# Analysis of the Diagnosis's Inaccuracy Codes for Infection Cases in Dahlia Ward's Inpatients at Majenang Regional Hospital

Syifa Khurotun Azizah<sup>1\*</sup>, Agya Osadawedya Hakim<sup>2</sup>, Gunawan<sup>3</sup>

1.2 Medical Record & Health InformationUniversitas Muhammadiyah Purwokerto Purwokerto, Indonesia

3 Medical Record & Health Information Majenang Regional Hospital Majenang, Indonesia

\*Corresponding Author: <a href="mailto:skhurotunazizah@gmail.com">skhurotunazizah@gmail.com</a>

**Abstract.** The large number of infection cases in Indonesia has caused the number of BPJS claims related to these cases to continue to increase. The claim process carried out by the hospital must go through various stages in order to be claimed, including the coding process. The medical recorder's role as a coder is responsible for the correctness and accuracy of the code for a diagnosis that has been determined by medical personnel (doctors). Inaccuracies in diagnosis codes will impact the effectiveness of health service data and information management as well as pending claims. Pending claims that occur due to inaccuracies can impact hospital cost profit which will result in the hospital experiencing losses. Based on a preliminary study conducted in the Dahlia Ward, Majenang Regional Hospital, 3 medical records with incorrect codes were found (3.54%) out of 58 medical records. This study aims to calculate the inaccuracy of diagnosis codes for cases of infection for inpatients in the Dahlia Ward, Majenang Regional Hospital and identify the factors that cause inaccurate diagnosis codes for cases of infection for inpatients in the Dahlia Ward, Majenang Hospital. The research method used is a qualitative method with a narrative descriptive design. Data collection techniques were carried out using two methods, namely observation and interviews. Interviews were conducted to obtain reasons for inaccurate diagnosis codes, while observations were used to verify interview results. There were 3 resource persons in this study, namely the head of medical records and 2 inpatient coders. The research results showed that inaccuracies occurred due to incomplete diagnosis writing by the DPJP, such as doctors tending to write abbreviations, and coders tending to use rote memorization in determining diagnosis codes.

**Keywords:** Inaccuracy, Diagnosis Code, Infection, Hospitalization

### **I.BACKGROUND**

Medical Recorder and Health Information (PMIK) must be able to determine disease and action codes correctly according to the classification applied in Indonesia (ICD-10) [1]. Determining the correct diagnosis code is also influenced by medical personnel who determine the code, medical records personnel as code givers, and other health personnel. The quality of coded data is important for health information management personnel, health care facilities, and health information management professionals [2]. Coding inaccuracy is a form of inaccuracy in writing diagnoses of diseases and behavior that fall into certain categories in ICD-10 and ICD-9 CM. Medical experts who treat patients or who are in charge of recognizing primary conditions must make a diagnosis so that this diagnostic code is accurate which will be the basis for calculating morbidity data. Available medical records should be used by the coder to determine the diseases and procedures to code [3]. Some hospitals in Indonesia (around 65%) have not made a complete and clear diagnosis based on ICD-10 and the coding is not correct. The average percentage of inaccurate diagnosis codes in 30 health service facilities in Indonesia is 56.64% [4].Infectious diseases are one of the most important health problems in developing countries, including Indonesia. Infectious diseases are a collection of types of diseases that easily attack children caused by viral infections, bacterial infections and parasitic infections [5]. At Majenang Regional Hospital, patients with cases of infectious diseases are usually placed in the Dahlia ward.

Hospitals are the most important part of the world of health, where there are types of services that support public health. Not all hospitals have high quality services. The quality of health services is very important to measure how far a hospital is in providing services to patients [6]. Inpatient treatment is a form of treatment, where the patient is treated and stays in the hospital for an indefinite period of time, because while the patient is being treated, the hospital must provide the best service to the patient so that the service recipient feels well served [7]. Based on the results of a preliminary study conducted with short interviews at the Majenang Regional Hospital, it was found that there was a problem in the form of inaccurate diagnosis codes for infection cases in August-October 2023 totaling 3 cases (3.54%) out of 58 cases. This caused the Majenang Regional Hospital to experience delayed profit and sometimes cause financial loses. Based on this problem, researchers then interested in research related to "Analysis of the Inaccuracy of Codes in Dahlia Ward's Inpatients at Majenang Regional Hospital".

Asosiasi Perguruan Tinggi Rekam Medis dan Manajemen Informasi Kesehatan Indonesia - Universitas Muhammadiyah Sidoarjo

# **II.METHOD**

This research is a descriptive qualitative study which aims to provide an overview and explain the results obtained regarding the reasons for the inaccuracy of the diagnosis code for infection cases for inpatients in dahlia ward at majenang regional hospital. data collection techniques use observation and interviews. interviews were conducted to determine the reasons for inaccurate diagnosis codes, while observations were used to verify the interview findings There were 3 sources involved in this research, namely the head of medical records and 2 inpatient coders.

# **III.RESULTS AND DISCUSSION**

Based on the research conducted, the researcher made observations first to identify inaccuracies in the diagnosis codes mentioned in the preliminary study. The results of these inaccuracies can be seen in the following table:

Table 2 Inaccuracy of Codes in Infection Cases at Majenang Regional Hospital  ICD- ICD								
No ·	No. RM	Primary Diagnosis	10 RS code	ICD 10 Code Researcher	Concomitan t Diagnosis	10 RS code	ICD 10 Code Researcher	Result s
1	152x x	Pneumonia	J18.9	V3: Pneumonia V3: Pneumonia (P. 517) V1: Pneumonia, unspecifie d (465) End code: J18.9	CHF	I12.9	LT: Failure V3: Failure, failed - heart -congestive (P.269) V1: Congestive heart failure (P. 439) End code: I50.0	Not precise
2	173x x	Appendiciti s	K35. 9	LT: Appendicitis				
				V3:Appendicitis				
				(P. 59)	-	-	-	Not precise
				V1: Unspecified appendicitis				
				(P. 505)				
				End Code: K37				
3	040x x	Cystitis	N23	LT: Cystitis	Hepatitis	K75.	LT: Hepatitis	Not precise
				V3: Cystitis (P.170)			V3: Hepatitis (P. 316)	
				V1: Cystitis, unspecified (P. 620)			V1: Inflammatory liver disease, unspecified (P. 524)	
				End Code: N30.9			End Code: K75.9	
							LT: Fatty	

The 3rd International Scientific Meeting on Health Information Management (3rd ISMOHIM)

Asosiasi Perguruan Tinggi Rekam Medis dan Manajemen Informasi Kesehatan Indonesia - Universitas Muhammadiyah Sidoarjo

Fatty Liver - V3: Fatty

- liver (NEC)(P. 272)

V1: Fatty (change of)
liver, not elsewhere
classified (P. 524)

Code: K76.0

Based on the table above, the inaccuracy in case number one is declared incorrect because the coder is still using memorized ICD-10 and ICD 9 CM. In case number two, it was declared inappropriate due to incomplete writing of the diagnosis by the DPJP. Meanwhile, in case three, it was declared inappropriate because there was a concomitant diagnosis that was not coded by the coder. Coders must assign a code to each diagnosis and action even though it does not affect the BPJS claim.

### DISCUSSION

Factors that can cause inaccuracies in coding are as follows:

## Clarity and Completeness of Writing a Diagnosis by the Doctor Responsible for the Patient

Writing a diagnosis that is difficult to read will affect the information that will be produced because of the incompleteness of the data presented so that it can have an impact on the quality of the information and the accuracy of the code. Determining a patient's diagnosis is an obligation, the rights and responsibilities of the doctor concerned must not be changed, therefore the diagnosis made. in the medical record must be filled out completely and clearly in accordance with ICD-10 directions [8]. Writing a doctor's diagnosis that is difficult to read by entering an incorrect diagnosis will affect the information produced because of the inaccuracy of the data presented, which can impact the quality of the information and the accuracy of the code.[9]. Recording and documenting the results of examinations, treatment, procedures and other health services that have been and will be provided to patients must be complete, clear and carried out after the patient receives health services by including the name, time and signature of the health worker providing the health services [10].

Based on the results of interviews conducted by researchers regarding factors that can cause inaccurate diagnosis codes.

Like the following statement:

"There are definitely obstacles. Now is the digital era or Electronic Medical Records. For this transition, it is very influential for

coding. Coding at Majenang Regional Hospital is done at SIMRS, whatever the doctor's diagnosis, we will definitely read it. Well, the problem is that not all doctors responsible for the patient write down a complete diagnosis. So usually just use abbreviations"(Informant 1).

This is in accordance with previous research which stated that incomplete filling out of medical records reflects the health services provided and the quality of medical record services. Incomplete medical record documents will make it difficult for health workers to recognize the patient's medical history and make claims to the insurance company [11].

# Coders Tend to Use Memorization in Determining Diagnosis Codes

Based on the results of interviews conducted by researchers regarding factors that can cause inaccuracies in coding. Like the following statement:

"Because I've been in coding for a long time, and the diagnoses that often come up tend to be the same. So I rarely open the ICD book." (Informant 2).

Based on the results of interviews conducted by researchers, officers tend to use memorization or auxiliary books when coding. Both the PMIK profession and other professions that do coding tend to use memorization or use textbooks. This is prone to code inaccuracies, because it does not refer directly to the ICD-10 book [12]. The Majenang Regional General Hospital must also carry out an evaluation regarding the accuracy of giving diagnosis codes. Carrying out the work of a medical recorder, a medical recorder is obliged to evaluate the clinical classification system and coding of diseases related to health and medical procedures in health financing.

Asosiasi Perguruan Tinggi Rekam Medis dan Manajemen Informasi Kesehatan Indonesia - Universitas Muhammadiyah Sidoarjo

# **IV.CONCLUSIONS**

The conclusion of this study is that the factors that can cause inaccuracy in assigning infection case codes in the Dahlia ward at Majenang Regional Hospital are the clarity and completeness of writing diagnoses by the Doctor in Charge of the Patient, and coders tend to use rote memorization in determining Diagnosis Codes. Hospital Majenang needs to maintain and increase the accuracy of providing diagnosis codes in infection cases. Coders must code each diagnosis and action even though it does not affect the BPJS claim. Majenang Regional Hospital must also carry out an evaluation of the accuracy of providing diagnosis codes and regular training regarding coding.

#### ACKNOWLEDGMENT

Thanks to Universitas Muhammadiyah Purwokerto and the 2024 ISMOHIM committee for organizing international conference activities so that this article can be published.

#### REFERENCES

- [1]Menteri Kesehatan Republik Indonesia, Keputusan Menteri Kesehatan Republik Indonesia Nomor HK.01.07/Menkes/312/2020 Tentang Standar Profesi Perekam Medis dan Informasi Kesehatan. Indonesia, 2020, p. 42.
- [2]N. dan D. R. K. Puspitasari, "EVALUASI TINGKAT KETIDAKTEPATAN PEMBERIAN KODE DIAGNOSIS DAN FAKTOR PENYEBAB DI RUMAH SAKIT X JAWA TIMUR Nurmalinda Puspitasari \*, Diah Retno Kusumawati \* \*," Eval. Tingkat Ketidaktepatan Pemberian Kode Diagnosis Dan Fakt. Penyebab Di Rumah Sakit X Jawa Timur, vol. 3, no. 1, 2017.
- [3]Y. F. Nanjo et al., "Analisis Pengaruh Ketidaktepatan Kode Diagnosis Dan Kode Tindakan Pasien Rawat Inap Peserta Jaminan Kesehatan Nasional Terhadap Tarif Di Rumah Sakit Umum Daerah Wangaya Kota Denpasar," J. Heal. Care Media ISSN 2089-4228, vol. 6, no. 2, pp. 86–94, 2022.
- [4]E. S. D. H. Suryandari, R. N. Rahmadhani, A. Z. Pitoyo, H. S. Sangkot, and A. Wijaya, "Hubungan Ketepatan Penulisan Diagnosis Penyakit dengan Keakuratan Kode Diagnosis pada Pasien Rawat Inap di Rumah Sakit," J. Manaj. Kesehat. Indones., vol. 11, no. 3, pp. 249–259, 2023, doi: 10.14710/jmki.11.3.2023.249-250.
- [5]A. A. Noor Mutsaqof, W. -, and E. Suryani, "Sistem Pakar Untuk Mendiagnosis Penyakit Infeksi Menggunakan Forward Chaining," J. Teknol. Inf. ITSmart, vol. 4, no. 1, p. 43, 2016, doi: 10.20961/its.v4i1.1758.
- [6]M. Badar, "Manajemen Kualitas Pelayanan Rumah Sakit Umum Daerah Batara Siang Kabupaten Pangkep," KAIZEN Kaji. Ekon. Manajemen, Akuntansi, dan Kewirausahaan, vol. 1, no. 1, pp. 1–9, 2022.
- [7] Nurdahniar, "Pelayanan Kesehatan Rawat Inap Rumah Sakit Umum Daerah Tenriawaru Kabupaten Bone," Univ. Negeri Makassar, no. 1465142006, pp. 1–12, 2019.
- [8]D. Mardiawati, L. Handayuni, R. Afrima Yenni, and D. Giovani, "Faktor-Faktor Yang Mempengaruhi Ketepatan Pengodean Pada Kasus Cedera Berdasarkan Icd-10 Di Rumah Sakit Khusus Bedah," Ensiklopedia J., vol. 4, no. 3, pp. 228–234, 2022, doi: 10.33559/eoj.v4i3.305.
- [9]M. Salehudin, D. Harmanto, and A. Budiarti, "Tinjauan Kejelasan dan Ketepatan Diagnosa Pada Resume Medis Pasien Rawat Inap dengan Keakuratan Kode Berdasarkan ICD-10 di RSHD Kota Bengkulu," J. Manaj. Inf. Kesehat., pp. 34–43, 2021.
- [10]Kementerian Kesehatan Republik Indonesia, Peraturan Menteri Kesehatan RI No 24 Tahun 2022 Tentang Rekam Medis. Indonesia, 2022.
- [11]M. K. Wirajaya and N. Nuraini, "Faktor Faktor yang Mempengaruhi Ketidaklengkapan Rekam Medis Pasien pada Rumah Sakit di Indonesia," J. Manaj. Inf. Kesehat. Indones., vol. 7, no. 2, p. 165, 2019, doi: 10.33560/jmiki.v7i2.225.
- [12]L. Indawati, "Identifikasi Unsur 5M dalam Pemberian Kode Penyakit Dan Tindakan (Systematic Review)," Indones. Heal. Inf. Manag. J., vol. 5, no. 2, pp. 59–64, 2017.