



Analysis of the Conformity of Patient Visit Data for Cardiac Cases Based on PTMKJ Reports at Santosa Hospital Bandung Central

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Abstract

Accurate hospital reporting depends on consistency between source medical-record data and compiled statistical reports. During implementation of the Non-Communicable Diseases and Mental Health report (Penyakit Tidak Menular dan Kesehatan Jiwa; PTMKJ), discrepancies were identified between reported cardiac-case visits and the corresponding medical-record data at Santosa Hospital Bandung Central. This study aimed to analyze the conformity of cardiac patient visit data in PTMKJ reports with medical-record data during the first quarter of 2026 and to identify factors associated with discrepancies based on observations in the Medical Records Unit. A descriptive quantitative design was used. The study applied total sampling to all recorded visits for coronary heart disease and heart failure during the study period. Data were collected through document review by comparing PTMKJ reports with medical-record visit data and were processed using Microsoft Excel to calculate differences and conformity percentages. A total of 5,510 medical-record visits were analyzed. Overall data conformity reached 95.11%, while non-conformity was 4.89%. Monthly conformity was 94.49% in January, 98.92% in February, and 91.60% in March. Observations indicated that discrepancies were associated with delays in diagnosis coding, a high volume of patient visits relative to available coding staff, data-extraction timing, recapitulation processes, and subsequent data updates. Strengthening verification, coordination, and timely completion of diagnosis coding is therefore necessary to improve PTMKJ reporting quality.

Keywords: PTMKJ, Cardiac Cases, Patient Visits, Data Conformity, Medical Records

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1. Introduction

Medical records are documents containing patient identity, examination findings, treatment, procedures, and other services provided during healthcare delivery. In addition to their function as clinical service documents, medical records are a primary data source for hospital reporting and health-information provision. Consequently, medical-record data must be managed accurately, completely, and in a timely manner so that the resulting information is accountable and can support decision-making in healthcare facilities (Kementerian Kesehatan Republik Indonesia, 2022). Appropriate medical-record management is also part of quality healthcare delivery as mandated by Law of the Republic of Indonesia Number 17 of 2023 concerning Health (Republik Indonesia, 2023).

Hospital reports are a form of information presentation used to describe healthcare-service conditions, evaluate hospital performance, and provide a basis for planning and policy decisions. Reported information should meet the dimensions of accuracy, completeness, consistency, and timeliness to reflect actual service conditions. A discrepancy between source data and reported data can reduce the quality of health information and may affect evaluation processes and hospital-management decisions (Pramono et al., 2021).

Cardiovascular disease is one of the major non-communicable diseases and remains an important cause of morbidity and mortality. Reliable reporting of cardiac cases is therefore needed to support service evaluation, disease monitoring, planning, and health-policy decisions. One form of hospital reporting used to monitor non-communicable diseases is the Non-Communicable Diseases and Mental Health report, locally referred to as the Penyakit Tidak Menular dan Kesehatan Jiwa (PTMKJ) report. This report includes the number of patient visits by non-communicable disease group, including cardiac disease, and is used for hospital statistics and reporting to health authorities (World Health Organization, 2019).

The accuracy of hospital reporting is influenced not only by the completeness of medical records but also by the timeliness and accuracy of diagnosis coding. Accurate coding based on the International Classification of Diseases, Tenth Revision (ICD-10), contributes to reliable health information (Pramono et al., 2021). Wahyuni et al. (2024) reported an association between medical-record completeness and coding accuracy, while Khumaira et al. (2024) noted that inaccurate diagnosis coding can affect the quality of healthcare data. Ramdhani and Gunawan (2024) similarly highlighted the importance of coding quality for the information produced by medical-record units.

Previous studies have largely focused on diagnosis-code accuracy according to ICD-10 or on medical-record completeness. Studies specifically evaluating the conformity of PTMKJ report data with medical records as the primary reporting source remain limited. This represents a research gap because data conformity directly affects the quality of information used in hospital evaluation and decision-making. The present study addresses this gap by comparing cardiac patient visit data in PTMKJ reports with medical-record data at Santosa Hospital Bandung Central.





Preliminary observations in the Medical Records Unit identified differences between the number of cardiac-case visits recorded in PTMKJ reports and the numbers found in patient medical records. These differences indicate a need to evaluate the data-processing workflow to improve reporting quality. Therefore, this study aimed to analyze the conformity of cardiac patient visit data in PTMKJ reports with medical-record data at Santosa Hospital Bandung Central during the first quarter of 2026 and to identify factors associated with data discrepancies based on observations in the Medical Records Unit.

2. Research Methods

This study used a descriptive research design with a quantitative approach. The descriptive design was used to characterize the level of conformity between cardiac patient visit data in PTMKJ reports and medical-record data without applying an intervention to the study object. A quantitative approach was selected because the analyzed data were numerical and were systematically processed to describe the degree of data conformity (Sugiyono, 2022).

The study was conducted in the Medical Records Unit of Santosa Hospital Bandung Central. The research object consisted of cardiac patient visit data recorded in PTMKJ reports and corresponding patient visit data obtained from medical records during the first quarter of 2026. The analyzed cardiac groups were coronary heart disease and heart failure.

The population comprised all cardiac patient visit data recorded in the PTMKJ reports and medical records during the first quarter of 2026. Total sampling was used, meaning that all members of the population were included because the amount of available data was feasible for complete analysis (Notoatmodjo, 2021).

Data were collected through document review by comparing cardiac patient visit data in PTMKJ reports with data contained in patient medical records. Observation was also conducted in the Medical Records Unit to obtain supporting information regarding the data-processing and PTMKJ-reporting workflow. Data conformity was operationally defined as agreement between the number of cardiac patient visits in the PTMKJ report and the corresponding number obtained from medical records for the same reporting period. Non-conformity referred to the numerical difference between the two sources.

The research instrument was an observation sheet used to record the comparison between PTMKJ reports and medical-record data. Microsoft Excel was used to support data processing and calculations. Analysis was performed descriptively by comparing the number of visits in both data sources for each month, calculating the absolute difference, and calculating conformity and non-conformity percentages. The percentage of conformity was obtained as 100% minus the percentage of non-conformity. Results were presented in tables and interpreted according to the observed comparison.





3. Research Results and Discussion

a. Results

The study compared cardiac patient visit data recorded in the PTMKJ report with medical-record data for the first quarter of 2026. The analyzed groups were coronary heart disease and heart failure. A total of 5,510 visits were identified in the medical-record source across both cardiac groups. The results are presented below.

Table 1. Comparison of Coronary Heart Disease Visit Data

Month	Medical Record Data	PTMKJ Data	Difference
Januari	1.570	1.492	78
Februari	1.444	1.430	14
Maret	1.293	1.400	107

Table 1 shows differences between the number of coronary heart disease visits recorded in the PTMKJ report and the medical-record data. The largest absolute difference occurred in March, with 107 visits, whereas the smallest difference occurred in February, with 14 visits. The findings indicate that conformity of coronary heart disease visit data was not consistent across reporting months.

Table 2. Comparison of Heart Failure Visit Data

Month	Medical Record Data	PTMKJ Data	Difference
Januari	444	411	33
Februari	409	403	6
Maret	350	381	31

Table 2 demonstrates that discrepancies were also present for heart failure visits. The largest difference was observed in January, with 33 visits, while the smallest difference occurred in February, with 6 visits. Thus, discrepancies were present in both cardiac case groups during the study period.

Table 3. Percentage of Data Conformity and Non-Conformity

Month	Conformity	Non-Conformity
Januari	94.49%	5.51%
Februari	98.92%	1.08%
Maret	91.60%	8.40%
Total	95.11%	4.89%

As shown in Table 3, overall conformity between cardiac patient visit data in PTMKJ reports and medical-record data was 95.11%, with non-conformity of 4.89%. The highest monthly conformity was recorded in February (98.92%), while the lowest was recorded in March (91.60%). Correspondingly, the highest non-conformity occurred in March (8.40%) and the lowest in February (1.08%). Although conformity exceeded 90% in every month, discrepancies remained and therefore require continued data-quality control.



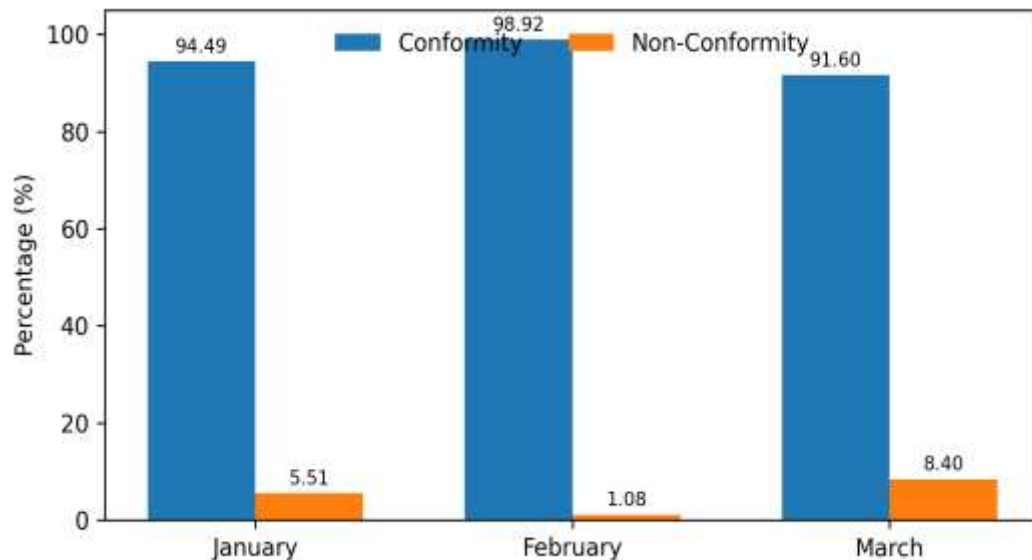


Figure 1. Percentage of Conformity and Non-Conformity of Cardiac Patient Visit Data Based on PTMKJ Reports, First Quarter 2026

Figure 1 illustrates monthly fluctuations in data conformity. February had the highest conformity at 98.92%, whereas March had the lowest at 91.60%. Despite these fluctuations, all months remained above 90% conformity.

b. Discussion

Data conformity is an important indicator of the quality of health information produced by a medical-record unit. A high degree of conformity indicates that the reporting process generally reflects the source data and supports the use of information for healthcare-service evaluation. In this study, overall conformity was 95.11% and non-conformity was 4.89%. Although most data were consistent, differences in the number of patient visits occurred in every month, indicating that the reporting workflow still requires evaluation.

The highest non-conformity occurred in March (8.40%), whereas the lowest occurred in February (1.08%). This variation demonstrates that data conformity can change between reporting periods. The fluctuation suggests that factors within data processing may influence reporting results and supports the need for continuous quality control at each stage of report preparation.

Based on observations in the Medical Records Unit, data discrepancies were associated with delays in completing diagnosis coding, particularly when the volume of patient visits was high relative to the number of available coding staff. Such delays may cause the dataset used for reporting to differ from the medical-record dataset available after coding has been completed. Differences may also be related to data-extraction timing, recapitulation processes, and updates performed after a report has been prepared. Therefore, non-





conformity should be understood as potentially arising from several stages of the medical-information management process rather than from one factor alone.

These findings are consistent with Pramono et al. (2021), who emphasized the importance of accurate ICD-10 clinical coding for the quality of health information. Wahyuni et al. (2024) also reported an association between medical-record completeness and coding accuracy, while Khumaira et al. (2024) explained that inaccurate diagnosis coding can affect healthcare-data quality. Ramdhani and Gunawan (2024) similarly highlighted the importance of accurate coding in inpatient medical records. Together, these findings reinforce that timely and accurate medical-record processing is essential for reliable hospital reporting.

From an operational perspective, the overall conformity level indicates that PTMKJ reporting at Santosa Hospital Bandung Central was generally consistent with the source records, but the remaining 4.89% discrepancy is still meaningful for data-quality improvement. Practical measures supported by the findings include strengthening coordination between medical-record and reporting personnel, conducting re-verification before report submission, monitoring pending coding workloads, and ensuring that diagnosis coding is completed before the reporting dataset is finalized. These actions can improve the accuracy, consistency, and accountability of PTMKJ reports.

4. Conclusion

The conformity of cardiac patient visit data between PTMKJ reports and medical-record data at Santosa Hospital Bandung Central during the first quarter of 2026 was 95.11%, while non-conformity was 4.89%. Monthly conformity was highest in February at 98.92% and lowest in March at 91.60%. Discrepancies were observed in both coronary heart disease and heart failure data. Based on observations in the Medical Records Unit, the discrepancies were associated with delays in diagnosis coding when visit volume exceeded available coding capacity, as well as differences in data-extraction timing, recapitulation, and subsequent data updates. Strengthening verification, improving coordination between medical-record and reporting personnel, monitoring coding workload, and completing diagnosis coding before finalizing PTMKJ reports are recommended to improve reporting accuracy and consistency.

5. Compliance with ethical standards

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Disclosure of conflict of interest

The source manuscript does not contain a conflict-of-interest declaration. Author confirmation is required before submission.

Statement of informed consent

The study used secondary reporting and medical-record data and observational information from the Medical Records Unit. The source manuscript does not report a patient informed-consent





procedure; the authors should confirm the applicable ethical and institutional requirements before submission.

Ethical approval

Ethical approval information was not provided in the source manuscript and should be completed by the authors before journal submission if required.

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