WHO standards that have stipulated that disease coding must use ICD-10. ICD-10 is an internationally recognized standard for the classification of diseases and health conditions. The use of other sources such as Google does not meet standards and can lead to errors in coding that impact patient diagnosis and treatment.

There are 5 factors causing inaccuracy in disease diagnosis codes for outpatient BPJS patients at the Siompu Barat Health Center, namely:
Man Factor.

Table 2. Human Aspects

Aspects observed	Yes	No
The assignment of diagnostic codes to patient illnesses in medical records is carried out by officers with a medical records education background.		✓
The coding officer has attended coding training		✓

Source: Primary Data, 2024

Factors that influence the inaccuracy of the patient's disease diagnosis code are caused by officers involved in medical record activities in the coding section, human resources involved in the coding section are doctors and midwives. The existence of midwifery education qualifications that

carry out the provision of patient disease diagnosis codes in medical record files indicates a lack of skills and specific knowledge about the coding possessed by the officer.

This is in line with researchLoren et al (2020), at the Haji General Hospital in Surabaya, which stated that one of the causes of inaccuracy in ICD-10 diagnosis codes was the lack of knowledge of coding officers regarding the assignment of diagnostic codes to patients' diseases in accordance with ICD-10.

According toIndonesian Minister of Health Regulation Number 55 of 2013regarding the Implementation of Medical Record Work states that one of the absolute competencies that a medical record worker must have is being able to classify and code diseases or actions in accordance with ICD-10.

In addition, there is no training related to the coding of medical record files, this directly affects the accuracy and consistency in providing patient disease diagnosis codes, while this training activity also has an important influence on one of the accuracy in providing disease diagnosis codes, so that it will minimize errors in determining patient disease diagnosis codes in providing disease diagnosis codes, so that it will minimize errors in determining patient disease diagnosis codes.

According toLoren et al (2020), that one of the causes of inaccuracy of ICD-10 diagnosis codes is that there has been no training related to coding attended by officers, which is similar to research conducted at the Siompu Barat Health Center that one of the factors causing inaccuracy of ICD-10 diagnosis codes is the lack of training related to coding attended by coding officers at the Siompu Barat Health Center.

Method Factor

Table 3. Method Aspects

Aspects observed	Yes	No
There are policies that regulate the coding of disease diagnoses.		✓

Source: Primary Data, 2024

The method factor referred to in this case is the policy or Standard Operating Procedure (SOP) in providing medical record file coding at the Siompu Barat Health Center. At the Siompu Barat Health Center there is no SOP for codification of medical record files, the absence of an SOP for codification of medical record files at the Siompu Barat Health Center greatly affects the accuracy of the diagnosis code.

SOP is an important document that provides guidance and standard procedures for conducting codification. Without SOP, the codification process is at risk of inconsistencies and errors, as there is no standard for officers to follow.

Of course, in line with researchSri Wahyuni (2023)is that SOP greatly influences work, if the officer's work is not carried out according to SOP then there will be various kinds of coding.

This is not in line with researchLoren et al (2020), at the Haji General Hospital in Surabaya, which found that there was an SOP that supported the process of providing disease diagnosis codes, which indicated the importance of the existence of SOPs in ensuring consistency and accuracy in providing disease diagnosis codes. SOPs ensure that all medical record officers follow the same procedure, so that the diagnosis codes given are more accurate and reliable, with the existence of SOPs the accuracy of diagnosis codes increases which ultimately supports the quality of health services.

According to researchThe Last Supper (2019), proving the influence between the availability of SOP for disease coding and the accuracy of disease diagnosis codes. This means that all instructions and work procedures are arranged and written clearly so that the SOP that regulates the coding procedure can have an impact on the accuracy of coding the patient's disease diagnosis code so that it is proven to reduce the occurrence of errors in determining the patient's disease diagnosis.

Material Factors

Table 4. Material Aspects

Aspects observed	Yes	No
There is an ICD-10 book		✓
The diagnosis of the disease is written specifically	✓	
There are abbreviations in writing disease diagnoses	✓	

Source: Primary Data, 2024

At the Siompu Barat Health Center, there is no ICD-10 book in the process of implementing the coding of medical record files, the absence of an ICD-10 book is a significant challenge.

The ICD-10 book is the main reference for coding medical record files correctly, without this book officers will face difficulties in determining the correct diagnosis code, which can ultimately impact the quality of medical data and health services. Therefore, the availability of the ICD-10 book is very important to support accuracy and consistency in the coding process.

In addition, the writing of the patient's disease diagnosis is sometimes not specific so that the process of determining the diagnosis code becomes inaccurate, thus affecting the accuracy of the disease diagnosis code.

Of course, in line with researchSri Wahyuni & Wa Ode Sitty Budiaty (2022) Sri Wahyuni & Wa Ode Sitti Budiaty (2023), that the diagnosis is not written specifically, of course this greatly affects the accuracy of coding, coding will be correct if the diagnosis is written completely and appropriately.

This is in line with researchLoren et al (2020), at the Haji General Hospital in Surabaya, the factors influencing the inaccuracy of the patient's disease diagnosis code are caused by the inaccuracy and incompleteness of writing the disease diagnosis.

This is also in line with researchSelvi Mayang Sari and Mega Ermasari Muzuh (2024), that complete medical record documents are very important in supporting various aspects of administration and services in health facilities. In this context, improving the completeness of document filling must continue to be pursued to ensure better quality of medical records and minimize the potential for errors in determining the diagnosis.

A fully written diagnosis will greatly affect the accuracy of coding the disease diagnosis. This is also explained inRegulation of the Minister of Health of the Republic of Indonesia No. 24 of 2022Regarding medical records in Article 2 paragraph (3), medical records must be made in writing, complete and appropriate or electronically.

Machine Factor

Table 5. Machine Aspects

Aspects observed	Yes	No
Coding is done by computerization		✓

Source: Primary Data, 2024

The coding is not computerized (Manual). The process of providing diagnostic codes for patient diseases is still done manually and has not been computerized.

This is different from the research resultsLoren et al (2020), at the Haji General Hospital in Surabaya, which found that the process of providing diagnostic codes for patients' illnesses had been carried out computerized, using SIMRS and the Healthy Plus application in the process of implementing diagnostic codes.

Table 6. Money Aspect

Aspects observed	Yes	No
There is a budget for the procurement of ICD-10 books		✓

Source: Primary Data, 2024

There is no budget for the procurement of ICD-10 books, and the procurement of training budget for officers. This factor refers to the budget used by coders to meet the needs of implementing medical records. A budget must be planned by the health care facility to ensure the facilities and infrastructure needed by coders.

Of course, in line with researchSelvi Mayang Sari et al (2023)that money or budget is really needed in any implementation.

CONCLUSION

The assignment of disease diagnosis codes to outpatient BPJS patients at the Siompu Barat Health Center is carried out by doctors and P-Care officers who do not have a medical record education background. In practice, coding officers search for disease diagnosis codes using Google and a book containing a list of existing disease codes recorded by coding officers as a guidebook for searching for disease diagnosis codes.

The factors causing inaccuracy in providing disease diagnosis codes for outpatient BPJS patients at the Siompu Barat Health Center are caused by human factors, namely the provision of patient disease diagnosis codes in medical record files is not carried out by officers with an educational background and there is no training for coding officers, material factors, namely the absence of an ICD-10 book, and incomplete writing of the patient's disease diagnosis, money factors, namely the absence of a budget related to training for coding officers, and the procurement of ICD-10 books.

The limitations of the research experienced by the author during the research implementation process at the Siompu Barat Health Center were identifying the patient's disease diagnosis in the medical record files, where some diagnoses were not written completely, then the disease diagnosis code was sometimes not written in the medical record files.

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