

Impact of Hospital Information Management System (HIMS) on Nursing Documentation in Selected Hospital: A Study Among Staff Nurses

ELBY K PAUL, Sherin Annie Varghese

Chirayu medical college and hospital

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ABSTRACT

Hospital Information Management System (HIMS) has become an essential digital tool in modern healthcare institutions for improving patient care documentation and clinical communication. Nursing documentation is a critical component of patient safety, legal accountability, and continuity of care. This descriptive cross-sectional quantitative study was conducted to assess the impact of HIMS on nursing documentation among 150 staff nurses working in selected hospital wards including intensive care unit, medical ward, surgical ward, and emergency unit. Convenient sampling technique was used to select participants. A structured questionnaire consisting of demographic variables, ease of HIMS use, documentation accuracy, time management, and challenges faced by nurses was administered.

The findings revealed that 84% of nurses reported improved documentation accuracy, 61.3% experienced reduced documentation time after adaptation, and 92% stated that patient records became easier to retrieve after HIMS implementation. Medication documentation errors were reduced according to 87.3% of respondents. Major challenges identified included slow server response (38.7%), frequent login/logout issues (28%), duplicate entries (20.7%), and limited computer terminals (12.6%). Positive perception score regarding HIMS was 78%. Significant association was observed between years of professional experience and ease of HIMS use. The study concludes that HIMS has a positive impact on nursing documentation, though technical barriers remain a challenge.

Keywords: Hospital Information Management System, Nursing Documentation, Electronic Health Records, Staff Nurses, Digital Documentation

INTRODUCTION

Hospital Information Management System is a digital platform widely used in hospitals for managing patient records, medication orders, nursing notes, laboratory investigations, and interdisciplinary communication. In nursing practice, HIMS has become central to clinical documentation because it improves accessibility of records, reduces handwriting-related errors, and supports continuity of patient care.

Nursing documentation is an essential legal, professional, and communication responsibility of nurses. Accurate documentation ensures safe clinical decision-making and effective patient monitoring. Electronic documentation systems improve completeness and timeliness of records; however, nurses may initially face challenges related to adaptation, system complexity, and technical interruptions.

With increasing digitalization of healthcare services, understanding the practical impact of HIMS on nurses' documentation performance is important for improving hospital informatics systems and nursing efficiency.

Objectives of the Study

1. To assess nurses' perception regarding HIMS in nursing documentation.

2. To evaluate the effect of HIMS on documentation accuracy.
3. To determine time-saving benefits of HIMS.
4. To identify challenges faced by nurses while using HIMS.

MATERIALS AND METHODS

Research Design

Descriptive cross-sectional quantitative study.

Setting

The study was conducted in Chirayu medical college and hospital wards:

- Intensive Care Unit
- Medical Ward
- Surgical Ward
- Emergency Unit

Sample Size

Accessible population : 279

Confidence Level :95%

Margin of Error: 5%

Population Proportion: 70%

Population Size: 279

This means 150 or more measurements/surveys are needed to have a confidence level of 95% that the real value is within $\pm 5\%$ of the measured/surveyed value.

Sampling Technique

Convenient sampling technique.

Inclusion Criteria

- Staff nurses have more than 2 year experience and using HIMS for more than six months
- Nurses working in inpatient departments

Exclusion Criteria

- Staff nurses those who were absent during studies
- Staff nurses those who were not willing to participate in studies

Data Collection Tool

A structured questionnaire with five sections:

1. Demographic profile
2. Ease of HIMS use
3. Documentation accuracy
4. Time management
5. Challenges faced

Ethical Consideration

Institutional permission was obtained prior to data collection. Confidentiality of participants was maintained.

Results

Demographic Characteristics of Participants

Variable	Frequency	Percentage
Age 21–30 years	82	54.7%
Age 31–40 years	58	32.0%
Above 40 years	10	13.3%
Female	118	78.7%
Male	32	21.3%
B.Sc Nursing	54	64.0%
GNM	96	36.0%

Major Findings

Documentation Accuracy

- 126 nurses (84%) reported improved documentation accuracy after HIMS implementation.
- 18 nurses (12%) reported no major change.
- 6 nurses (4%) reported difficulty correcting errors.

Time Taken for Documentation

- 92 nurses (61.3%) reported reduced documentation time after gaining familiarity.
- 38 nurses (25.3%) reported initial increase in documentation time.
- 20 nurses (13.4%) reported no difference.

Accessibility of Patient Information

- 138 nurses (92%) reported easier retrieval of patient records.
- 12 nurses (8%) experienced occasional server delay.

Medication Documentation Safety

- 131 nurses (87.3%) reported fewer medication documentation errors.

Challenges Faced by Nurses

Challenge	Frequency	Percentage
Slow system/server	58	38.7%
Frequent login/logout	42	28.0%
Duplicate entries	31	20.7%
Limited computer terminals	19	12.6%

Statistical Analysis

Mean Perception Score

Positive perception score regarding HIMS = **78%**

Chi-Square Association

Impact of HIMS on Nursing Documentation Among 150 Staff Nurses

Variable	Mean Score	Standard Deviation (SD)	Chi-Square (χ^2)
Ease of HIMS Use by Years of Experience	2.41	0.68	10.62
Documentation Accuracy after HIMS	2.80	0.51	8.94
Time Taken for Documentation	2.48	0.72	7.86
Accessibility of Patient Information	2.92	0.39	11.24
Medication Documentation Safety	2.87	0.44	9.76
Challenges Faced During HIMS Use	2.12	0.83	6.91

Association between Years of Experience and Ease of HIMS Use Observed Frequency

Years of Experience	Easy to Use	Moderate Difficulty	Difficult to Use	Total
1–5 years	52	18	5	75
6–10 years	28	12	5	45
Above 10 years	12	10	8	30
Total	92	40	18	150

Expected Frequency Table

Years of Experience	Easy	Moderate	Difficult
1–5 years	46	20	9
6–10 years	27.6	12	5.4
Above 10 years	18.4	8	3.6

Association Between Years of Experience and Ease of HIMS Use Among Staff Nurses (N = 150)

Years of Experience	Easy to Use n (%)	Moderate Difficulty n (%)	Difficult to Use n (%)	Total	χ^2 Value	df	Significance
1–5 years	52 (34.7%)	18 (12.0%)	5 (3.3%)	75			
6–10 years	28 (18.7%)	12 (8.0%)	5 (3.3%)	45			
Above 10 years	12 (8.0%)	10 (6.7%)	8 (5.3%)	30			
Total	92 (61.3%)	40 (26.7%)	18 (12.0%)	150	10.62	4	Significant at p < 0.05

The association is statistically significant.

Therefore:

There is significant association between years of experience and ease of HIMS use. Younger nurses demonstrated faster adaptation compared to senior nurses.

DISCUSSION

The present study demonstrates that HIMS significantly improves nursing documentation quality by enhancing:

- Legibility
- Accessibility
- Completeness
- Legal safety

Most nurses perceived electronic documentation as beneficial for reducing medication-related documentation errors and improving access to patient data. However, technical barriers such as slow servers, repeated login requirements, and duplicate documentation reduce workflow efficiency.

The findings indicate that younger nurses adapt more rapidly to digital documentation systems, possibly due to greater familiarity with digital technology. Senior nurses may require additional training support.

CONCLUSION

Hospital Information Management System has a significant positive impact on nursing documentation among staff nurses. It improves documentation accuracy, accessibility of records, and medication safety while reducing documentation time after adaptation. Technical improvements remain necessary for maximizing efficiency.

RECOMMENDATIONS

- Continuous HIMS training for nurses
- Increased availability of bedside terminals
- Faster server infrastructure
- Simplified nursing documentation interface
- Regular audit of electronic nursing documentation

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