



DOI: <https://doi.org/10.38035/gijes.v4i3>
<https://creativecommons.org/licenses/by/4.0/>

Analysis of the Impact of Downtime Disruptions on SIMRS on the Operational Process of Outpatient Registration Services at AMC Hospital Cileunyi

Nabilah Tsani Nurisyafa'ah¹, Diansyah²

¹Medical Record and Health Information Study Program, Politeknik Piksi Ganesha, Bandung, Indonesia, nabilahtsani05@gmail.com

²Medical Record and Health Information Study Program, Politeknik Piksi Ganesha, Bandung, Indonesia, diansyahrm1@gmail.com

Corresponding Author: nabilahtsani05@gmail.com¹

Abstract: Downtime refers to the period during which a system's core services are unavailable or inaccessible for a certain period of time due to unexpected disruptions; specifically, the outpatient registration department at AMC Hospital still frequently experiences downtime issues. This study aims to determine the impact of downtime on operational processes in the outpatient registration department. The method used was a descriptive study with a qualitative approach, involving observations and interviews with 10 informants selected through purposive sampling based on inclusion and exclusion criteria. The results showed that the most frequent disruptions occurred between December 2025 and May 2026, with prolonged durations caused by server outages, slow BPJS bridging, and internet connectivity issues. These disruptions forced staff to switch to manual record-keeping, which led to long queues and increased the average registration time from approximately 3 minutes (under normal conditions) to approximately 35 minutes following the downtime. SIMRS downtime significantly reduced the efficiency of outpatient registration services. The hospital is advised to improve its IT infrastructure, increase the number of IT staff, and develop more structured standard operating procedures (SOP) for handling downtime.

Keywords: Downtime, SIMRS, Registration, Services

INTRODUCTION

Digital transformation in the health sector is an important part of improving the quality of healthcare services in the modern era (Alvianty et al., 2025). One form of information technology implementation in hospitals is the Hospital Management Information System (SIMRS), which functions to integrate administrative processes and clinical services in an integrated manner, thereby improving service efficiency and accuracy (Farhiyah et al., 2025).

Based on the Regulation of the Minister of Health of the Republic of Indonesia No. 24 of 2022, Article 3 Paragraph 1, health facilities are obliged to organize a SIMRS, an information technology system that processes and integrates the entire hospital service flow in

the form of reporting and administrative procedures in order to obtain accurate and precise information (Permenkes RI No. 24, 2022). One of the activities in the implementation of electronic medical records at hospitals, as stipulated in Permenkes No. 24 of 2022, Article 13 Paragraph 1 Point a, concerning patient registration, defines patient registration as the registration activity involving the completion of identity and social data for outpatients, emergency patients, and inpatients (Permenkes RI No. 24, 2022). Patient registration is the initial stage of the healthcare service process at a health facility, in which patients register themselves to obtain medical services (Arifin et al., 2023).

Registration services require fast and accurate access to patient data to support the registration process, identity verification, medical record documentation, and the distribution of services to the intended clinics (Pane et al., 2023). Evaluations of SIMRS implementation in outpatient registration units have shown that the technology, human, and organizational dimensions of the system jointly determine user satisfaction and the effectiveness of hospital management decision-making (Aprilianingsih et al., 2022; Pujihastuti et al., 2021).

Based on the results of preliminary observations conducted in February 2026 at AMC Hospital, several problems were identified, such as server disruptions that hindered staff in providing services due to SIMRS *errors*, which led to a buildup of patients at the registration desk and an increase in complaints resulting from patient dissatisfaction; frequent *downtime* during outpatient service hours; a shortage of IT staff, both in terms of human resources and maintenance; and frequent network errors causing the SIMRS to load slowly. This was reinforced by the results of an interview with an outpatient registration officer at counter 3, who explained that these *downtime* incidents were caused by server disruptions, supported by *downtime* report data showing more than 6 error disruptions during December-January with fairly long *downtime* durations (AMC Hospital downtime report, 2026).

This finding is in line with a study conducted by Handayani (2025) entitled A Review of *Downtime* Handling in the Hospital Management Information System (SIMRS) at the Outpatient Patient Registration Department. That study focused on how the system-handling process occurs during *downtime*, as well as the hospital's level of compliance with medical record management accreditation standards (Handayani et al., 2025).

The similarity between that study and this study lies in the same main topic, namely examining hospital information systems and the operational obstacles caused by system disruptions. However, the fundamental difference (novelty) of this study lies in its focus of analysis and study location. The previous study focused more on evaluating compliance with accreditation standards after *downtime* and how electronic medical record infrastructure constraints can affect the smoothness of hospital services, whereas this study specifically analyzes the magnitude of the impact of the sequence of technical disruptions on the real operational workflow of staff and service satisfaction at AMC Hospital Cileunyi during the ongoing period.

Based on the description above, the researchers were interested in taking the title Analysis of the Impact of *Downtime* Disruptions on the SIMRS on the Operational Process of Outpatient Registration Services at AMC Hospital Cileunyi. This study aims to determine the impact of *downtime* disruptions on the SIMRS on the operational process of outpatient registration services at AMC Hospital Cileunyi.

METHODS

This study used a descriptive research method with a qualitative approach. Qualitative research is a type of research that aims to gain an in-depth understanding of the meaning of a social phenomenon or problem experienced by the research subject (Assyakurrohim et al., 2022). The qualitative approach was chosen because it allows the researcher to understand the phenomenon of *downtime* disruptions in its natural context without manipulating conditions,

consistent with the characteristics of modern qualitative research (Sugiyono, 2023). Through this method, the researcher systematically, factually, and accurately describes the impact of *downtime* disruptions in the Hospital Management Information System (SIMRS) on the operational process of outpatient registration services at AMC Hospital Cileunyi.

This study was conducted at AMC Hospital Cileunyi, a private hospital in Bandung Regency. The research location was centered on the Medical Records Installation and the National Health Insurance (JKN) Unit, because this unit plays a direct role in the management, verification, and submission of BPJS Kesehatan claim documents (BPJS Kesehatan, 2023). The research was conducted from February to May 2026, while the data used covered the period from December 2025 to May 2026.

The data sources used in this study were primary and secondary data. Primary data were obtained through observation and interviews, while secondary data were obtained from hospital documentation. The population in this study consisted of all hospital staff involved in the use of the SIMRS. The sample in this study consisted of 10 informants, comprising 1 head of medical records, 2 outpatient registration officers at counter 3, 1 emergency registration officer, 1 outpatient clinic nurse, 1 outpatient clinic specialist physician, 2 IT staff members, and 2 BPJS patients. The sampling technique used was *purposive sampling* with inclusion and exclusion criteria.

The data analysis stages in this qualitative study were carried out descriptively and narratively through the following systematic steps:

a) Data Reduction: collecting, sorting, and summarizing field notes from observations, interview transcripts, and monthly *downtime* documentation data.

b) Data Presentation: presenting the data that had been grouped into a monthly *downtime* report matrix table and a registration time comparison table, reinforced with descriptive narratives and direct quotations from informant interviews to make it easier to understand.

c) Conclusion Drawing: formulating final conclusions based on the analysis of the causal relationship between technical server/internet disruptions and the decline in service efficiency, while also formulating problem-solving recommendations for hospital management.

RESULTS AND DISCUSSION

Result

Based on the results of in-depth observations and interviews at AMC Hospital Cileunyi, *downtime* disruptions in the SIMRS had a direct impact on the smoothness of operations at the outpatient registration counter. This condition occurred over several periods with fairly long *downtime* durations, causing various obstacles in the outpatient registration service process. *Downtime* reports at AMC Hospital were recorded over several specific periods with fairly long durations.

Table 1. Downtime Report for December 2025

No	Date	Time	Cause	Time Restored	Remarks
1	04/12/2025	07.36	SIMRS loading when saving and retrieving data at 07:36, continuing until the evening at 17:00	No information	IT confirmed the network was fine; no solution provided by the SIMRS
2	05/12/2025	06.59	SIMRS loading; Frista and fingerprint disrupted at 06:59; issue reported by BPJS; still loading until the evening	No information	BPJS network connection up and down
3	12/12/2025	16.00	SIMRS error, could not be opened at 16:00, caused by a power outage; SIMRS up and down until the afternoon shift	No information	Repaired by the Techno team

No	Date	Time	Cause	Time Restored	Remarks
4	13/12/2025	06.03	SIMRS error from 06:03 to 07:56, still error; already confirmed with IT	No information	Switched to an alternative SIMRS link
5	22/12/2025	06.32	Unable to open V-Claim, Frista, and fingerprint at 06:32	06.54	Disruption from BPJS
6	24/12/2025	14.36	SIMRS data-saving loading from 07:05 until the afternoon at 16:30	No information	Slowdown in BPJS bridging, but V-Claim remained accessible

Source: Downtime Incident Report (2025)

Table 1 shows that 6 *downtime* incidents occurred in the SIMRS during December 2025, with the longest duration occurring on 4 December, from 07:36 in the morning continuing until 17:00 in the evening, caused by SIMRS loading. Another lengthy disruption occurred on 24 December due to a slowdown in BPJS bridging, which caused the system to load slowly. In addition to December 2025, *downtime* incidents were also found during the January-May 2026 period, with varying frequency and causes of disruption.

Table 2. Downtime Report for January 2026

No	Date	Time	Cause	Time Restored	Remarks
1	05/01/2026	09.46	V-Claim disruption caused by a national BPJS Kesehatan network disruption	11.30	BPJS Kesehatan network disruption
2	07/01/2026	08.48	SIMRS disruption; cause unknown	09.00	-
3	12/01/2026	14.14	SIMRS network up and down; according to a staff member, other hospitals experienced the same issue	-	Response received at 14.38
4	15/01/2026	07.40	SIMRS disruption; switching the web link was attempted but the issue persisted	08.40	-
5	19/01/2026	13.11	Unable to save data or open the SIMRS menu, reportedly due to BPJS loading	-	Still loading until 13.34
6	21/01/2026	11.16	BPJS bridging disruption	-	Still loading until 11.50
7	23/01/2026	06.35	BPJS bridging disruption	-	Network still up and down until the evening

Source: Downtime Incident Report (2026)

Table 3. Downtime Report for February 2026

No	Date	Time	Cause	Time Restored	Remarks
1	02/02/2026	07.33	SIMRS could not be accessed	07.58	-
2	21/02/2026	06.42	Internet network loading	11.06	Internet still unstable
3	26/02/2026	17.31	Unable to access Frista and fingerprint	No information	Disruption from BPJS at 17:36, still disrupted until 19:09

Source: Downtime Incident Report (2026)

Table 4. Downtime Report for March 2026

No	Date	Time	Cause	Time Restored	Remarks
1	09/03/2026	07.33	Bridging loading at 07:02	07.26	BPJS loading
2	31/03/2026	06.42	BPJS loading starting at 15:48	16.00	BPJS loading

Source: Downtime Incident Report (2026)

Table 5. Downtime Report for April 2026

No	Date	Time	Cause	Time Restored	Remarks
1	01/04/2026	11.24	Bridging system loading at 11:24	No information	-
2	06/04/2026	06.48	BPJS system loading at 06:48	08.28	BPJS system loading
3	07/04/2026	10.18	BPJS system loading at 10:18	14.00	BPJS system loading
4	11/04/2026	07.54	BPJS system loading at 07:54	09.00	BPJS system loading

Source: Downtime Incident Report (2026)

Table 6. Downtime Report for May 2026

No	Date	Time	Cause	Time Restored	Remarks
1	04/05/2026	10.45	No internet at 10:45	10.50	No internet
2	08/05/2026	06.45	SIMRS bridging disruption from 06:45 until 09:00	09.00	BPJS system loading
3	16/05/2026	15.01	BPJS network disruption from 15:01 to 15:48	15.48	BPJS system loading
4	26/05/2026	07.54	No internet from 11:13 until restored	12.41	No internet

Source: Downtime Incident Report (2026)

Based on Tables 1-6, *downtime* incidents in the SIMRS still frequently occurred during the January-May 2026 period. The disruptions that most often occurred in the system were BPJS bridging issues, BPJS system loading, and problems with the BPJS *V-Claim* system, as well as internet network disruptions that prevented the service process from running optimally. Several incidents lasted for a fairly long duration, such as on 31 March 2026, when a *downtime* disruption caused by BPJS system loading occurred from 06:42 in the morning until 16:00 in the afternoon. In addition, several system disruption incidents had no information on when normal conditions were restored, which had the potential to create uncertainty in the service process. This could have a direct impact on the outpatient registration service process, with impacts including:

1. Queue Buildup and Surge in Waiting Time

The results of observations and interviews at AMC Hospital Cileunyi show that SIMRS *downtime* has a direct impact on the patient registration service process at the outpatient registration desk. This impact was clearly felt by registration staff, particularly at counter 3, who had to record patient identity manually one by one. Based on an interview with one of the registration informants at counter 3, it was stated: “When the SIMRS is experiencing *downtime*, we as registration staff cannot do anything; in such situations, manual recording is carried out temporarily, but there is a high risk of error, and the registration process takes longer than usual, which normally only takes 2-3 minutes per patient. Once it becomes manual, it can take up to 10-35 minutes because we have to manually confirm with the medical records department, which causes the queue in the SIMRS to build up immediately while patients wait to be called even though the system is still experiencing *downtime*.” (Interview, 2 June 2026).

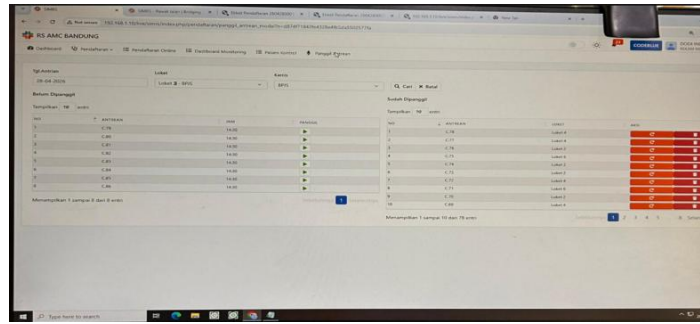


Figure 1. Condition of Patient Queue Buildup in the SIMRS

Source: Researcher (2026)

Based on the observation results, this buildup occurred because manual service capacity was only able to handle 4-5 patients per hour, in contrast to the digital system, which was able to serve more than 10 patients per hour. According to Nasution's (2021) study entitled Information Quality in Digital Systems in Medan Amplas Subdistrict, technological obstacles in public areas instantly create workflow congestion that reduces user comfort, and public services that were initially adaptive experience prolonged operational disruption (Nasution, 2021).

This descriptive study at AMC Hospital Cileunyi is in line with the study conducted by Wijaya (2024) in the journal entitled Analysis of the Impact of Hospital Management Information System Implementation on Management Decision-Making, which states that an unstable system that frequently experiences disruptions can reduce productivity and affect the quality of management decision-making (Wijaya et al., 2024). AMC Hospital Cileunyi has implemented an integrated SIMRS but still experiences server *downtime*, particularly during service hours. This condition causes service delays and the temporary implementation of manual procedures, which has the potential to reduce service quality (Simanullang et al., 2026).

Based on the results of interviews and observations with registration staff at outpatient clinic counter 3, there is a comparison of the average registration time before and after *downtime* occurs, which can be seen in Table 7 below.

Table 7. Comparison of Average Patient Registration Times Before and After SIMRS Downtime

Condition	Registration Time Range	Average Registration Time
Before downtime	2-5 minutes	± 3 minutes
After downtime	10-60 minutes	± 35 minutes

Source: Downtime Incident Report (2026)

Table 7 shows that the average patient registration time before SIMRS *downtime* ranged from 2-5 minutes, with an average service time of approximately ±3 minutes. After *downtime* occurred, the registration time increased to 10-60 minutes, with an average service time reaching approximately ±35 minutes. This increase indicates that SIMRS disruptions have a direct impact on the efficiency of the outpatient registration process. This condition causes patient queues to become longer, increases the workload of outpatient staff, and has the potential to reduce the quality of service provided to patients. The lengthy process requires manual form completion, physical medical record searches, and data verification. The increase in outpatient registration waiting time is caused by network errors or maintenance disruptions that cause the SIMRS to frequently load slowly.

2. Patient Data Validation Constraints (Particularly for BPJS Kesehatan Participants)

In addition to time-related issues, *downtime* causes staff to be unable to validate patients' insurance participation data, particularly for BPJS Kesehatan, because the SIMRS application,

which is integrated with the BPJS *Vidi/P-Care* system, cannot be accessed. Staff are forced to ask patients to show their physical cards.

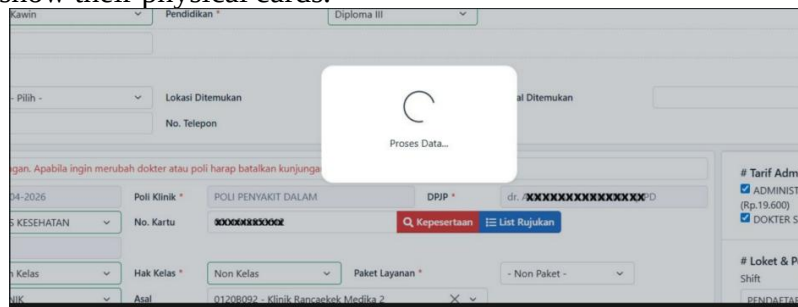


Figure 2. SIMRS Unable to Access BPJS Participation Data

Source: Researcher (2026)

Based on the observation and interview results, when the SIMRS is unable to access or validate BPJS participation data, this creates a high administrative risk for AMC Hospital Cileunyi. If patients continue to be served without real-time system validation, this creates the potential for hospital claims to be rejected in the future. This study is in line with the study by Wiwaha and Ulfah (2024) entitled *A Review of Downtime Handling in Outpatient Registration to Support Starkes Accreditation*, which states that disrupted data integration during *downtime* risks causing financial losses due to errors in manually inputting identity data and referral numbers (Wiwaha & Ulfah, 2024).

3. Double Workload (Double Entry)

The operational impact was also felt directly by hospital staff, particularly registration staff at counter 3. When the SIMRS experiences disruptions, manual recording must be carried out, which likely requires re-entering patient data into the system once the network returns to normal. Registration counter staff also frequently receive direct complaints from impatient or dissatisfied patients, which causes the staff's workload to double.

This was confirmed by a statement from a registration officer: “When the system is back on or up, the work of the registration staff at counter 3 is not yet finished; in fact, it just keeps piling up. Besides constantly being complained to about waiting times by patients when the network is experiencing errors, registration staff have to re-enter all patient data from the manual registration book into the SIMRS. So the work is doubled, serving newly arrived patients while gradually inputting the manual data that was left behind earlier, in order to synchronize with the central system.” (Interview, 2 June 2026).

4. Downtime Handling Efforts by AMC Hospital

In an effort to handle *downtime*, AMC Hospital has implemented several anticipatory and corrective measures to minimize disruptions to services. Anticipatory measures are carried out through regular inspection and maintenance of hardware, servers, and networks to ensure the system runs optimally. In addition, the hospital also prepares a manual service procedure as an alternative when the SIMRS experiences disruptions. When *downtime* occurs, registration staff continue to serve patients using forms or manual recording so that the service process is not halted. Once the system returns to normal, the data that had been recorded manually is then re-entered into the SIMRS so that all patient information remains stored and integrated with the system. These efforts show that AMC Hospital is committed to maintaining service continuity and reducing the negative impact of *downtime* on the operational process of outpatient services.

Based on the results of interviews with IT staff and the head of medical records, it was stated: “Before *downtime* occurs, regular inspection and renewal of hardware components on

PCs related to the running of the SIMRS are carried out to keep it optimal, and a manual registration system is prepared so that services can continue to run when *downtime* occurs.” (Interview, 18 May 2026).

Discussion

Based on the results of observations and interviews at AMC Hospital Cileunyi with 10 informants consisting of the head of medical records, registration staff, outpatient clinic nurses, patients, specialist physicians, and IT staff, it is known that SIMRS *downtime* disruptions still frequently occur during outpatient service hours.

The results of this study show that SIMRS *downtime* incidents still frequently occurred during the January-May 2026 period, with fairly long durations, such as on 31 March 2026, when *downtime* occurred from 06:42 to 16:00, caused by BPJS system loading, which hindered the service process. In December 2025, there were 6 *downtime* incidents in the SIMRS, with the longest duration occurring on 4 December, from 07:36 continuing until 17:00, caused by SIMRS loading. This caused an increase in patient waiting time and a longer patient registration duration during *downtime*, which in turn affected the length of time required by staff to complete patient registration. The patient registration duration increased from an average of approximately ± 3 minutes before *downtime* to approximately ± 35 minutes after *downtime* disruptions occurred, showing the impact of the system disruption in lengthening patient queues and generating complaints and dissatisfaction with the service, as well as increasing the workload of registration staff, who are required to perform manual recording during *downtime*.

The results of this study show that *downtime* requires staff to perform manual work and re-enter data once the system returns to normal. This condition can increase workload and reduce staff productivity. According to health information system management theory, the use of information systems aims to improve the efficiency, accuracy, and speed of service. This finding is in line with Handayani's (2023) study entitled Implementation of an Electronic Medical Record Information System Using the HOT-FIT Method at PKU Muhammadiyah Surakarta Hospital, which states that SIMRS disruptions hinder the patient registration operational process and require an effective *downtime* handling mechanism to maintain service quality (Handayani et al., 2023).

Based on the results of this study, the main factors causing *downtime* at AMC Hospital Cileunyi include server disruptions, network instability, network errors, and maintenance activities as the main triggers of *downtime*, as well as limited human resources in the IT unit. This condition shows that the successful implementation of the SIMRS at AMC Hospital Cileunyi does not depend solely on the software, but also on the readiness of infrastructure and human resources. This is consistent with the findings of Arifin (2025), whose evaluation of a web-based outpatient registration system found that the technology dimension, including system stability and ease of use, had the greatest influence on the net benefit perceived by users. In addition to affecting the patient registration process, SIMRS *downtime* also affects the quality of communication and coordination between service units in the hospital. When the system cannot be used, registration staff, nurses, physicians, and the medical records department have to coordinate manually to ensure that patient data remains registered. This condition causes the service flow to become less effective, because the information exchange process that is normally carried out automatically through the system must instead be carried out using manual documents. This has the potential to increase the risk of service delays as well as the risk of errors in patient information input.

This result is in line with Sari's (2024) study entitled Evaluation of the Preparation for the Implementation of the Electronic Medical Record Information System (RME) at the Regional Hospital for Occupational Health of West Java Province, which found that technical, infrastructure, and human resource obstacles are factors that influence the optimization of

electronic medical record implementation in hospitals (Sari et al., 2024). From a hospital management perspective, SIMRS *downtime* shows that the dependence of services on digital systems is currently very high. When the system runs normally, the service process becomes faster and more efficient, but when disruptions occur, the hospital experiences difficulty in maintaining service stability. Therefore, a backup system and a more structured *downtime* procedure are needed so that services can continue to run optimally even when the main system experiences disruptions.

The results also show that staff readiness is a key factor when facing SIMRS *downtime*. Not all staff are able to adapt quickly when they have to switch from a digital system to a manual system. This is reflected in the increased service time and delays in data input once the system returns to normal. Therefore, regular training related to *downtime* procedures and the use of the manual system needs to be conducted periodically so that staff are better prepared to face emergency conditions, along with regular system maintenance as an important step in reducing the frequency of *downtime*. The novelty of this study lies in its detailed, chronological documentation of *downtime* incidents at the operational level over a six-month period, which quantifies the real magnitude of the disruption's impact on service duration, and in the finding that human resource readiness—rather than infrastructure alone—is a decisive factor in mitigating the operational consequences of SIMRS *downtime* in outpatient registration services.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

Based on the results of the study on the impact of *downtime* disruptions in the SIMRS on the operational process of outpatient registration services at AMC Hospital Cileunyi, it can be concluded that SIMRS *downtime* disruptions have a significant impact on the smoothness of hospital services, particularly at the outpatient registration unit.

Based on the results of observations and interviews with 2 registration staff at counter 3, 2 IT staff, 1 head of the medical records unit, and 2 patients, it is known that the registration service process using the SIMRS makes it easier for staff to input patient data in real time and reduces patient waiting time; however, obstacles remain in its implementation. These obstacles include *downtime*, which affects the outpatient clinic registration service process, with impacts including patient buildup, a surge in patient waiting time, and a high number of complaints. In addition, when *downtime* occurs, staff face several obstacles, such as being unable to verify patient identity in the system and having to carry out temporary manual recording, which requires staff to re-enter patient data from manual records into the system once the network returns to normal. This also causes staff to bear a double workload. Nevertheless, AMC Hospital Cileunyi has implemented various efforts to address the obstacles experienced during service delivery, such as conducting regular inspection and renewal of hardware components on PCs related to the operation of the SIMRS to keep it optimal, educating patients when network disruptions occur, and preparing a manual registration system so that services continue to run when *downtime* occurs. These strategies serve as a solution to efficiently reduce the impact of SIMRS disruptions on the operational process of outpatient clinic services and to reduce the risk of queue buildup.

Limitations

This study has several limitations. First, it was conducted only at a single private hospital during a specific period (December 2025-May 2026), so the findings cannot yet be generalized to other hospitals or regions. Second, the study relied on a qualitative approach with a limited number of informants (10 people) selected through purposive sampling, which may not capture the full range of staff and patient experiences related to SIMRS *downtime*. Third, the *downtime*

duration and impact data were derived primarily from hospital incident reports and informants' recollections, which may be subject to recording inconsistencies, as reflected in several incomplete entries regarding the time normal conditions were restored. The findings should therefore be interpreted within the scope of this study.

Recommendations

Based on the results of this study, it is recommended that AMC Hospital Cileunyi improve the quality of its information technology infrastructure by repairing servers, improving internet network stability, and carrying out regular SIMRS maintenance to minimize *downtime* during outpatient service hours. In addition, the IT unit needs to increase its human resources so that system disruptions can be handled more quickly and optimally, accompanied by routine system monitoring and the development of a specific SOP for handling SIMRS *downtime*. For future researchers, this study is expected to be developed further using a quantitative method or by adding other variables, such as the level of patient satisfaction, the effectiveness of the *downtime* SOP, or an analysis of hospital service quality following the implementation of SIMRS system improvements.

Author Contributions

The first author was primarily responsible for the research conceptualization, data collection, data analysis, and drafting of the manuscript. The second author contributed to the formulation of the conceptual framework, interpretation of results, and critical review and revision of the manuscript. Both authors have read and approved the final version of the article submitted for publication.

Acknowledgment (Optional)

The authors would like to express their appreciation and gratitude to all respondents who participated and provided valuable information during the data collection process of this study. Thanks are also extended to the staff and patients at AMC Hospital Cileunyi who contributed to the success of this research.

REFERENCES

- Alvianty, R. A., Arvian, S. R., & Wasir, R. (2025). Literature review: Analisis transformasi digital layanan kesehatan di Indonesia terhadap peran sektor publik dan swasta. *Jurnal Manajemen Pelayanan Kesehatan*, 28(2), 56–60. <https://doi.org/10.22146/jmpk.v28i02.20958>
- Aprilianingsih, M., Listina, F., & Kayrus, A. (2022). Evaluasi Sistem Informasi Manajemen Rumah Sakit (SIMRS) pada Bagian Pendaftaran Rawat Jalan dengan Metode Hot-Fit di RS Swasta di Lampung Tahun 2022. *Jurnal Formil (Forum Ilmiah) Kesmas Respati*, 7(3), 262–273. <https://doi.org/10.35842/formil.v7i3.450>
- Arifin, I. (2025). Evaluasi Sistem Informasi Registrasi Pasien Rawat Jalan Berbasis Web di RS X. *SMART: Jurnal Teknologi Informasi dan Komputer*, 4(1), 21–30. <https://doi.org/10.58222/smart.v3i1.522>
- Arifin, I., Heltiani, N., & Fattolah, D. (2023). Perancangan sistem informasi registrasi pasien rawat jalan RSUD Kabupaten Lebong. *Jurnal Manajemen Informasi Kesehatan*, 8(1), 27–37. <https://jurnal.stikesbhaktihasuda.ac.id/index.php/>
- Assyakurrohim, D., Ikham, D., Sirodj, R. A., & Afgani, M. W. (2022). Metode studi kasus dalam penelitian kualitatif. *Jurnal Pendidikan Sains dan Komputer*, 3(01), 1–9. <https://doi.org/10.47709/jpsk.v3i01.1951>

- Azizah, R. N. (2025). Penerapan sistem informasi manajemen rumah sakit (SIMRS) dalam meningkatkan efisiensi pelayanan kesehatan di Indonesia: Studi literatur. *Jurnal Kesehatan dan Teknologi*, 6(2), 1–10. <https://doi.org/10.31004/jkt.v6i2.44329>
- BPJS Kesehatan. (2023). Petunjuk teknis verifikasi klaim Jaminan Kesehatan Nasional. Jakarta: BPJS Kesehatan.
- Farhiyah, N. L., Faizah, H., Hartono, B., & Daud, A. G. (2025). Implementasi Sistem Informasi Manajemen Rumah Sakit (SIMRS) dalam pemenuhan pelayanan kesehatan. *RIGGS: Journal of Artificial Intelligence and Digital Business*, 4(3), 1716–1720. <https://doi.org/10.31004/riggs.v4i3.2218>
- Handayani, I. A., Marsudarinah, & Marwanto, E. B. (2023). Penerapan sistem informasi rekam medis elektronik menggunakan metode HOT-FIT di Rumah Sakit PKU Muhammadiyah Surakarta. *Jurnal Kesehatan Vokasional*, 7(2), 85–93. <https://doi.org/10.22146/jkesvo.72357>
- Handayani, N., Syafei, M. Y., & Narimawati, U. (2025). Integrating hospital information systems and national health insurance: Impact on employee performance and service quality. *Jurnal Ilmiah Manajemen Kesatuan*, 13(4), 2889–2898. <https://doi.org/10.37641/jimkes.v13i4.3679>
- Kementerian Kesehatan Republik Indonesia. (2022). Peraturan Menteri Kesehatan Republik Indonesia Nomor 24 Tahun 2022 tentang Rekam Medis.
- Kementerian Kesehatan Republik Indonesia. (2023). Peraturan Menteri Kesehatan Nomor 17 Tahun 2023 tentang Perubahan atas Peraturan Menteri Kesehatan Nomor 4 Tahun 2020 tentang Penyelenggaraan Institusi Penerima Wajib Laporan.
- Latifah, N. A., & Suryani, A. I. (2025). Evaluasi alur pendaftaran pasien BPJS rawat jalan di RS Humana Prima. *Jurnal Infokes (Informasi Kesehatan)*, 9. <https://journal.piksi.ac.id/index.php/INFOKES>
- Nasution, A. (2021). Kualitas informasi dalam sistem digital di Kecamatan Medan Amplas. *Jurnal Komunikasi dan Informasi*, 6(1), 45–60.
- Pane, M. S., Fanisya, N., Rizkina, S. R., Nasution, Y. P., & Agustina, D. (2023). Sistem informasi manajemen rumah sakit (SIMRS) untuk meningkatkan mutu pelayanan kesehatan di Indonesia. *Detector: Jurnal Inovasi Riset Ilmu Kesehatan*, 1(3), 1–14. <https://doi.org/10.55606/detector.v1i3.1980>
- Pujihastuti, A., Hastuti, N. M., & Yuliani, N. (2021). Penerapan sistem informasi manajemen rumah sakit dalam mendukung pengambilan keputusan manajemen. *Jurnal Manajemen Informasi Kesehatan Indonesia*, 9(2), 191–200. <https://doi.org/10.33560/jmiki.v9i2.377>
- Sari, R. A., Asih, T. N., & Pamungkas, G. (2024). Evaluasi persiapan implementasi Sistem Informasi Rekam Medik Elektronik (RME) di RSUD Kesehatan Kerja Provinsi Jawa Barat.
- Simanullang, M. J. (2026). Analisis dan optimalisasi downtime server pada Sistem Informasi Manajemen Rumah Sakit (SIMRS): Studi kasus Rumah Sakit Mitra Medika. *Jurnal Desain dan Analisis Teknologi (JDDAT)*, 5(1), 65.
- Sugiyono. (2023). Metode penelitian kualitatif, kuantitatif, dan R&D (2nd ed.). Alfabeta.
- Wijaya, K. S., Komara, E., & Mulyani, K. (2024). Analisis dampak penerapan Sistem Informasi Manajemen Rumah Sakit dalam pengambilan keputusan manajemen. *Syntax Admiration*, 5(11), 4656–4666. <https://doi.org/10.46799/jsa.v5i11.1551>
- Wiwaha, A., & Ulfah, A. (2024). Tinjauan penanganan downtime di pendaftaran rawat jalan guna menunjang akreditasi versi Starkes. *Jurnal Prepotif*, 8(2). <https://doi.org/10.31004/prepotif.v8i2.29053>