



How Consistent are Perinatal Case Disease Diagnosis Codes Based on ICD 10? A Case Study from Ciremai Hospital

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Abstract. The mortality rate of neonatal cases in Indonesia in 2021 reached 20,154 cases, the cause of death was dominated by diagnoses of Low Birth Weight, asphyxia, infections, and congenital abnormalities. In health care practice, the diagnosis of illness during treatment will be recorded in a medical record. The medical record will contain administrative and clinical data, one of which contains the diagnosis code and actions during treatment. The diagnosis code established in the medical record must be precise, accurate, and consistent in accordance with ICD-10. This study included a type of quantitative descriptive research with a sample of 222 infant medical records, the sample technique used was purposive sampling. The results showed that the coding process at Ciremai Hospital in Cirebon City was 100% electronic, where from 222 infant medical record documents there were 167 consistent diagnosis codes and 55 inconsistent diagnosis codes. This is caused by 2 things, namely improper diagnosis codes and improper code reselection. Thus, the determination of the diagnosis code for perinatal cases at Ciremai Hospital in Cirebon City in 2022 shows that the consistency of the diagnosis code of 75% or as many as 167 diagnosis codes is consistent.

Keywords: Consistency, Perinatal, Diagnosis, Codification, ICD 10

INTRODUCTION

Law Number 29 of 2009 states that in the practice of medicine, a doctor and/or dentist is required to make a medical record. Thus, a health care facility contains administrative data records and clinical data of patients during treatment in a medical record. A medical record is a document that contains patient identity data, examinations, treatment, actions, and other services that have been provided to patients (Permenkes Nomor 24, 2022).

A good medical record can reflect the quality of service provided. Therefore, medical record services must be managed by someone who is competent in the field of medical records or someone who has passed medical record education according to a law known as Medical Recorder and Health Information (Permenkes Number 24, 2022). A medical recorder has professional standards one of which must be competent in terms of clinical

classification, disease codification, and other health problems (Keputusan Menteri Kesehatan No. 312, 2020).

The coder is responsible for the accuracy of the diagnosis code and the actions already established by the doctor. This is due to quality and statistics. The disease is determined by the accuracy of the diagnosis code set by the coder. Medical records contain continuous information related to the patient's health condition. In realizing this, a medical record must have data consistency that can be seen through qualitative analysis of medical record documents consisting of review for complete and consistent diagnostic, review for entry consistency, review for description and justification of course of treatment, review for recording informed consent, review for documentation practices, review for potentially compensable events (Hatta, 2013).

Indonesian health data in 2021 shows that there were 20,154 neonatal deaths in 2021 with a description of 79.1% occurring at the age of 0-6 days and 20.9% occurring at the age of 7-28 days. The causes of neonatal death in 2021 include Low Birth Weight (BBLR), asphyxia, infections, congenital abnormalities, and others (Kemenkes RI, 2022). Based on these data, the condition of sick babies in Indonesia is still high, thus affecting the infant mortality rate in Indonesia. The results of a preliminary study at Ciremai Hospital in Cirebon City showed that there was an inconsistent diagnosis code for perinatal cases. Some infant patients with the same diagnosis but different diagnosis codes. This will affect the consistency of hospital reporting codes and data. The purpose of this study was to determine the consistency of the diagnosis code of perinatal cases based on ICD-10 at Ciremai Hospital in Cirebon City.

LITERATURE

ICD stands for International Statistical Classification of Diseases and Related Health Problems, which contains diagnostic classifications of diseases with international standards compiled based on a system of categories and grouped in disease units according to criteria agreed by international experts. The ICD issued by WHO is a comprehensive and internationally recognized system of disease classification and procedures (Hatta, 2013).

Consistency is an adjustment / compatibility between one part with another part and with all parts (Lily, 2018). The consistency of data written in medical records can be assessed by conducting qualitative analysis of medical records. Qualitative analysis of medical records is an analysis of medical record documents that aims to achieve the creation of

medical records that avoid inconsistencies or violations of records that have an impact on inaccurate and incomplete results (Hatta, 2013).

In qualitative analysis, there are six (6) components of qualitative analysis, which are as follows: (Lily, 2018).

- a. Review for complete and consistent diagnostic. A diagnostic statement is made in the Medical Record that reflects the level of understanding of the patient's medical condition at the time of recording. This relates to the continuity of diagnoses in the patient's medical information. The following are things to note in review for complete and consistent diagnostic that is admission diagnosis, additional diagnostics, pre operative, post operative diagnosis, pathological diagnosis, clinical diagnosis, principal diagnosis, secondary diagnosis and procedures
- b. Review for entry consistency. Things to note in the review for entry consistency include: The diagnosis of the disease from start to finish must be consistent; Records should reflect the development of information about the patient's condition.
- c. Review for description and justification of course of treatment. Medical Record contains information on the patient's condition during treatment, examination results, and actions that have been taken. In addition, there are necessary reasons that guide each decision whether to do or not to take an action, and if there is a change in treatment.
- d. Review for recording informed consent. The accuracy of doctors in recording the information given to patients is very necessary, this affects the possibility of patients writing statements for approval or rejection before medical action. The patient's statement regarding the interests of treatment must be described carefully and in detail because it will have an impact on legal interests.
- e. Review for documentation practices. Things that need to be considered in the review for documentation practices aspect include: Legible and clear writing, Standard abbreviations that have been standardized, Do not write comments containing insinuations or insults, The ink used must be durable, Up-to-date and Filling is not gaps.
- f. Review for potentially compensable events. Medical records must have an entire record of events that could potentially be claimed against the health care institute/provider itself, either by patients or by third parties.

METHOD

This research is a quantitative descriptive research with the sample technique used, namely purposive sampling. The object of research is in the form of a diagnosis code for perinatal cases at Ciremai Hospital in Cirebon City in 2022 with criteria for all cases of disease in the perinatal period except cases of congenital malformations and Covid-19. Data collection techniques by observation and documentation studies. Data analysis techniques used descriptive univariate analysis.

DISCUSSION

The implementation of Medical Records at Ciremai Hospital in Cirebon City has thoroughly implemented EMR (Electronic Medical Record) through a system known as SIMRS (Hospital Management House System). Thus, in the process of establishing the code of diagnosis and action has been carried out electronically. The determination of diagnosis codes and actions in medical records at Ciremai Hospital in Cirebon City is based on the Hospital Codification SOP and standardized coding rules in accordance with the ICD.

The process of implementing codification in hospitals must begin with a careful review of the patient's medical records related to documentation of health problems and care provided to patients. This is closely related to quantitative and qualitative analysis of medical records. Qualitative analysis of medical records contains six important points, one of which is related to the review of completeness and consistency of diagnosis. A coder must be able to select clinical conditions and procedures that support the establishment of diagnosis codes and actions based on the guidelines for diagnosis statements and actions set by the doctor.

Thus, it is expected that the quality of hospital coding will be better. This is in accordance with the coding quality element which consists of four elements, namely reliability (consistent: the code remains the same even though it is coded by different officers), validity (diagnosis code and appropriate action), completeness (includes all diagnoses and actions written in the medical record), and timelines (on time) (Hatta, 2013). If the four elements are not met, then the diagnosis code that is enforced will not be of quality and will affect statistical data, service costs, and in the interests of policy making (Maryati, et al. 2020).

This study only focuses on examining the consistency of the diagnosis code of perinatal cases at Ciremai Hospital in Cirebon City in 2022. The research data used were secondary data with a total of 222 medical records of infant patients in accordance with the criteria of the study sample. Based on the research that has been done, the results of the calculation of the consistency of the diagnosis code of perinatal cases in SIMRS on the summary sheet of entry and exit of inpatient infant medical records for the 2022 period of Ciremai Hospital in Cirebon City can be illustrated in the following table 1.

Table 1. Consistency of Perinatal Case Diagnosis Code

Criterion	N	%
Consistent	167	75%
Inconsistent	55	25%
Total	222	100%

Source : Research Data

Based on the table 2, Inconsistent diagnosis codes of perinatal cases, largely influenced by not only one primary diagnosis and improper code reselection, as well as inaccuracy of codes with diagnoses. The results of the researchers' observations during the process of coding the inpatient diagnosis have not been fully consistent, this is because there are still some incorrect diagnosis codes, thus affecting the consistency of the diagnosis code. The coder of Ciremai Hospital explained that the inconsistency of the diagnosis code was caused by human error factors, sometimes coders only relied on memory when assigning the code, and clinical coding audits were not carried out. The inconsistency of the diagnosis code in perinatal cases at Ciremai Hospital is influenced by an incorrect diagnosis code and improper code reselection.

Table 2. List of Causes of Inconsistencies in Diagnosis Codes

Source :

No	Category	N	%
1	Improper diagnosis code	47	85%
2	Reselection of inappropriate diagnosis codes	8	15%
Total		55	100%

Research Data

The incorrect diagnosis code in this study consists of an incorrect code but is still in Chapter XVI Certain Condition originating in the perinatal period and an incorrect code outside that chapter. For example, the code is incorrect, namely in the case of N8, the main diagnosis of RDN (Respiratory Distress of Newborn) disease is written. The diagnosis code listed in the patient's medical record entry and exit summary is P22.0. The diagnosis code is not accurate because the P22.0 code is the diagnosis code of RDS (Respiratory Distress Syndrome of Newborn), so the code that should be assigned to RDN disease is the P22.9 code.

Another case was found in N1 cases with the main diagnosis of severe asphyxia. The diagnosis code listed in the patient's medical record entry and exit summary is P21.1 which should be coded with P21.0 which is severe birth asphyxia. In this case, the code error is because the code P21.1 is intended for the diagnosis of moderate and mild asphyxia, so the

code is not appropriate if it is assigned to the diagnosis of severe asphyxia. In addition, there are also code inaccuracies outside Chapter XVI Certain Condition originating in the perinatal period contained in case H11.135 with the primary diagnosis of TTN (Transient Tachypnea of the newborn). The diagnosis code entered is G44.2 which should be coded with P22.1 which is Transient tachypnea of newborn. The code assignment is incorrect because the code G44.2 is the code for the diagnosis of vascular headache.

Inconsistent diagnosis codes are affected also by improper code reselection. Improper reselection of diagnosis codes is found in case H7.83 with the main diagnosis of severe asphyxia and neonatal infection. The APGAR value shows the number 3 and the medical action enforced by the doctor, namely the installation of a ventilator. The diagnosis code set by the Hospital coder is code P39.9. When viewed from the value of APGAR and the actions given, the selection of the diagnosis code that is enforced is inappropriate. The exact diagnosis code based on code reselection with Rule-MB 2 is code P21.1. The selection of code P21.1 which is the diagnosis code for severe asphyxia disease because the treatment given shows more action for severe asphyxia disease.

CONCLUSION

The implementation of Medical Records at Ciremai Hospital in Cirebon City has thoroughly implemented EMR (Electronic Medical Record) through a system known as SIMRS (Hospital Management House System). The process of assigning diagnosis codes and actions has been carried out electronically. The determination of diagnosis codes and actions in medical records at Ciremai Hospital in Cirebon City is based on the Hospital Codification SOP and standardized coding rules in accordance with the ICD.

The results of this study can be concluded that the consistency of the diagnosis code for perinatal cases in 2022 at Ciremai Hospital in Cirebon City by 75% or as many as 167 cases has been consistent and the diagnosis code is inconsistent by 25% or as many as 55 cases. The inconsistency of the diagnosis code in this study is based on two important points, namely the incorrect diagnosis code and the reselection of the incorrect diagnosis code. Coding inconsistencies will affect the quality of coding, so efforts need to be made to improve code consistency to support coding quality.

Improving coding consistency can be done through updating the Standard Operating Procedures (SPO) which contains electronic coding policies, a list of terms and abbreviations that are often found in disease cases according to the type of Functional Medical Staff (SMF) in the Hospital. The Medical Record Unit of Ciremai Hospital should strive to create a guideline or juknis that contains procedures for coding specific perinatal cases. In addition, hospitals also need to strive for continuous competency improvement for coders through training, seminars, or workshops. Evaluation of coding results also needs to be done, so clinical coding audits are also needed in an effort to review established diagnosis codes to improve coding quality.

Acknowledgement:

Peneliti menyampaikan terima kasih kepada seluruh pihak yang terlibat dalam penelitian ini. Peneliti banyak mendapatkan saran, kritik, dan motivasi yang membangun selama penelitian ini sehingga terselesaikan dengan baik dan dapat dipertanggungjawabkan.

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