


## The Determination of Bronchopneumonia Diagnostic Codes in Patients of The National Health Insurance

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ARTICLE INFORMATION	ABSTRACT
<p><i>*Corresponding Author</i> Yashna Meutia Lathifina E-mail: yashnameutia@gmail.com</p> <p><b>Keywords:</b> Bronchopneumonia; Coding; Diagnosis</p> <p>Copyright © 2023 Authors</p>  <p>This is an open access article under the CC-BY-NC-SA license.</p>	<p><i>Coding is the activity of providing the diagnosis in accordance with International Statistical Classification of Diseases and Related Health Problems as well as providing a procedure code in accordance. Accuracy in coding a disease and action is very important because it is related to health service financing because it determines the smoothness and process of submitting claims for reimbursement of health service costs to BPJS. The purpose of this study was to identify the code code coded by the coder in the codefication of bronchopneumonia cases in National Health Insurance patients by reviewing the coding procedures carried out by the coder. This research uses a descriptive method with a quantitative approach. In collecting data, researchers use observation. The results showed that the accuracy of codefication in bronchopneumonia patients was eighty-two point thirty-five percent in fifty-six medical records of precise diagnosis and seventeen point sixty-five percent in forty-two medical records of improper diagnosis. The accuracy of the bronchopneumonia code as the primary diagnosis Totaled to ninety point forty-eight percent of the exact code and nine point fifty-two percent of the improper code of the forty-two medical records. The code of bronchopneumonia as a secondary diagnosis Totals to sixty-nine point twenty-three percent of the exact code and thirty-point seventy-seven improper codes of twenty-six medical records. It is recommended that there is a need to increase the accuracy of the coder in reading the diagnosis written by the doctor on the medical resume as well as the consistency.</i></p>

### INTRODUCTION

Health Insurance (JKN) which was developed in Indonesia is part of the National Social Security System (SJSN) which is implemented through the mandatory Social Health Insurance mechanism, the goal is that all Indonesians are protected in the insurance system (Efendy, et al, 2022; Dewi & Israhadi, 2021; Mboi, 2015). So that they can meet the basic

needs of decent public health. Social Health Insurance Administration Body (BPJS) is a social protection legal entity established to administer social security programs to ensure that all people can meet their basic needs for a decent life. The form of BPJS health responsibility to health facilities is that BPJS health is obliged to pay for health facilities for services provided to participants no later than 15 days from the time the claim

is received in full (Permenkes RI No. 28 of 2014).

Since the implementation of the National Social Security System (SJSN) of 2014 in Indonesia, the determination of rates for patients with the National Health Insurance (JKN) has adhered to the casemix system, namely grouping diagnoses and procedures with reference to similar or similar clinical characteristics and similar or similar costs. done with grouper (Yuniarti, et al, 2019; Mudiono, et al, 2023; Winarti & Djamhur, 2023; Permenkes RI No. 27 of 2014).

Coding is an activity to provide a disease diagnosis code with ICD 10 and actions/procedures according to ICD 9 CM published by WHO. In the prospective financing system, coding is very important because it will determine the Total of fees paid to the Advanced Level Referral Health Facility (FKRTL). If there is an error in coding, it will affect the DRG code (Diagnosis Related Group) the case will affect the acceptance of claim submissions (Dorothy, et al, 2022; Arini, et al, 2022; Nilasari, et al, 2022; Permenkes RI No. 26 of 2021).

The accuracy and accuracy of the code provided will greatly affect the rates that the hospital will receive in exchange for the service fees that have been provided to patients while receiving health care facilities (Susanti, 2018). Bronchopneumonia also

known as lobular pneumonia is in parenchyma lung involving bronchi/bronchioles in the form of distribution shaped patches (patchy distribution). Generally about one or a number of lobe marked lung with existence spots infiltrates caused by bacteria, viruses, fungi, and objects foreign (Chu, et al, 2019; Adityo & Aditya, 2015).

Based on the Field Work Practice (PKL) conducted by researchers on January, 11<sup>th</sup>-January 26<sup>th</sup>, 2022 at the AN-NISA Hospital in Tangerang, the researchers found that bronchopneumonia cases were among the 10 biggest inpatient diseases in 2021. Bronchopneumonia cases occurred in infants to elderly patients who are BPJS Health users.

Therefore, in the era of the National Health Insurance (JKN) the Indonesian Case Base Groups (INA CBG's) system is an important element in the submission and payment of claims for health care payments that have been carried out by health care facilities, based on the ICD 10 code for diagnosis and ICD 9 CM for actions in generating claim rates. Coder staff must master the science of codification and clinical pathways for each disease because the Social Health Insurance Administration Body (BPJS) has rules in every diagnosis (Iqbal, 2022).

## METHOD

The research method used in this research is descriptive with a quantitative approach. The study was carried out in the casemix unit coding section at AN-NISA Hospital in February-March 2022. The population and sample of this study were the medical records of patients with the National Health Insurance (JKN) with cases of bronchopneumonia and an inpatient coder. Collecting data by means of observation using a checklist sheet and equipped with qualitative data collection through interviews.

Qualitative data collection was used to explore data that had not been studied in depth at the time of quantitative data collection through an observation checklist.

## RESULTS AND DISCUSSION

### Codefication Standard Operating Procedure (SOP)

Obtained basic data for the Codefication's SOP described in the following table.

**Table 1. Implementation of Codefication Standard Operating Procedures (SOP) by Coders at AN-NISA Hospital Tangerang**

Standard Operating Procedure Criteria for Hospital	Implemented	Not Implemented
Open the ICHA application on the medical resume menu hospitalization, unu grouper	√	
Open the EMR application on the inpatient menu, discharge medical assessment, and action reports	√	
Looking for a diagnosis on the EMR application on the home medical assessment application	√	
Search for action reports in the EMR app on the action report menu	√	
Look for disease codes on ICD 10	√	
Searching for the action code on the ICD 9 CM	√	
Inputting disease codes and action codes in the inpatient menu on the ICHA application	√	
Doing grouping on unu grouper 5.2 in the ICHA application	√	
Maintain the confidentiality of medical records	√	

Source: Primary Data (2021)

From the table, it is known that there are 9 standard criteria for the SOP Codefication of the AN-NISA Hospital Tangerang with the results being implemented entirely. So it can be concluded that the percentage of the implementation of the Codefication SOP Based on Table 2 AN-NISA Hospital Tangerang, there is already a Codefication Standard Operating Procedure (SOP), in the

process of coding the coder has carried out his job description based on the SOP that has been set at the AN-NISA Hospital Tangerang.

**Table 2. Frequency Distribution of Codification SOP Implementation**

Category	Frequency	Percentage
<b>Implemented</b>	9	100%
<b>Not Implemented</b>	0	0
<b>Total</b>	9	100%

.Based on the results of the study, AN-NISA Hospital Tangerang has a Standard Operating Procedure (SOP) related to disease codification. From the results of observations made to the coder in implementing the SOP points, the criteria for implementing the disease codeification SOP at the AN-NISA Hospital Totaled to 9 points. The results of the implementation of the coder have carried out their job descriptions based on the Standard Operating Procedures (SOP) that have been set at the AN-NISA Hospital Tangerang. The application of SOPs is very important in an organization or company as a guide in carrying out operations so that they are well structured, so that the implementation of quality medical record services is in accordance with applicable SOPs.

#### **Human Resources (HR) Coder based on Professionalism**

Based on the results of interviews conducted with an inpatient coder, the results of the coder 's educational background are D III Medical Records and Health Information with experience working at the AN-NISA

Hospital Tangerang for 10 years. The coder has participated in several coding trainings including coding in the era of the National Health Insurance (JKN).

Coder officers showed that the informant had an education level, namely D III Medical Records and Health Information with 10 years of work experience and had attended several coding trainings both held internally and externally. The importance of educational qualifications in accordance with the work in their field can make it easier to complete work in accordance with the scope of their duties and provide the best service so as to improve the quality of services provided. The regulations used by the coder as coding guidelines include: PPK Doctor owned by RS AN-NISA Tangerang; BA Management of INA-CBG Claim Problem Solutions in 2019; Rule MB1-MB5 when needed.

#### **Bronchopneumonia Codification**

Based on the results of sample observations, there were 68 inpatient medical records from October to December 2021.

**Table 3. The Accuracy of the Codification of the Diagnosis of Bronchopneumonia in JKN Patients Inpatient at AN-NISA Hospital Tangerang**

Codefication Accuracy	Appropriate	Not exactly	Total
<b>Bronchopneumonia</b>	82.35%	17.65%	100%
<b>BP as primary diagnosis</b>	90.48%	9.52%	100%
<b>BP as a secondary diagnosis</b>	69.23%	30.77%	100%

Source: Primary Data, 2021

Based on Table 3, it is known that the accuracy of codification in bronchopneumonia patients is 82.35% (56 medical records) with correct codes and 17.64% (12 medical records) incorrect codes

from a total of 68 medical record. Of 68 consisting of 42 medical records with cases of bronchopneumonia as the main diagnosis and 26 medical records as a secondary diagnosis.

**Table 4. Frequency distribution of the codification of the main diagnosis of bronchopneumonia**

Category	Frequency	Percentage
Bronchopneumonia right	38	90.48%
Inappropriate bronchopneumonia	4	9.52%
<b>Total</b>	<b>42</b>	<b>100%</b>

Based on Table 4, it is known that the codification of cases of bronchopneumonia as the main diagnosis was 90.48% (38 medical records) with correct codes and 9.52% (4 medical records) incorrect codes. In 4 incorrect codes, namely the main diagnostic code for bronchopneumonia with tuberculosis, the exact code is (A16.2 Tuberculosis: pneumonia).

Based on Table 5, it is known that the codification of cases of bronchopneumonia as a secondary diagnosis was 69.23% (18

medical records) with correct codes and 30.77% (8 medical records) incorrect codes. Of the 8 incorrect codes, 6 are the main diagnosis codes for typhoid fever and secondary diagnosis of bronchopneumonia, the exact code is pneumonia, because typhoid fever is coded A01.0† J17.0\* and 2 secondary diagnostic codes are correct with the diagnosis of bacterial pneumonia coded to J15.9 bacterial pneumonia, unspecified and the diagnosis of pulmonary TB bronchopneumonia, exact code A16.2 Tuberculosis: pneumonia.

**Table 5. Frequency Distribution of Accuracy of Codification of Secondary Diagnosis of Bronchopneumonia**

Category	Frequency	Percentage
Bronchopneumonia right	18	69.23%
Inappropriate bronchopneumonia	8	30.77%
<b>Total</b>	<b>26</b>	<b>100%</b>

At AN-NISA Hospital Tangerang, bronchopneumonia is coded with the code J18.0 bronchopneumonia, unspecified.

Based on the results of the codification observation, it was found that 82.35% of the code was correct and 17.65% of the 68 medical records had the wrong code for bronchopneumonia. From 68 there were 42 medical records with bronchopneumonia code as the main diagnosis and 26 medical records with bronchopneumonia code as a secondary diagnosis. Of the 42 medical records, 90.48% of the code was correct and 9.52% was coded incorrectly. Of the 26 medical records, 69.23% were correct codes and 30.77% were incorrect codes.

A coder needs to be careful in reading a doctor's diagnosis and assigning a disease code in order to produce a precise, accurate and high-precision code.

## CONCLUSION

Casemix medical record unit at AN-NISA Hospital already has a Standard Operating Procedure (SOP). The existence of the Standard Operating Procedure (SOP) is a

guideline for coders so that they can carry out coding consistently.

Human Resources at the AN-NISA Hospital Tangerang based on the education level of the casemix coder officer, the medical record unit at the An-NISA Hospital Tangerang consists of 4 coders. Among them are 3 outpatient coders and 1 inpatient coder, in this study the inpatient coder has an educational background of D III Medical Records and Health Information who has 10 years of experience working at the AN-NISA Hospital Tangerang and has experience participating in both internal coding training as well as external.

The results obtained were 82.35% correct codes and 17.65% of 68 medical records with incorrect codes for bronchopneumonia. From 68 there were 42 medical records with bronchopneumonia code as the main diagnosis and 26 medical records with bronchopneumonia code as a secondary diagnosis. Of the 42 medical records, 90.48% of the code was correct and 9.52% was coded incorrectly. Of the 26

medical records, 69.23% were correct codes and 30.77% were incorrect codes.

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