Asian Journal of Environmental Research
E-ISSN: 3047-4930
DOI: https://doi.org/10.69930/ajer.v2i2.377
Research Article

ScienceTech. Group

Vol. 2 (2), 2025
Page: 145-150

The Impact of Administrative Staff's Role on the Effectiveness of SIMRS in Recording the Daily Census of JPPK Patients at Hospital X

Neng Sri Rosmiyanti Devi *, Ai Susi Susanti

Hospital Administration, Health, Polytechnic Piksi Ganesha, Indonesia
*Email (corresponding author): ng.sri2022@gmail.com@gmail.com

Abstract. *This study analyzes the role of administrative staff in enhancing the effectiveness of the Hospital Management Information System (SIMRS) in recording the daily census of patients under the Health Service Guarantee (JPPK) at Hospital X. Employing a case study design with qualitative and quantitative methods, data were collected through observations and document analysis of census reports from January to March 2025. Results indicate a significant correlation between the accuracy, competence, and compliance of administrative staff and the effectiveness of SIMRS. An error rate of 2.96% was found, primarily caused by inaccurate input of consulting doctor data, medical procedures, and medication details. Medication changes were often due to stock limitations, requiring substitutions and approval from patients, which in turn demanded timely adjustments by staff. Errors in medication pricing occurred due to delays in updating price information in the SIMRS system. These issues point to a broader problem of limited coordination and delayed information flow between hospital units. The findings underscore the importance of administrative staff with adequate knowledge and skills in using SIMRS. Their performance significantly impacts the accuracy and efficiency of JPPK patient census recording, highlighting their strategic role in supporting integrated hospital information systems.*

Keywords: *SIMRS, daily patient census, administrative staff, effectiveness, JPPK*

1. Introduction

The Hospital Management Information System (SIMRS) is an information technology developed to support the management of all operational activities within a hospital (1). The primary goal of SIMRS is to enhance the efficiency, effectiveness, and accuracy of services by integrating all hospital data and information into a single computer-based system (1,2). In the era of digitalization in healthcare services, the implementation of SIMRS has become vital. This system allows for faster recording and reporting processes, more secure and structured patient data storage, and facilitates monitoring and evaluation by hospital management (3,4).

However, the success of this system heavily relies on the accuracy and understanding of administrative staff in data entry (5,6). Errors in data input can lead to discrepancies in information, potentially affecting the quality of services and the accuracy of management reports (7,8).

At Hospital X, the process of recording the daily census of JPPK (Health Service Guarantee) patients is conducted through SIMRS and is a crucial part of hospital administration. Therefore, administrative staff play a significant role in ensuring that the recorded data accurately reflects the conditions on the ground (9,10).

Received: 10 May 2025 / Accepted: 30 May 2025 / Available online: 1 June 2025

In practice, the effectiveness of SIMRS is largely determined by the diligence and competence of the administrative staff. Errors such as incorrectly recording the names of consulting doctors, mismatched medication information, or inaccuracies in payment data can negatively impact the quality of reports, claims processes, and healthcare service evaluations (11,12). This situation is particularly critical in the recording of the daily census of JPPK patients, which demands high accuracy for administrative and financial purposes.

Initial observations indicate that there are still errors in the input of daily census data for JPPK patients at Hospital X. The causes may stem from a lack of training for staff, excessive workloads, or discrepancies between the data recorded in SIMRS and physical documents. Therefore, it is necessary to evaluate the performance of administrative staff to understand the extent to which their roles influence the effectiveness of SIMRS usage (13,14).

This research is conducted at Hospital X, focusing on the process of recording the daily census of JPPK patients during the period from January to March 2025. The study limits the discussion to data input errors made by administrative staff using the HYSIS application within the SIMRS system, with the aim of analyzing the error rate in the recording of JPPK patients. The research findings recorded an input error rate of 2.96% during this period (15,16).

2. Methods

This study employs a case study method with a mixed approach of qualitative and quantitative research. Data collection techniques include interviews, direct observations, calculation of input error percentages, and document analysis of daily patient census reports collected during the period from January to March 2025.

2.1. Population and Research Data

The population in this study consists of Financial Administration staff responsible for inputting the daily census data of JPPK patients. The data analyzed includes a total of 7,377 entries during the research period. The determination of the input error rate is conducted through a combination of quantitative and qualitative data analysis.

2.2. Sample

The sample used in this study consists of data containing input errors in the recording of the daily census of JPPK patients, drawn from a total of 7,377 patient visits during January to March 2025. Data collection methods were carried out through observations of the daily census data input activities and analysis of the census report documents from the same period. This research utilizes primary data obtained directly from the analysis and calculation of the percentage of input errors identified.

2.3. Research Tools

The HYSIS application is utilized in hospitals to efficiently record and manage daily patient census data. It helps streamline the process of tracking patient admissions, discharges, and overall occupancy, enabling healthcare facilities to monitor patient flow and resource allocation effectively.

2.4. Data Analysis

The data obtained were analyzed descriptively and presented in tabular form. The analysis focused on identifying the number of input errors from the total of 7,377 patient visit entries during the period from January to March 2025.

The data is presented descriptively in percentage form using the following formula:

Error Percentage = (Number of Input Errors / Total Data Entered) × 100%

Explanation:

- **Number of Input Errors** = Total recording errors found (e.g., incorrect names of consulting doctors, mismatched medication details, etc.)
- **Total Data Entered** = All census data recorded during the observation period.

2.5. Working Method

In the administration process of JPPK (Health Service Guarantee) patients, the workflow includes the following stages:

1. **Patient Classification**
   Patients are classified based on the payment system, which includes: general (self-payment), partnerships, and JPPK (including Pindad, RS, and PEI).
2. **Patient Census Process**
   Patient data is extracted from the hospital information system (SIMRS) and matched with physical documents to ensure accurate recording.
3. **Verification of Administrative Documents**
   Verification of patient administrative documents is conducted to ensure accuracy in billing details, healthcare services received, and the rights and obligations of the patients.
4. **Data Processing and Identification of Discrepancies**
   Patient visit data and hospital receivables data are processed to identify discrepancies between the billed amount and the actual receivables. If differences are found, further investigation is conducted.
5. **Resolution of Data Discrepancies**
   A re-examination of both physical and digital documents is performed to trace the source of errors. Coordination with relevant agencies is carried out to resolve discrepancies before the final reporting.
6. **Preparation and Submission of Reports**
   After all data has been verified and adjusted, the daily patient census report is prepared and submitted to the JPPK office as a form of administrative accountability.

3. Results and Discussion

This study focuses on the analysis of the daily census recording of JPPK patients at Hospital X during the period from January to March 2025. Based on observations and document reviews, a number of data input errors were identified in the use of the SIMRS system, with a recorded error rate of 2.96%. The most common types of errors included inaccurate recording of consulting doctors' names, incomplete information on medical procedures, and inaccuracies in the details and prices of recorded medications.

Errors related to medication recording were largely caused by stock availability issues, necessitating the use of substitute medications. This substitution process requires patient approval; however, it is often not accurately input into the SIMRS system, leading to

discrepancies between the actual conditions and the data in the system. Additionally, the slow updating of medication prices in the system also contributed to input errors (16,18).

Other factors influencing the occurrence of errors include insufficient training for administrative staff, high workloads, and weak coordination among units in the hospital. Although SIMRS is designed to support efficiency and accuracy, these findings indicate that the success of the system heavily relies on the quality and diligence of the human resources managing it.

Therefore, administrative staff play a crucial role in determining the effectiveness of SIMRS. Staff members who have a good understanding of the system and work meticulously can reduce the rate of input errors, thereby contributing to the improvement of the quality of hospital administrative services. Here is a summary of the data calculation for the percentage of input errors in the daily census of JPPK patients for the period of January to March 2025 as follows (Table 1)

Table 1. Data calculation for the percentage of input errors in the daily census of JPPK patients

Month	Total Record	Number of Errors	Error Pencetage
January	2.450	94	3,84%
February	2.265	68	3,00%
March	2.662	56	2,10%
Total	**7.377**	**218**	**2,96% (Average)**

Conclusions

Based on the analyzed data, the average input error rate over the three-month period was recorded at 2.96%. The types of errors identified included inaccuracies in recording the names of consulting doctors, medication details, and payment information. The evaluation results indicated a decrease in the error rate from month to month, which can be interpreted as an indication of improved accuracy or understanding among administrative staff regarding the use of the system and data input procedures in SIMRS.

The highest error rate was recorded in January at 3.84%, which was likely influenced by several interrelated factors. One major issue was the inaccuracy in recording the names of consulting doctors, such as listing a doctor who was not actually involved in treating the patient. Additionally, discrepancies were found between medical procedures documented in the system and those actually performed, indicating errors in recording clinical actions. Changes in medication details also contributed significantly to the error rate. These were often driven by stock limitations that required substitution with alternative medications, which had to be approved by the patient before being updated in the system. In some cases, delays in making these updates led to discrepancies between what was administered and what was recorded in SIMRS. Moreover, inaccuracies in recording medication prices were identified, stemming from outdated pricing information in the system and mismatches between system data and actual prices from the pharmacy department. These various factors highlight the complexity of maintaining accurate records in a dynamic hospital environment and underscore the need for timely coordination and effective communication between administrative and clinical units.

Meanwhile, in March, the error rate decreased to 2.10%, indicating an improvement in work processes or enhanced competencies among administrative staff.

Overall, these results support the hypothesis that the role of administrative staff significantly influences the effectiveness of SIMRS usage. Accuracy, understanding of standard operating procedures (SOP), and technical skills of the staff are crucial factors in ensuring the accuracy of data recording.

Acknowledgments

The author expresses heartfelt gratitude to all staff members who provided the opportunity to conduct field practice and for their support during the data collection process. The cooperation and assistance provided were invaluable to the success of this research.

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