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Overview of the Accuracy of Fracture Main Diagnostic Codes in Inpatients at Gatot Soebroto Army Hospital

Carono[1*], Siswati[2], Deasy Rosmala Dewi[2], Laela Indawati[2]

[1]Diploma Student, Medical Record and Health Information Study Program, Faculty of Health Science, Universitas Esa Unggul, Jakarta, Indonesia

[2]Medical Record and Health Information Study Program, Faculty of Health Science, Universitas Esa Unggul, Jakarta, Indonesia

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***Corresponding author:**
Carono

E-mail address:
carono20180306042@gmail.com

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A B S T R A C T

Coding activities include the coding of diagnosis and the coding of medical treatment. The important thing that must be considered by medical recorders is the accuracy in giving the diagnosis code. This study aims to determine the accuracy of the main diagnostic code for fractures in inpatients at Gatot Soebroto Army Hospital using ICD-10. This research is an observational study with a descriptive method. The study was conducted at the medical record unit of the Gatot Soebroto Army Central Hospital from October to December 2020. Sampling in this study was carried out using a systematic random sampling technique. The sample in this study was the medical record of patients with a fracture diagnosis at Gatot Soebroto Army Hospital. This study found that standard operating procedures (SOPs) for giving diagnosis codes in general according to ICD-10 at Gatot Soebroto Army Hospital already exist. However, the SOP code for fracture diagnosis is not yet available. Most of the documents (72.88%) had a diagnosis code that did not match the ICD-10. In conclusion, Gatot Soebroto Army Hospital does not yet have a special SOP regarding the diagnosis code for fracture cases. Most fracture diagnosis codes in medical record documents are incorrect. This is probably due to the lack of accuracy of the coder in coding the diagnosis, the absence of an evaluation or audit of the diagnosis coding for fracture cases, and the writing of the diagnosis by doctors being unclear and illegible.

1. Introduction

Coding is a procedure for giving code using letters and numbers. Activities coding includes coding diagnoses and coding medical actions. The important thing that must be considered by medical recorders is the accuracy in giving the diagnosis code. Coding will produce accurate and quality data. Accuracy in providing and writing codes is helpful for providing nursing care, billing claim fees, improving service quality, comparing morbidity and mortality data, presenting the top 10 diseases, and other matters related to health services.[1]

Determining the accuracy of the code for the main diagnosis of the disease is also influenced by the specification of writing the main diagnosis. Each diagnosis statement must be informative or easy to understand in order to classify the conditions into the most specific ICD-10 category. The quality of the coding depends on the completeness of the diagnosis, the legibility of the doctor's writing, and the professionalism of the doctor and coding officer.[2]

Writing specific primary diagnoses can facilitate coding officers in coding, analyzing, and making disease recapitulation reports. Diagnostic coding is also used as a basis for grouping case-based groups (CBG) for billing systems for payment of service fees, recording diseases and actions in health care facilities,

as well as to improve hospital management information in making correct decisions. Detailed information according to ICD-10 can be in the form of acute/chronic conditions, detailed anatomical locations, stages of the disease, and complications. Writing a non-specific diagnosis often makes it difficult for coders to choose the right disease code and leads to miscoding.[2,3]

It is important to review the accuracy of the diagnosis code in medical records because if the diagnosis code is not correct or does not follow ICD-10, it can cause a decrease in the quality of services in hospitals, affect data, report information, and accuracy of rates when used as a payment method for patient service. Low rates of health services will certainly harm the hospital. On the other hand, high rates of health services seem to make the hospital benefit from the difference in rates to the detriment of health insurance providers and patients.[4]

The impact on the hospital is if the fracture diagnosis code is incorrect, namely on claims for health insurance financing and inappropriate drug administration. While the effect on the patient is receiving improper medical treatment and, as a result, will cause the patient's condition to worsen. This study aims to determine the accuracy of the main diagnostic code for fractures in inpatients at Gatot Soebroto Army Hospital using ICD-10.

2. Methods

This research is an observational study with a descriptive method. The study was conducted at the medical record unit of the Gatot Soebroto Army Central Hospital from October to December 2020. Sampling in this study was carried out using a systematic random sampling technique, namely random sampling. The sample in this study was the medical record of patients with a fracture diagnosis at Gatot Soebroto Army Hospital. A total of 59 medical record documents were sampled in this study. The variables in this study were standard operating procedures for giving a diagnosis code to inpatients, the accuracy of the diagnosis code, and the obstacles in giving the main fracture diagnosis code. Data collection techniques were carried out by observation and interviews. Data analysis was carried out descriptively, and data presentation was carried out in a narrative manner.

3. Results and Discussion

Standard operating procedures for coding fracture diagnosis

Based on the observations, standard operating procedures (SOPs) for giving diagnosis codes in general according to ICD-10 at Gatot Soebroto Army Hospital are already in place. The instructions in the SOP for coding the diagnosis are fully implemented by the coding officer who codes the diagnosis. However, the SPO code for fracture diagnosis is not yet available. In the SOP for coding diagnosis at Gatot Soebroto Army Hospital, there is an instruction that if the sheet is incomplete, the officer needs to delay the codification of the medical record, but in fact, researchers still found several resumes that had not been written down with the diagnosis code.

According to the Ministry of health of the Republic of Indonesia, standard operating procedures (SOPs) have a major influence on the success of health service delivery.[4] Standard operating procedures that are not appropriate will result in big losses such as errors in health services.[5] The Minister of Health of the Republic of Indonesia has regulated medical service standards which include the National Guidelines for Medical Services (PNPK) and SOP, which explains that the head of health facilities is obliged to form the preparation of SOPs according to the type and level of the health service facility they lead.

The accuracy of the diagnosis code

Based on table 1, there were 43 samples (72.88%) who had a diagnosis code that did not match the ICD-10. The inaccuracy of the code occurs because the knowledge of health workers about the fracture diagnosis code is still low, and the medical record officer does not understand the code.[6,7]

Table 1. The accuracy of the diagnostic code.

No	Diagnostic code	Total	Percentage (%)
1	Correct	16	27.11%
2	Incorrect	43	72.88%
Total		59	100%

Table 2. Details of the accuracy of fracture diagnosis codes in hospitalized patients.

No	Description	Total	Information
1	Accuracy of fracture diagnosis code	16	Error not adding 4th and 5th digits
2	Inaccuracy of fracture diagnosis code	25	Error not adding 4th and 5th digits
3	Accuracy of adding additional characters	18	Not providing information for additional characters ('.0' for closed fractures and '.1' for open fractures)

Based on table 2, the errors in the coding for additional characters of the 59 main fracture diagnostic codes can be sorted, namely; 8 cases of block selection errors, 3 cases of 4th digit and 22 cases of 5th, 6 cases of sub-block selection errors, 18 cases of other character assignment errors. The 4th digit for the S42 sub-block is '.0'-'.9' except for '.5,.6' whose function is to get a more specific fracture code in the shoulder and upper arm (fracture of the shoulder and upper arm). In contrast, the 5th digit functions to get an explanation of the type of fracture closed or open.

Barriers to coding the main fracture diagnosis

The factors that cause the inaccuracy of the main fracture diagnosis code can be seen through elements of management. The management element has five factors, namely man, money, material, machine, and method.[8-10] Based on observations and interviews with medical record officers at Gatot Soebroto Hospital, misdiagnosis was caused by many factors, one of which was the doctor's writing which was not clear, and the use of abbreviations in writing the diagnosis. Coding officers are also often not careful in looking at the diagnosis supporting forms, so the coding results are not accurate because they do not review the entire contents of the medical record.

4. Conclusion

In conclusion, Gatot Soebroto Army Hospital already has an SOP for giving a general diagnosis code, and there is no specific SOP regarding the diagnosis code for fracture cases. Most fracture diagnosis codes in medical record documents are incorrect. This is probably due to the lack of accuracy of the coder in coding the diagnosis, the absence of an evaluation or audit of the diagnosis coding for fracture cases, and the writing of the diagnosis by doctors being unclear and illegible.

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