e-ISSN : 2987-0836 DOI : https://doi.org/10.59585/ijhs

Publish : Association of Indonesian Teachers and Lecturers
International Journal of Health Sciences (IJHS)
Journal Homepage : https://jurnal.agdosi.com/index.php/IJHS/index
Volume 4 | Number 3 | September 2026 |

Analysis Of Morbidity Data Management For The Presentation Of The Top 10 Diseases At The Medical Records Installation Of Hermina Arcamanik General Hospital

Nova Rahmadona[1*], Desy Widyaningrum[2]
[*] Medical Records and Health Information Study Program, Politeknik Piksi Ganesha, Indonesia

Abstract

Morbidity data play an essential role in supporting hospital decision-making, program planning, and service quality evaluation. Nevertheless, morbidity data management may be affected by incomplete diagnosis documentation, coding inaccuracies, and delays in data processing. This study aimed to analyze morbidity data management in relation to the preparation and presentation of the top 10 disease report at the Medical Records Installation of Hermina Arcamanik General Hospital. A descriptive qualitative design was employed. Data were collected on March 25, 2026 through direct observation, semi-structured interviews, and document review. One medical records officer directly responsible for morbidity reporting was purposively selected as the informant. The findings showed that morbidity data retrieval had been computerized through the Hospital Management Information System (SIMRS) and Electronic Medical Records (EMR). Data were exported to Microsoft Excel, separated by service type, processed, reviewed, and ranked for routine reporting. The principal problem occurred in outpatient services, where diagnoses were sometimes incomplete, uncoded, or recorded only as follow-up visits because of high patient volume and limited physician practice time. In March 2026, the top 10 outpatient and emergency diagnoses comprised 8,522 cases, whereas the top 10 inpatient diagnoses comprised 1,050 cases. Corrective action was mainly undertaken after incomplete data had been identified. The study concludes that computerized morbidity reporting is already established, but source-data quality, interprofessional coordination, and preventive system controls should be strengthened to improve the accuracy and timeliness of morbidity reports.

Keywords: Morbidity Data, Medical Records, Top 10 Diseases, Electronic Medical Records, Hospital Reporting

Correspondent Author : Nova Rahmadona
E-mail : novarahmadona04@gmail.com

Resive : 15 September 2026
Revised : 16 September 2026
Accept : 19 September 2026
Publish : 19 September 2026

International Journal of Health Sciences is licensed under a Creative Commons Attribution 4.0 International License

e-ISSN : 2987-0836 DOI : https://doi.org/10.59585/ijhs

Publish : Association of Indonesian Teachers and Lecturers
International Journal of Health Sciences (IJHS)
Journal Homepage : https://jurnal.agdosi.com/index.php/IJHS/index
Volume 4 | Number 3 | September 2026 |

1. Introduction

Hospitals are healthcare institutions that provide comprehensive individual health services, including inpatient, outpatient, and emergency care. The quality of healthcare services depends substantially on the availability of accurate, timely, and accountable data and information (Depkes RI, 2020). Medical record data are a major source of such information, particularly morbidity data, which describe patterns of disease among patients. Morbidity data are important for decision-making, health program planning, and the evaluation of hospital service quality (Simanjuntak et al., 2023).

In practice, morbidity data management includes data collection, processing, analysis, and presentation. One common output is the list of the top 10 diseases, which ranks diagnoses according to the highest number of cases within a specified period and service category. In hospital reporting, these data are differentiated between inpatient services (RL-5.3) and outpatient services (RL-5.4) and are used to identify disease patterns and support the establishment of service priorities (Putra et al., 2024). This information assists hospital management in determining service priorities, resource requirements, and strategies for improving healthcare quality (Andriani et al., 2026).

However, morbidity data management still faces problems such as incomplete diagnoses, inaccurate diagnostic codes, delayed processing, and inefficient data entry. Hidayat et al. (2023) analyzed 375 of 6,069 inpatient medical record documents and found an association between completeness of medical record information and diagnostic coding accuracy. Herawati and Monika (2025) reported that 10% of RL-4A reporting components were non-compliant because of inadequate coding validity and manual data entry. These conditions may reduce the validity of disease reports and limit their usefulness for decision-making.

During field observation at the Medical Records Installation of Hermina Arcamanik General Hospital, morbidity data management was identified as an important routine activity in preparing morbidity reports, including the top 10 disease list. A recurring problem was that physicians had not always coded diagnoses in the electronic medical record. This condition could delay morbidity data processing and reporting.

Accordingly, this study aimed to analyze morbidity data management for the presentation of the top 10 diseases at the Medical Records Installation of Hermina Arcamanik General Hospital and to identify areas for improvement that may enhance the quality of morbidity information and support healthcare service quality.

International Journal of Health Sciences is licensed under a Creative Commons Attribution 4.0 International License

e-ISSN : 2987-0836 DOI : https://doi.org/10.59585/ijhs

Publish : Association of Indonesian Teachers and Lecturers
International Journal of Health Sciences (IJHS)
Journal Homepage : https://jurnal.agdosi.com/index.php/IJHS/index
Volume 4 | Number 3 | September 2026 |



2. Research Methods

This study used a descriptive qualitative approach to describe morbidity data management in the Medical Records Installation (Wahab and Humairoh, 2025). The study was conducted on March 25, 2026 at the Medical Records Department of Hermina Arcamanik General Hospital. The research setting comprised place, actor, and activity: the place was the Medical Records Installation; the actor was the officer responsible for morbidity reporting; and the activities included data retrieval, verification, grouping, and presentation of the top 10 diseases. The informant was selected purposively on the basis of direct involvement and knowledge of the process, resulting in one medical records officer responsible for morbidity data reporting.

The researcher served as the primary research instrument and used a semi-structured interview guide to obtain information regarding morbidity data management. Direct observation was also conducted to examine the management process, while documentation was used as supporting evidence related to morbidity data.

The object of the study was morbidity data management for the presentation of the top 10 diseases. Data were collected through direct observation of SIMRS/EMR access, diagnosis-data retrieval, separation by service type, processing in Microsoft Excel, and report preparation. The interview explored duties, workflow, diagnosis completeness and coding constraints, and follow-up procedures for incomplete data. Documentation included diagnosis outputs and the March 2026 top 10 disease recapitulation without patient identifiers.

Data from observation, interviews, and documentation were analyzed through data reduction, data display, and conclusion drawing. Reduction involved selecting information relevant to the study objective. The selected data were then presented descriptively and interpreted to answer the research objective.

3. Results and Discussion

a. Results

Observation showed that morbidity data retrieval at Hermina Arcamanik General Hospital was performed through the Hospital Management Information System (SIMRS). The officer logged in using an individual account with authorized access, selected the treatment menu, opened Inquiries & Report and Diagnosis Report, and selected Diagnosis per Episode to display patient diagnoses by service episode. The officer then opened the Diagnosis List Treatment List Entry Report, specified the reporting period, and selected Show Data. After verification, the data were exported to Microsoft Excel and used as the basis for morbidity reporting, including the top 10 disease report.

International Journal of Health Sciences is licensed under a Creative Commons Attribution 4.0 International License

e-ISSN : 2987-0836 DOI : https://doi.org/10.59585/ijhs

Publish : Association of Indonesian Teachers and Lecturers
International Journal of Health Sciences (IJHS)
Journal Homepage : https://jurnal.agdosi.com/index.php/IJHS/index
Volume 4 | Number 3 | September 2026 |

The interview indicated that morbidity data collection began by exporting data from the Electronic Medical Record (EMR). The data were then separated into inpatient and outpatient categories. Outpatient data were combined with emergency department data, whereas inpatient data were processed separately. After separation by service type, diagnoses were grouped and ranked to identify the most frequent diseases for the reporting period.

Physicians were directly involved because they were responsible for entering patient diagnoses into the EMR. These diagnoses became the source for morbidity extraction and reporting. The main constraint occurred in outpatient care, where diagnoses were sometimes incomplete or not coded because a high patient volume had to be managed within limited practice time. Some records contained only Z codes or follow-up notes without a complete disease diagnosis. According to the informant, Z, O, and P codes were excluded from the top 10 disease calculation. Completed reports were reviewed by the head of medical records before being forwarded as routine reports to the Health Office. Morbidity information was also reviewed by the quality unit to support annual service-priority decisions.

The principal morbidity-data problem was therefore concentrated in outpatient services, particularly uncoded diagnoses and coding inconsistencies. Such problems were rarely found in inpatient services because a completed diagnosis was required for the medical discharge summary. When outpatient diagnosis data were incomplete, medical records personnel coordinated with the physician in charge; when the physician was difficult to contact, coordination was escalated to the relevant unit head. This coordination was intended to improve diagnosis completeness and accuracy.

Document review confirmed that morbidity information was presented as top 10 disease reports for inpatient and outpatient/emergency services. Reports contained the diagnosis name, ICD-10 code, and number of cases for the reporting period.

Table 1. Top 10 Inpatient Diseases, March 2026

No.	Diagnosis	ICD-10	Cases
1	Typhoid fever	A01.0	204
2	Bacterial infection	A49.9	183
3	Acute respiratory infection	J22	174
4	Bronchopneumonia	J18.0	112
5	Stroke	I69.4	89
6	Dengue fever	/A90	66
7	Non-insulin-dependent diabetes mellitus without complications	E11.9	64
8	Dyspepsia	K30	63
9	Appendicitis	K35	50

International Journal of Health Sciences is licensed under a Creative Commons Attribution 4.0 International License

e-ISSN : 2987-0836 DOI : https://doi.org/10.59585/ijhs

Publish : Association of Indonesian Teachers and Lecturers
International Journal of Health Sciences (IJHS)
Journal Homepage : https://jurnal.agdosi.com/index.php/IJHS/index
Volume 4 | Number 3 | September 2026 |

10	Viral infection	B34.9	45
	Total Cases		1,050

Table 2. Top 10 Outpatient and Emergency Department Diseases, March 2026

No.	Diagnosis	ICD-10	Cases
1	Atherosclerotic heart disease	I25.1	1913
2	Non-insulin-dependent diabetes mellitus without complications	E11.9	1514
3	Radiculopathy	M54.1	1135
4	Benign prostatic hypertrophy (BPH)	N40	1030
5	Stroke	I69.4	797
6	Chronic obstructive pulmonary disease (COPD)	J44.9	537
7	Asthma	J45.9	530
8	Hypertensive heart disease without (congestive) heart failure	I11.9	468
9	Cataract	H25.9	334
10	Childhood autism	F84.0	264
	Total Cases		8,522

b. Discussion

The Medical Records Installation of Hermina Arcamanik General Hospital manages morbidity data using SIMRS and EMR. Officers select diagnosis reports by service episode and reporting period, verify the data, export them to Microsoft Excel, and separate inpatient data from outpatient and emergency department data. Although data retrieval is computerized, grouping, filtering, and disease ranking still require manual processing after export. Fahrudin et al. (2024) stated that an ideal morbidity-data processing system should integrate diagnosis data and consistently generate periodic and top 10 disease reports. Aulia et al. (2024) also described an electronic system capable of displaying the most frequent diseases by date, month, or year. Thus, the current system supports efficient data retrieval but still depends on post-export processing.

Separation by service type is important because inpatient encounters differ from outpatient and emergency encounters. In March 2026, the top 10 outpatient and emergency diagnoses accounted for 8,522 cases, whereas the top 10 inpatient diagnoses accounted for 1,050 cases. The most frequent outpatient/emergency diagnoses were atherosclerotic heart disease (1,913 cases), type 2 diabetes mellitus without complications (1,514 cases), and radiculopathy (1,135 cases). The most frequent inpatient diagnoses were typhoid fever (204 cases), bacterial infection (183 cases), and acute respiratory infection (174 cases). These totals should not be interpreted as a direct comparison of disease burden between units because service coverage, visit volume, and data aggregation differ. One month of data describes only

International Journal of Health Sciences is licensed under a Creative Commons Attribution 4.0 International License

e-ISSN : 2987-0836 DOI : https://doi.org/10.59585/ijhs

Publish : Association of Indonesian Teachers and Lecturers
International Journal of Health Sciences (IJHS)
Journal Homepage : https://jurnal.agdosi.com/index.php/IJHS/index
Volume 4 | Number 3 | September 2026 |



that reporting period; assessment of trends and service priorities requires comparison across multiple periods.

Four parties participate in morbidity-data management: physicians establish and enter diagnoses; medical records personnel retrieve, separate, verify, and recapitulate data; the head of the medical records installation reviews the report; and the quality unit evaluates the report for service planning. Report quality therefore depends not only on the information system but also on continuity of work among personnel. Ilyas et al. (2023) emphasized that conformity of variables and metadata in electronic medical records supports completeness and accuracy. Incomplete diagnoses at the point of care affect the data retrieved and may ultimately alter the ranking of the top 10 diseases.

The major problem was incomplete, uncoded, or follow-up-only outpatient diagnosis documentation. According to the informant, high patient volume and limited physician practice time led physicians to prioritize patient examination over complete diagnosis entry. Visits remained recorded, but some could not be used in the top 10 disease calculation because diagnostic information was insufficient. This may cause the number of cases for certain diseases to appear lower than the actual service situation. The finding is consistent with Herawati and Monika (2025), Hidayat et al. (2023), and Sari et al. (2026), who respectively highlighted coding validity, the relationship between record completeness and coding accuracy, and factors influencing outpatient coding accuracy.

Coding constraints were more prominent in outpatient care, while inpatient diagnoses were relatively more complete because they were required for the medical discharge summary. Seftiani and Ulfah (2024) reported that electronic medical records can improve efficiency in outpatient coding, although some monthly data processing may remain manual. Electronic systems alone therefore do not guarantee data quality; successful use also depends on documentation discipline, workflow clarity, user capability, and control of incomplete data.

At the study site, records with Z, O, and P codes were excluded from the top 10 disease calculation. This criterion should be formalized in a written standard operating procedure because inclusion and exclusion criteria influence disease rankings. Reports should specify the period, service type, patient category, counting unit, data source, and categories excluded from analysis. The final filtered total should also be reconciled with visits or service episodes so that missing, duplicate, or undiagnosed records can be identified before report approval.

When incomplete diagnoses were identified, medical records personnel coordinated with the physician in charge and, when necessary, the relevant service-

International Journal of Health Sciences is licensed under a Creative Commons Attribution 4.0 International License

e-ISSN : 2987-0836 DOI : https://doi.org/10.59585/ijhs

Publish : Association of Indonesian Teachers and Lecturers
International Journal of Health Sciences (IJHS)
Journal Homepage : https://jurnal.agdosi.com/index.php/IJHS/index
Volume 4 | Number 3 | September 2026 |

unit head. This mechanism was corrective because action occurred after incompleteness was detected. Putra et al. (2024) similarly noted that incomplete medical summaries must be returned for completion, potentially delaying RL-5.3 reporting. At Hermina Arcamanik, Wahab and Humairoh (2025) also emphasized that incomplete diagnosis documentation reduces morbidity-data accuracy despite electronic-system use. Existing coordination could be strengthened through alerts for blank diagnoses before an episode is closed, daily or weekly lists of incomplete records, completion deadlines, periodic coding audits, and feedback to service units.

The top 10 disease report is submitted to the Health Office and reviewed by the quality unit to determine service priorities. Morbidity reports therefore function not only as administrative documents but also as managerial information. Fahrudin et al. (2024) showed that integrated data-processing systems can accelerate top 10 disease reporting, improve accuracy, and reduce user omission. Service priorities should ideally consider not only absolute case counts but also changes across periods, severity, resource needs, quality implications, and preventability.

Overall, morbidity-data management follows a systematic sequence from retrieval and service-type separation to processing, review, and report submission. Its principal weakness lies in source-data quality, particularly the completeness and accuracy of outpatient diagnoses. Improvement should begin when physicians document diagnoses in the EMR rather than only at the recapitulation stage. Stronger standard operating procedures, automated controls, periodic monitoring, coding training, and inter-unit coordination may improve the accuracy and timeliness of morbidity reporting.

4. Conclusion

Morbidity data management at the Medical Records Installation of Hermina Arcamanik General Hospital is supported by computerized systems through SIMRS and EMR. The workflow includes data retrieval, separation of inpatient from outpatient/emergency data, preparation of the top 10 disease report, review by the head of medical records, and use by the quality unit and the Health Office. Computerized retrieval makes the process faster and more efficient.

The main problem occurs in outpatient services, where diagnoses may be missing, uncoded, or recorded only as follow-up visits because of high patient volume and limited physician practice time. Current improvement measures are predominantly corrective, meaning that action is taken after incomplete data are identified rather than prevented at the point of documentation.

Future studies should analyze morbidity data over a longer period to identify disease patterns and trends more reliably. Further investigation is also needed to understand the

International Journal of Health Sciences is licensed under a Creative Commons Attribution 4.0 International License

Publish : Association of Indonesian Teachers and Lecturers
International Journal of Health Sciences (IJHS)
Journal Homepage : https://jurnal.agdosi.com/index.php/IJHS/index
Volume 4 | Number 3 | September 2026 |

causes of incomplete outpatient diagnosis documentation, including physician workload and the effectiveness of reminder functions within the EMR.

5. Compliance with ethical standards

Acknowledgements

The source manuscript does not report a specific acknowledgement statement.

Disclosure of conflict of interest

The source manuscript does not report a conflict-of-interest statement. This information should be confirmed by the authors before submission.

Statement of informed consent

The source manuscript does not report an informed-consent statement. This information should be confirmed by the authors before submission.

References

Andriani, N. D., Syahputri, R. B., Kusuma, N. N. and Pradnyantara, I. G. A. N. P. (2026) 'Strategi Kebijakan Internal dalam Peningkatan Mutu Rumah Sakit: Systematic Literatur Review', Pro Health Jurnal Ilmiah Kesehatan, 8(1), pp. 1–9.

Aulia, L., Sufyana, C. M. and Sari, I. (2024) 'Perancangan Sistem Informasi Rekam Medis Elektronik Dalam Pelaporan 10 Besar Penyakit Rawat Inap', Decode: Jurnal Pendidikan Teknologi Informasi, 4(2), pp. 533–546. doi: 10.51454/decode.v4i2.589.

Depkes RI (2020) 'Peraturan Menteri Kesehatan Nomor RI Tentang Rumah Sakit', Permenkes RI, (3), pp. 1–80.

Fahrudin, H., Abdussalaam, F. and Sari, I. (2024) 'Perancangan Sistem Informasi Pengolahan Data Morbiditas Rawat Inap Guna Menunjang Tata Kelola Pelaporan Rawat Inap', Jurnal Indonesia: Manajemen Informatika dan Komunikasi, 5(3), pp. 2145–2157. doi: 10.35870/jimik.v5i3.846.

Herawati, T. and Monika, F. (2025) 'Analisis Pengolahan Pelaporan Eksternal RL 4A Berdasarkan Sistem Informasi Rumah Sakit di Rumah Sakit Cirebon', MEJORA: Medical Journal Awatara, 3(1), pp. 60–69. doi: 10.61434/mejora.v3i1.265.

Hidayat, A. D., Jayanti, K. D., Oktaviasari, D. I., Novitasari, I. A. and Widyaningrum, Y. D. A. (2023) 'Hubungan Kelengkapan Informasi Rekam Medis dengan Keakuratan Kode Diagnosis di Rumah Sakit', Jurnal Rekam Medis dan Informasi Kesehatan Indonesia, 3(1), pp. 44–49. doi: 10.62951/jurmiki.v3i1.46.

Ilyas, A. A., Golo, Z. A., Retnowati and Saputra, J. D. (2023) 'Analisis Kesesuaian Variabel dan Meta Data Rekam Medis Elektronik: Studi Kasus pada Instalasi Rawat Jalan Rumah Sakit X', Jurnal Rekam Medis Dan Informasi Kesehatan, 6(2), pp. 89–97.

Putra, D. A., Ulfa, H. M. and Amartha, M. R. (2024) 'Tinjauan Pelaksanaan Pelaporan Bulanan RL-5.3 di Rumah Sakit Islam Ibnu Sina Pekanbaru Tahun 2021', Jurnal Rekam Medis (Medical Record Journal), 3(1), pp. 20–29.

International Journal of Health Sciences is licensed under a Creative Commons Attribution 4.0 International License

Publish : Association of Indonesian Teachers and Lecturers
International Journal of Health Sciences (IJHS)
Journal Homepage : https://jurnal.agdosi.com/index.php/IJHS/index
Volume 4 | Number 3 | September 2026 |



Sari, S. M., Muzuh, M. E., Amiruddin, A., Rahmadi, D. S. and Dzulkarnain, K. (2026) 'Analisis Keakuratan Kode Diagnosis Berdasarkan ICD-10 dan Faktor Penyebabnya pada Rekam Medis Rawat Jalan di Puskesmas Kota Baubau', Jurnal Promotif Preventif, 9(1), pp. 60–69. doi: 10.47650/jpp.v9i1.2555.

Seftiani, S. and Ulfah, A. (2024) 'Tinjauan Penerapan Electronic Medical Record Instalasi Rekam Medis Bagian Coding Rawat Jalan Di Rumah Sakit Azra Bogor', Prepotif: Jurnal Kesehatan Masyarakat, 8(2), pp. 3428–3433. doi: 10.31004/prepotif.v8i2.31103.

Simanjuntak, M., Sitorus, M. S., Erlindai, E., Christy, J., Valentina, V., Lubis, S. P. S. and Azhar, A. (2023) 'Sosialisasi Kelengkapan Berkas Rekam Medis Terhadap Pelaporan Data Morbiditas (RL 4A) Di Rumah Sakit Madani Medan', Pengabdian Kepada Masyarakat Indonesia SEAN (ABDIMAS SEAN), 1(1), pp. 23–30. doi: 10.58471/abdimassean.v1i1.564.

Wahab, S. and Humairoh, L. (2025) 'Analisis Pengolahan Data Morbiditas Guna Menunjang Mutu Pelaporan Rawat Inap di Unit Rekam Medis RS Hermina Arcamanik', Jurnal Ilmiah Perekam Dan Informasi Kesehatan Imelda (JIPIKI), 10(2), pp. 212–219. doi: 10.52943/jipiki.v10i2.1927.

International Journal of Health Sciences is licensed under a Creative Commons Attribution 4.0 International License