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ACCURACY OF DIAGNOSIS ESTABLISHMENT AND ACCURACY OF BPJS CLILD PNEUMONIA CASE CODES AT HOSPITAL X

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ABSTRACT

Problem: The accuracy of the diagnosis code is the writing of the disease diagnosis code that is in accordance with the classification in ICD-10, to determine an accurate inpatient diagnosis code, additional information needs to be considered. The inaccuracy of the pneumonia diagnosis code is caused by the writing of the code not in accordance with ICD-10 and in the supporting files, namely the results of the anamnesis examination, laboratory examination results and X-ray examination results are not accurate and incomplete. This can affect the quality of data, information and reports as well as the accuracy of rates for general patients and INA-CBG'S rates used as a payment method for BPJS patients so that it can have an impact on the decline in the quality of hospital services. **Objective:** Knowing the accuracy of diagnosis and the accuracy of childhood pneumonia codes at RS.X. **Method:** The type and design of the study were descriptive with a population and sample of BPJS children's pneumonia medical record files of 84 files. The research data used were secondary data using observation sheet instruments, then the data were processed and analyzed univariately using frequency distribution. **Results:** From a total of 84 samples of BPJS medical record files for children with pneumonia, it was found that the accuracy of establishing a pneumonia diagnosis was 50(60%) accurate and 34(40%) inaccurate, and the accuracy of the pneumonia diagnosis code was 50(60%) accurate and 34(40%) inaccurate.

Keywords : Anamnesis; Physical Examination; Supporting Examination; Diagnosis Code; Childhood Pneumonia

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1. INTRODUCTION

Determining the accuracy of the main diagnosis code of the disease is also influenced by the specifications of writing the main diagnosis, each diagnostic statement must be informative or easy to understand in order to classify existing conditions into the most specific ICD-10 category (WHO, 2010). The quality of the coding results depends on the completeness of the diagnosis, the readability of the doctor's writing, and the professionalisme of the doctor and coding officer. Classification and codification are one of the competencies carried out by PMIK in

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health care facilities, in implementing codification PMIK uses the International Statistical Classification of Disease (ICD) as a guideline for coding diseases and actions. In coding diagnoses using ICD 10, coding actions/procedures using ICD 9-CM.

Accuracy in providing diagnosis codes is something that must be considered by medical record personnel, the accuracy of diagnosis data is very important in the field of clinical data management, re-billing of costs, along with other things related to health care and services. In line with the results of Wariyanti's research (2014) said that the completeness of medical information and the accuracy of medical record documents are very important, if the medical information in a medical record document is incomplete, then the resulting diagnosis code will be inaccurate. The accuracy of diagnosis and action codes greatly affects the quality of statistical data and payment of health costs in the era of the National Health Insurance (JKN). Inaccurate diagnosis codes will cause inaccurate data. Wrong codes will result in wrong rates.

Pneumonia is a disease caused by acute infection of the lower respiratory tract area specifically affecting the lungs and causing the area to fill with fluid, mucus or pus. This condition can make it difficult for patients to breathe (UNICEF/WHO, 2006). According to the Decree of the Minister of Health of the Republic of Indonesia Number HK. 02.02/MENKES/514/2015, pneumonia can be diagnosed if a chest X-ray shows new infiltrates or progressive infiltrates plus laboratory results with leukocyte results of more than 10,000 or less than 4,500 and physical examination shows signs of consolidation, bronchial breath sounds and rhonchi with a body temperature of more than 38 degrees Celsius.

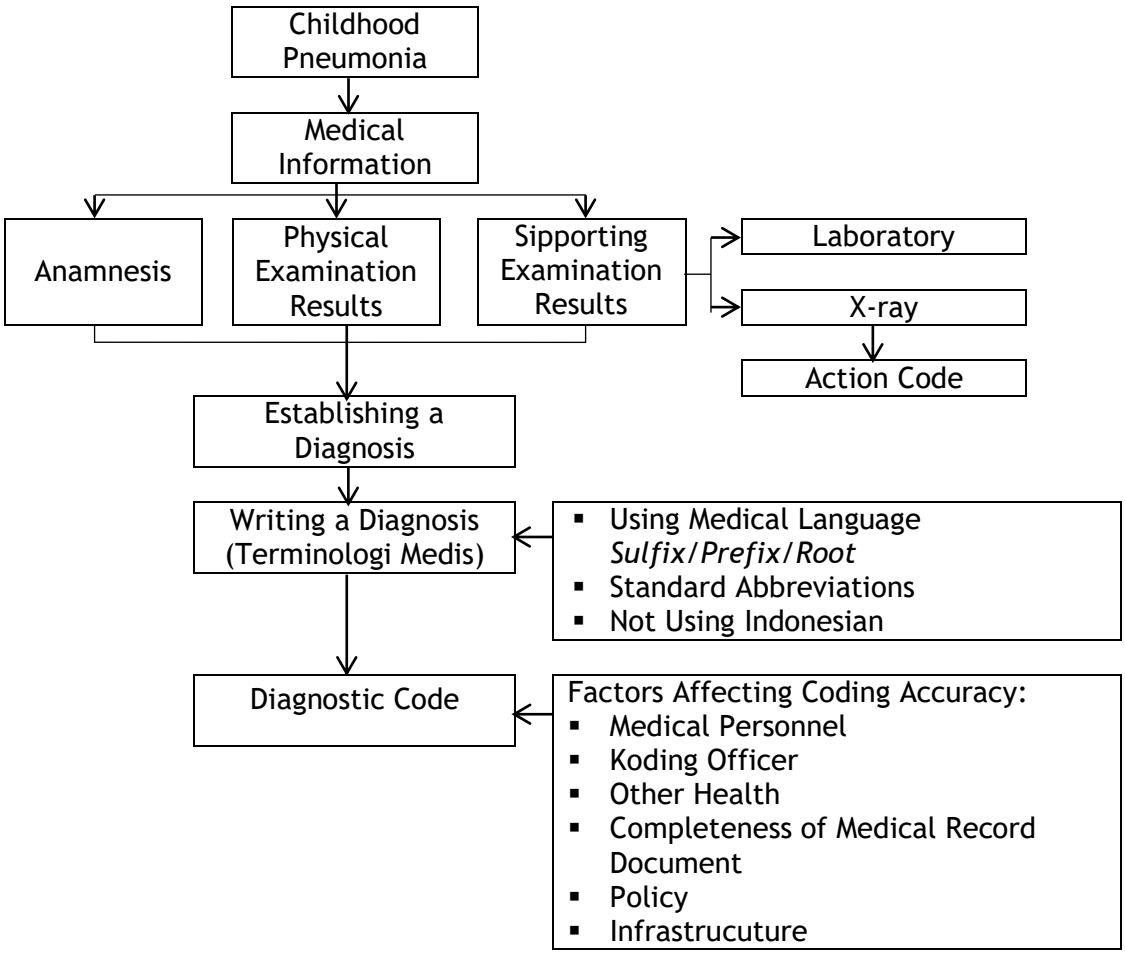
The pneumonia code is said to be inappropriate if the coder does not pay attention to the anamnesis including signs and symptoms, supporting results such as chest X-ray results showing infiltration and therapy, all three aspects must be attached to the resume before being submitted for the claim process. Inaccuracy and incompleteness of files can affect the smoothness of the claim process which causes the submitted claim file to be pending so that the submitted one is returned by the BPJS verifier to the hospital for correction. The code comes from incomplete or incorrect diagnostic information or medical procedures, so the costs obtained do not match the services provided so that high health service rates will harm the hospital (Suyitno, 2016).

Based on a preliminary survey conducted by researchers at RS.X, the number of patient visits based on inpatient patient visit data in 2022, there were 46 cases of pneumonia in children and in 2023 there was an increase of 57 child patients. In 2024 there was an increase of 84 child patients. From the results of the observation, it is known that the coding of the diagnosis of pediatric pneumonia patients at the Bhayangkara Bengkulu Hospital uses ICD-10 and there are still some officers who search for diagnosis codes through search websites or Google, this happens because there are still some coders who still do not understand the use of ICD-10 and coders who are not graduates of the medical records and health information department.

From the results of an initial survey conducted at the Bhayangkara Bengkulu Hospital in 2023, it was found that from 10 samples of medical record files of pneumonia cases that were observed, it was found that there were 4 (40%) files that were complete and accurate diagnostic codes, while 6 (60%) were incomplete and inaccurate consisting of 4 incomplete files supporting files in the form of laboratory results and x-ray results and 2 inaccurate code files but complete files. One example of a case is the inaccuracy of the code caused by the writing of the code incorrectly because the officer wrote the pneumonia case with the code J18 and Bronchopneumonia with the code J18. Where, for the Bronchopneumonia code is J18.0. According to the INA-CBG's Regulations Edition 2 of 2019, coding in pneumonia cases, coders must pay attention to accompanying diagnoses that may be related to the pneumonia code and pneumonia cases also have an asterisk code.

The existence of medical records with incomplete medical information due to incomplete and non-specific medical information filling can cause a lack of accuracy in the diagnosis code. This is because unclear and non-specific medical information can reduce the details of the existing examination data information, so that sometimes the coder has difficulty and is confused in determining the code that causes inaccuracy in the diagnosis code. According to Hatta (2013), the accuracy of diagnosis coding depends on the implementation of handling medical records. Therefore, if there is something that is unclear or the coder has difficulty in determining the diagnosis code due to incomplete medical information, before the code is determined, the coder should communicate by asking or reconfirming the incomplete medical information to the health worker or doctor in charge so that the accuracy of the code is more guaranteed. This study aims to determine the accuracy of diagnosis and the accuracy of the childhood pneumonia code in terms of the completeness of medical information.

2. THEORETICAL FRAMEWORK



3. METHODOLOGY

The type and design of the study were descriptive with a population and sample of BPJS children's pneumonia medical record files of 84 files. The research data used were secondary data using observation sheet instruments, then the data were processed and analyzed univariately using frequency distribution.

4. RESULTS AND DISCUSSIONS

a. Accuracy of Childhood Pneumonia Anamnesis

Tabel 1. Accuracy of Childhood Pneumonia Anamesis

Anamnesis	Amount	Percentage (%)
Appropriate	84	100
Not Exacty	0	0
Amount	**84**	**100**

Source : Processed Secondary Data, 2024

According to the Decree of the Minister of Health of the Republic of Indonesia Number HK. 02/02/MENKES/514/2015, namely in establishing a diagnosis of pneumonia if during the anamnesis examination the patient complains of increasing coughing and phlegm with a body temperature above 38°C, during the physical examination signs of consolidation, bronchial breath sounds and rhonchi are found. Based on table 4.1, it is known that 84 (100%) files are correct in the results of the anamnesis examination. The results of Romaden Marbun's research (2022) state that medical information in inpatient medical record files must be considered by health service providers. The completeness of medical information and the accuracy of the medical record document code are very important, if the medical information in a medical record document is incomplete, the resulting diagnosis code will be inaccurate.

Medical records are required to contain all discharge summaries, surgical sheets, procedure reports, pathology reports, and discharge resumes in order to be coded. An example of the implication of a mismatch in diagnostic codes is that doctors do not record diagnoses and anamnesis and physical examinations accurately, causing medical record officers to use the wrong diagnostic code (Hatta, 2012). Coding inaccuracy is a form of mismatch in writing disease diagnoses and behaviors that are included in certain categories in the ICD-10. Medical experts who treat patients who treat patients or who are tasked with recognizing primary conditions must make the right diagnosis so that the diagnostic code is accurate which will be the basis for calculating morbidity data. For accurate code classification, medical records need to be complete and precise (Hatta, 2011). Coders work based on physician behavioral guidelines and diagnostic statements. Coders must pay close attention to statements about symptoms, treatments, and other medical processes that result in incomplete diagnoses, as well as statements and procedures that create new information about diagnoses and therapies that have been determined by the doctor (Hatta, 2014).

RS.X for examination of pediatric pneumonia amnesty, seen from the doctor's medical record file, has been correct in writing the amnesty and physical examination. The impact that arises if the examination of the amnesty results is incomplete and inaccurate which can result in inaccurate diagnosis enforcement and accuracy of pneumonia case codes. . In hospital statistics, if the pneumonia case data is inaccurate, it will also affect decision-making related to the strategic plan to be implemented and affect the quality of the hospital and the quality of medical record services.

Therefore, in order for the diagnosis code to be accurate and in accordance with the conditions experienced by the patient, the hospital should be able to communicate any information that is felt to be unclear or incomplete before determining the diagnosis code to the doctor who made the diagnosis (Rustiyanto, 2012).

b. Accuracy of Childhood Pneumonia Laboratory Results

Tabel 2. Accuracy of Childhood Pneumonia Laboratory Results

Laboratory Results	Amount	Percentage (%)
Appropriate	61	73
Not Exacty	23	27
Amount	**84**	**100**

Source : Processed Secondary Data, 2024

According to the Decree of the Minister of Health Number HK. 02/02/MENKES/514/2015, namely in establishing a diagnosis of pneumonia for laboratory examinations must show leukocytes with less than 4,500 and more than 10,000. Based on table 4.2, it is known that 61 (72.6%) files are correct laboratory results, namely with leukocyte results> 10,000 and <4,500 and 24 (27.3%) files are not correct laboratory results.

The results of Muhammad Fuad Iqbal's research (2022) state that every diagnosis to be coded must be confirmed based on supporting examinations such as laboratory results, x-rays, anatomical pathology and actions must be relevant to the diagnosis. based on supporting examinations will affect the validity of filling in and calculating patient care costs because supporting sheets are proof that the patient has carried out additional services.

Supporting information reports are reports from a series of medical examinations carried out for certain indications in order to obtain more complete information (Basaryadi, 2013). In line with what Sri (2018) said, the completeness of the results of supporting medical examinations affects the accuracy of providing diagnostic codes because they can be used as supporting information if the diagnosis determined by medical personnel is unclear or incomplete.

The completeness of medical support is one of the factors that affect the accuracy and precision of the provision of diagnosis codes. Medical support in this case is the completeness of laboratory results, because on the laboratory result form there are certain criteria for a disease, which can be used as supporting information if the diagnosis determined by medical personnel is unclear or incomplete. The completeness of laboratory test results is very important because diagnosing pneumonia is not only seen from the results of the anamnesis and physical examination results but also laboratory tests that are useful for determining the cause of pneumonia. This is in line with Sugiarsi's statement (2013) that in determining a patient's diagnosis code, in addition to paying attention to the medical terminology of a disease diagnosis, the coder must pay attention to the supporting information contained in the medical record document.

Supporting examination of pneumonia disease is very much needed to complete medical information and determine the accuracy of the diagnosis code in the medical record file. If the coding officer (coder) codes only based on the diagnosis written on the admission and discharge summary sheet or only looks at the medical resume, the code given is partly in accordance with ICD-10, but if the coding is done based on the ICD-10 volume 1 coding rules, such as laboratory results or other additional information, then many code discrepancies are found based on ICD-10. For pneumonia, the coder must pay attention to the results of supporting examinations such as laboratory examinations where the diagnosis of pneumonia can be confirmed if the laboratory results show leukocytes below 4,500 and above 10,000. If the laboratory examination results for leukocytes are still between 4,500 and 10,000, the diagnosis of pneumonia cannot be confirmed. So the case is included in the case of symptoms and signs in breathing, so based on ICD-10 the coding is grouped into the R00-R09 block. And if in the laboratory examination results if bacteria such as Streptococcus Pneumoniae are found, then the diagnosis is written as Sepsis due to

Streptococcus Pneumoniae, which means that the sepsis condition is caused by pneumonia bacteria, therefore a combined code is made as A40.3 according to the instructions in ICD-10 Volume 3, but at Hospital X the coding officer in coding grouped it as pneumonia (J18) without first looking at the laboratory results or other additional information before coding.

The impact that arises if the laboratory results are incomplete and inaccurate which can result in inaccurate diagnosis enforcement and accuracy of pneumonia case codes. In hospital statistics, if the pneumonia case data is inaccurate, it will also affect decision-making related to strategic plans that will be implemented and affect the quality of the hospital and the quality of medical record services.

Therefore, in order for the diagnosis code to be accurate and in accordance with the conditions experienced by the patient, the Bhayangkara Bengkulu Hospital should do the following, namely:

1) Conduct training on how to fill in medical records by looking at the results of laboratory examinations first to produce accurate diagnostic codes
2) Conduct training for other health workers to complete the contents of medical record files and supporting reports that support the diagnosis.

c. Accuracy of Childhood Pneumonia X-Ray Results

Tabel 3. Accuracy of Childhood Pneumonia X-Ray Results

X-Ray Results	Amount	Percentage (%)
Appropriate	63	75
Not Exacty	21	25
Amount	**84**	**100**

Source : Processed Secondary Data, 2024

According to the Decree of the Minister of Health Number HK. 02/02/MENKES/514/2015, namely in establishing a diagnosis of pneumonia for X-ray examinations on chest x-rays there are new infiltrates or progressive infiltrates. When interpreting an x-ray, the radiologist will see spots/fog in the lungs (called infiltrates) that identify infection. Persistent pulmonary infiltrates occur if a solid substance other than air (eg, pus, edema, blood, surfactant, protein or cells) is left in the lung parenchyma. In the x-ray results sheet, the radiologist will write a description of the infiltrate or directly write pneumonia. Based on table 3, it is known that 63(75%) files are correct x-ray results and 21(25%) files are incorrect x-ray results. Accuracy in providing diagnostic codes is something that must be considered by medical record personnel, the accuracy of diagnostic data is very important in managing clinical data management, reimbursement, and matters related to health care and services. (Setiyoargo, 2015). The way to obtain an accurate diagnosis code is by paying attention to supporting information or other causes that influence the main or secondary diagnosis code (Purwanti, 2016).

According to Abdelhak (2011), factors that cause coding errors include diagnostic errors in reading medical record files due to incomplete medical record files and identification of major diagnostic errors made by doctors. The results of Hamid's research (2013) stated that the completeness of medical information is related to the accuracy of the diagnostic code. Based on these results, it is known that the completeness of inpatient information and the accuracy of the diagnostic code for pneumonia cases are very important and related. If the medical information in the medical record file of the inpatient form is complete, the diagnostic code for pneumonia cases produced will also be more accurate.

In the case of pneumonia diagnosis can be established if the supporting files are complete and correct. In the X-ray examination, the diagnosis of pneumonia can be established if the results of the X-ray examination show a new infiltrate or

progressive infiltrate on the chest photo. When interpreting the X-ray, the radiologist will see spots / fog in the lungs (called infiltrates) that identify infection. If the results of the X-ray examination do not show any new infiltrates or progressive infiltrates, the diagnosis of pneumonia is less precise.

Meanwhile, at RS.X, the coding officer in coding grouped it as pneumonia (J18) and (J18.0) without seeing the results of the X-ray examination first or other additional information before coding.The impact that arises if the X-ray results are incomplete and inaccurate which can result in inaccurate diagnosis enforcement and accuracy of pneumonia case codes. In hospital statistics, if the pneumonia case data is inaccurate, it will also affect decision-making related to strategic plans that will be implemented and affect the quality of the hospital and the quality of medical record services.

Therefore, in order for the diagnosis code to be accurate and in accordance with the conditions experienced by the patient, the Bhayangkara Bengkulu Hospital should do the following, namely:

1) Conduct training on how to fill in medical records by looking at the results of laboratory examinations first to produce an accurate diagnosis code
2) Conduct training for other health workers to complete the contents of medical record files and supporting reports that support the diagnosis.

d. Accuracy of Diagnosis of Childhood Pneumonia

Tabel 4. Accuracy of Diagnosis Childhood Pneumonia

Establishing a Diagnosis	Amount	Percentage (%)
Appropriate	50	73
Not Exacty	34	27
Amount	**84**	**100**

Source : Processed Secondary Data, 2024

Based on table 4, it is known that 50 (59.5%) files were correct in establishing the diagnosis of childhood pneumonia cases and 34 (40.5%) files were incorrect in establishing the diagnosis of childhood pneumonia cases. Pneumonia can be diagnosed according to KMK RI No. HK. 02.02 / MENKES / 514/2015, namely if there is a new infiltrate or progressive infiltrate in the chest X-ray plus 2 or more of the following symptoms:

1) Increasing coughing
2) Changes in sputum characteristics
3) Body temperature> 38 ° C (axilla) / history of fever
4) Physical examination: signs of consolidation, bronchial breath sounds and rhonchi are found
5) Leukocytes> 10,000 or <4,500

The Patient's Responsible Physician (DPJP) will establish a diagnosis of pneumonia if the clinical and therapeutic requirements are met. The accuracy of the diagnosis of the disease determined by medical personnel must be accurate and complete along with the signature of the doctor in charge of the patient. The accuracy of the diagnosis is largely determined by medical personnel, in this case it is highly dependent on the doctor as the one who determines the diagnosis because the medical profession has the right and responsibility to determine the diagnosis. The treating doctor is also responsible for the patient's treatment, and must choose the main condition and other conditions that are appropriate during the treatment period. The coder as the coder is responsible for the accuracy of the diagnosis code that has been determined by the medical officer. Therefore, for unclear or inaccurate and incomplete matters before determining the diagnosis code, it can be communicated first to the doctor who made the diagnosis to improve the information

in the medical record, the coding officer must create a code according to the rules in ICD-10 (Hamid, 2013).

In establishing a proper diagnosis of pneumonia, if the completeness of the supporting examination files such as the results of the anamnesis examination, the results of the laboratory examination and the results of the x-ray examination are correct. The completeness of medical support is one of the factors that affects the accuracy and precision of the provision of diagnosis codes. Medical support in this case is the completeness of laboratory results, because on the laboratory result form there are certain criteria for a disease, which can be used as supporting information if the diagnosis determined by medical personnel is unclear or incomplete. The completeness of the laboratory examination results is very important because diagnosing pneumonia is not only seen from the results of the anamnesis and the results of the physical examination but also laboratory examinations that are useful for determining the cause of pneumonia. This is in line with Sugiarsi's statement (2013) that in determining the patient's diagnosis code, in addition to paying attention to the medical terminology of a disease diagnosis, the coder must pay attention to the supporting information contained in the medical record document.

Inaccuracy in writing a diagnosis can affect the enforcement of a diagnosis using medical terminology, namely medical language containing root/suffix/prefix elements. Inaccurate medical terminology is divided into three characters, namely using Indonesian, using non-standard abbreviations and not containing root/suffix/prefix elements.

Medical terminology is the science of medical terms used as a means of communication for people who play a direct or indirect role in the field of health services. Medical terminology must be in accordance with the terms used in a disease classification system to support the accuracy of the disease code (Nuryati, 2011).

Inaccuracy in enforcing a diagnosis and writing a diagnosis, the diagnosis code is not precise and accurate. In hospital statistics, if the pneumonia case data is inaccurate, it will also affect decision-making related to strategic plans that will be implemented and affect the quality of the hospital and the quality of medical record services.

e. Accuracy of Childhood Pneumonia Diagnostic Codes

Tabel 5. Accuracy of Childhood Pneumonia Diagnostic Codes

Diagnostic Code	Amount	Percentage (%)
Accurate	50	60
Not Accurate	34	40
Amount	**84**	**100**

Source : Processed Secondary Data, 2024

Based on table 5, it is known that 50(60%) code files are accurate in cases of childhood pneumonia and 34(40%) code files are inaccurate in cases of childhood pneumonia. The accuracy of the diagnosis code is the writing of the disease diagnosis code that is in accordance with the classification in ICD-10. The code is considered appropriate and accurate if it is in accordance with the patient's condition that occurs and is complete according to the classification rules used.

The coding officer as the code giver is responsible for the accuracy of the diagnosis code that has been determined by the medical officer. Therefore, for things that are unclear or inaccurate and incomplete before determining the diagnosis code, it must first be communicated with the doctor who made the diagnosis to further improve the information in the medical record, the coding officer must create a code according to the rules in ICD-10 (Hamid, 2013).

According to the INA-CBGs Claim Verification Manual Edition 2 of 2019, there are several provisions in coding pneumonia diagnoses in ICD 10, as follows:

1) Pneumonia Without A Specific Cause

When the DPJP writes the diagnosis in the medical resume only pneumonia without being based on supporting examinations such as sputum and there are no other diagnoses caused by other related viruses, it can be coded J18.9

2) Pneumonia with COPD

Pneumonia has the code J18.9 and COPD has the code J44.0 in this case the correct code to describe the condition of pneumonia with COPD is J44.0 according to the instructions of ICD 10 Volume 3.

3) Pneumonia with Exacerbation of COPD

Acute exacerbation and pneumonia are two different conditions and require separate management, so they are coded separately.

4) Pneumonia with Septicemia

The code for septicemia due to streptococcus pneumoniae can be coded A40.3 if the presence of streptococcus pneumoniae is confirmed.

5) Pneumonia with Asthma

There are no direct includes or excludes instructions from the pneumonia code J18.9 with asthma J45 from either Vol.I or III. The two codes cannot be combined.

Inaccuracy of pneumonia codes is divided into two categories, namely the wrong number of characters and the absence of the fourth character. The following is an explanation of the inaccuracy of pneumonia codes which are divided into three categories at the RS.X:

1) Inaccurate Number of Characters

Of the 52 medical record files with inaccurate pneumonia codes, 52 (62%) had the wrong number of characters. According to Maryati (2016) in her research, inaccuracy in the diagnosis code due to errors in the third and fourth characters was caused by the coder being less careful in choosing the lead term and not being specific enough in paying attention to additional information contained in the medical record file.

2) No Fourth Character

Of the 52 medical record files for pneumonia cases, there were no (0%) diagnoses that did not have the fourth character.

According to WHO (2010), the implementation of diagnosis coding must be complete and accurate in accordance with the ICD-10 guidelines. Each chapter in ICD-10 is divided into blocks. Each block consists of a list of three-character categories. Each category is divided into four-character subcategories. The four-character subcategories are most appropriate for identification, such as variations of different places in the three-character category or stand-alone diseases in the three-character category for grouped conditions so that the resulting code is correct. The code is considered appropriate and accurate if it is in accordance with the patient's condition with all actions that occur, complete according to the classification rules used. The speed and accuracy of coding a diagnosis is highly dependent on the implementer who handles medical records, namely:

1) Medical personnel in determining the diagnosis
2) Medical records personnel who provide the diagnosis code
3) Other health workers involved in completing the filling of medical records.

According to Hatta (2013), the impact that occurs if the diagnosis code is not written correctly is that the patient will incur very large costs. This is in line with the results of Ayu's research (2012), the impact of inconsistencies in coding a diagnosis will affect claims for treatment costs, hospital administration and the quality of services in the hospital. According to Saputro (2015), the effect of inaccurate

pneumonia coding on patients will receive inappropriate medical and non-medical actions and as a result will cause the patient's condition to worsen such as patients receiving inappropriate medical actions, medicines, nutrition, and nursing or midwifery care during hospital care. And also has an impact on the decline in the quality of hospital services and the quality of medical record services.

Therefore, in order for the diagnosis code in inpatient cases to be accurate and to avoid coding errors in the diagnosis, Bhayangkara Bengkulu Hospital should do the following:

1) Improve the knowledge and skills of coders through coding training according to ICD-10
2) Create a policy procedure on filling in the diagnosis and the accuracy of the diagnosis code as a guideline for coding officers so that they can carry out coding consistently.

5. CONCLUSION

The accuracy of anamnesis, laboratory test results and x-ray results of childhood pneumonia cases affect the diagnosis, if the doctor writes the diagnosis correctly in the medical record file by paying attention to supporting files, the diagnosis code written by the coder will be accurate. Conversely, if the doctor writes the diagnosis in the medical record file without paying attention to supporting files, the diagnosis code written by the coder will be inaccurate.

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REFERENCES

Abdelhak, M. 2011. *Healt Information Management of strategic resource* . Sydney : W.B Saunders Company.

Anggreini, A. 2017. *Faktor-Faktor PenyebabKetidaklengkapan Resume Medis Pasien Rawat Inap di Rumah Sakit Griya Waluya, Ponogoro*. Tesis. Stikes

Aprilia Putri, Dewi Oktavia, N. M. 2019. *Analisis Pengodean Penyakit Berdasarkan ICd-10*. 99–104.

Ayu, R. 2012. *Tinjauan Penulisan Diagnosis Utama dan Ketepatan Kode ICD-10 Pada Pasien Umum di RSUD Kota Semarang. Fakultas Kesehatan UDINUS*.

Hamid, 2013. *Hubungan Ketepatan Penulisan Diagnosis dengan Keakuratan Kode Diagnosis Kasus Obtetri Gynecology Pasien Rawat Inap di RSUD Dr. Saiful Anwar Malang. Malang*: STIA Malang.

Hatta, G. 2013. *Pedoman Manajemen Informasi Kesehatan di Sarana Pelayanan Kesehatan Edisi Revisi 2*. Jakarta: UI Press.

Irmawati, I., & Nazillahtunnisa, N. 2019. *Keakuratan Kode Diagnosis Penyakit Berdasarkan Icd-10 Pada Rekam Medis Rawat Jalan Di Puskesmas*. Jurnal Rekam Medis Dan Informasi Kesehatan, 2(2), 100.

Iqbal, M.F. 2022. Ketentuan Kodefikasi Pneumonia Kasus Rawat Inap pada Pasien Jaminan Kesehatan Nasional (JKN) berdasarkan ICD 10 *Jurnal Rekam Medis & Manajemen Infomasi Kesehatan* Vol.2 No.1

Keputusan Menteri Kesehatan Republik Indonesia Nomor: 377/Menkes/SK/III/2007 Tentang Standar Profesi Perekam Medis dan Informasi Kesehatan. (n.d.).

Maimun, N., Natassa, J., Trisna, W. V., & Supriatin, Y. 2018. *Pengaruh Kompetensi Coder Terhadap Keakuratan dan Ketepatan Pengkodean Menggunakan ICD-10. Jurnal Kesmas* Vol.1 No.1.

Malonda. T, Rattu, A. & S. T. 2015. *Hubungan Kelengkapan Dokumen Rekam Medis dengan Persetujuan Klaim Jamkesmas oleh Verifikator dengan Sistem INA CNGs di RSI Sultan Agung Semarang. Jurnal Rekam Medis Vol.5* No.5.

Medis, J. R., & Kesehatan, M. I. (2022). *Ketentuan Kodefikasi Pneumonia Kasus Rawat Inap pada Pasien Jaminan Kesehatan Nasional (JKN) berdasarkan ICD 10. Jurnal Kesmas Untika Luwuk : Public Health Journal. 12.*

Nirma Alfiani, Dede Setiawan S. 2022. *Tinjauan kelengkapan rekam medis pada formulir laporan operasi di rumah sakit sumber waras kabupaten cirebon*. Jurnal Kesehatan Mahardika Vol.7.

Nuryati, -. (2014). *Evaluasi Ketepatan Diagnosis Dan Tindakan Di Rumah Sakit Pantirapih Yogyakarta Pada Penerapan Jaminan Kesehatan Nasional (Jkn)*. Jurnal Manajemen Informasi Kesehatan Indonesia, 2(2).

Peraturan Menteri Kesehatan Republik Indonesia Nomor 269/MENKES/PER/III/2008 Tentang Rekam Medis. (n.d.).

Purwanti E. *Ketepatan Kode Berdasarkan Kelengkapan Diagnosis Di Rumah Sakit Pku Muhammadiyah Yogyakarta*. Pormiki. 2016;1–5.

Pusat, K., & Putih, C. (n.d.). *Panduan Manual Verifikasi Klaim INA-CBG Panduan Manual Verifikasi Klaim INA-CBG. 2938*(14).

Rahayu, S. (2013). *Pemeriksaan Laboratorium Hematologi. Yogyakarta: Alfamedia.*

Rindiani, & Atika Tambusai. (2022). Analisis Prosedur Pengajuan Klaim Jaminan Pensiun Pada Bpjs Ketenagakerjaan Cabang Medan Kota. *EKOMA : Jurnal Ekonomi, Manajemen, Akuntansi*, *1*(2), 121–127. https://doi.org/10.56799/ekoma.v1i2.301

Rustiyanto, E. 2011. *Manajemen Filing Dokumen Rekam Medis dan Informasi Kesehatan*. Yogyakarta: Politeknik Kesehatan Permata Indonesia.

Saragih, P., Ginting, N., & Nainggolan, M. (2022). *Ketepatan Kode Penyakit Bronkopneumonia dan Kelengkapan Rekam Medis di Rumah Sakit St . Elisabeth Medan Tahun 2022*. *1*(4), 532–538. https://doi.org/10.55123/sehatmas.v1i4.896.

Setiyoargo A, Ariyanti R, Maxelly RO. *Hubungan Kelengkapan Anamnesa Formulir Gawat Darurat dengan Ketepatan Kode ICD 10 Sebab Eksternal Kasus Kecelakaan di Rumah Sakit Panti Nirmala Malang.*

Sugiasri., M. &. (2014). *Ketepatan Penggunaan Terminologi Medis Dalam Penulisan Diagnosis Pada Lembar Rigkasan Masuk Dan Keluar di Rumah Sakit Umum Daerah DR.Soediran Mangun Sumarso Kabupaten Wonogiri. APIKES Mitra Husada Karanganyar*.

Suryani, N. W. A. (2022). Hubungan Ketepatan Terminologi Medis Diagnosis Utama dengan Keakuratan Koding Diagnosis Pasien BPJS Kesehatan di Rumah Sakit Umum X Denpasar. *Jurnal Manajemen Informasi Kesehatan Indonesia*, *10*(2), 122. https://doi.org/10.33560/jmiki.v10i2.369

Tarigan, I. N., Lestari, F. D., & Darmawan, E. S. (2022). *KESEHATAN NASIONAL OLEH BPJS KESEHATAN DI INDONESIA : SEBUAH SCOPING REVIEW*. *7*(2).

Wasita, R. R. R., Susanto, A. D., & Nugraha, I. G. N. M. (2022). *ANALISIS PENGARUH KETIDAKTEPATAN KODE DIAGNOSIS DAN KODE TINDAKAN TERHADAP TARIF PASIEN RAWAT INAP PESERTA BADAN PENYELENGGARA JAMINAN SOSIAL KESEHATAN*. In *Seminar Ilmiah Nasional Teknologi, Sains, dan Sosial Humaniora (SINTESA)* (Vol. 5).

WHO. 2010 . International Statistical Classification of Deaseases and Related Health Problems 10th Revision. Vol. 1, 2, 3 Second Edition Th. 2010. Geneva

Wiquyah, N. (2017). *Hubungan Ketetapan Penulisan Terminologi Medis Diagnosis Utama Dengan Keakuratan Kode Kasus Penyakit Dalam Pasien Rawat Inap di*

RSU PKU Muhammadiyah Delanggu. APIKES Citra Husada Karanganyar.
Wirajaya MK, Nuraini N. *Faktor Faktor yang Mempengaruhi Ketidaklengkapan Rekam Medis Pasien pada Rumah Sakit di Indonesia*. J Manaj Inf Kesehat Indones. 2019;7(2):165.