

Nurses' Documentation Practices and Patient Safety in Primary Healthcare Facilities in Calabar South Local Government Area, Cross River State, Nigeria

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Abstract

Original Research Article

Ensuring patient safety in primary healthcare facilities is a pressing issue, often stemming from a lack of adequate resources, medication mishaps, poor record-keeping, lapses in infection control, and ineffective clinical practices. These hurdles can put patients at risk of preventable harm, complications, and negative health outcomes, ultimately compromising the quality and effectiveness of the services provided. Thus, this research aims to examine nurses' documentation practices and patient safety in primary healthcare facilities in Calabar South Local Government Area, Cross River State, Nigeria. The study adopted descriptive survey research design. Two hypotheses were formulated and tested at 0.05 level of significance. Simple random sampling technique was used to select 100 nurses and 343 patients that constituted the sample. The instruments for data collection were Nurses Documentation Practices Questionnaire (NDPQ) and Patient Safety Questionnaire (PSQ). The reliability of the instrument was established using split-half method which yielded indices ranged from 0.73 and 0.87 respectively. Consequently, the instruments were found to be adequately reliable for use in the study. Analysis of variance (ANOVA) was used to analyse the collected and prepared data for all the hypotheses; at 0.5 level of significance. The result revealed that timeliness of documentation and use of electronic health records had significant influence on patient safety. It was recommended among others that healthcare institutions should implement strict policies for timely documentation, ensuring that healthcare professionals accurately and promptly record patient information after every relevant clinical encounter.

Keywords: Nurses Documentation Practices, Timeliness of Documentation, Use of Electronic Health Records, Patient Safety in Primary Healthcare Facilities.

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Introduction

Ensuring patient safety in primary healthcare facilities is a pressing issue, often stemming from

a lack of adequate resources, medication mishaps, poor record-keeping, lapses in infection control, and ineffective clinical practices. These



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hurdles can put patients at risk of preventable harm, complications, and negative health outcomes, ultimately compromising the quality and effectiveness of the services provided. When we talk about patient safety in primary healthcare, we're focusing on preventing avoidable harm and minimizing unnecessary risks that come with healthcare delivery. This is crucial because primary healthcare facilities are typically the first point of contact for individuals seeking services like health promotion, disease prevention, diagnosis, treatment, and referrals. By prioritizing patient safety at this level, we can achieve better health outcomes and bolster public trust in healthcare services (World Health Organization WHO, 2024a).

Patient safety plays a vital role in avoiding medication errors, misdiagnoses, infections, and other adverse events that could lead to injury, disability, or even death. That's why safe clinical practices are so important—they protect patients. When care is safe, it leads to accurate diagnoses, appropriate treatments, timely referrals, and effective follow-ups. All of these elements work together to enhance recovery and improve disease management in primary healthcare settings (WHO, 2024b).

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Enhancing the quality and safety of patient care in primary healthcare facilities is crucial for fostering good health, preventing unnecessary harm, and ensuring that patients receive effective, timely, and fair healthcare services. These facilities are often the first point of contact for many individuals and communities, which makes the quality of care at this level vital for overall health outcomes. By improving quality and safety, we can significantly reduce medication errors, misdiagnoses, infections, falls, and other preventable adverse events. Safe clinical practices and accurate diagnoses shield patients from unnecessary complications, disabilities, and even death (World Health Organization WHO, 2024a; Pan American Health Organization PAHO, 2024).

Delivering high-quality care means that patients benefit from evidence-based treatments,

appropriate health education, timely referrals, and effective follow-ups. These practices not only boost the chances of recovery but also enhance disease management and lead to better health outcomes, especially for those with chronic illnesses and vulnerable populations (WHO, 2024b). Quality and safe healthcare services foster respectful communication, confidentiality, compassion, and a patient-centered approach. When patients receive reliable and timely services, their trust in healthcare providers grows, encouraging them to seek care sooner and adhere to recommended treatments (WHO, 2024b). By improving patient safety, we can prevent avoidable complications, reduce the need for repeated treatments, avoid unnecessary hospital admissions, and shorten hospital stays. This not only alleviates financial pressures on patients, families, and healthcare systems but also ensures that our limited resources are used efficiently (WHO, 2024a; Kalantari, Raeissi & Aryankhesal, 2024).

Nurses' documentation practices involve the organized recording of vital patient health information, including assessments, diagnoses, interventions, medications, and how patients respond to treatments. In primary healthcare settings, effective documentation is crucial for maintaining continuity of care, minimizing errors, and fostering positive outcomes for patients. When documentation is accurate, complete, and timely, it equips healthcare professionals with trustworthy information that aids in making sound clinical decisions and protects patients from unnecessary harm. By accurately documenting patients' conditions, nursing actions, medications, and treatment responses, nurses and other healthcare providers can easily access essential patient information. This helps bridge communication gaps and ensures safe, ongoing care, especially when different healthcare workers are involved in a patient's treatment (Hardido, Kedida & Kigongo, 2023).

Keeping a proper record of administered medications, dosages, allergies, and patient responses is vital for nurses to spot discrepancies and prevent any duplication or omission in care. The use of electronic nursing documentation can

enhance the accessibility and clarity of patient information, which in turn supports safer clinical decisions (Wahyuni, Nursalam, Dewi, Arifin & Benjamin, 2024). Therefore, nurses' documentation practices are key to promoting patient safety in primary healthcare facilities by enhancing communication, aiding clinical decision-making, reducing errors, and ensuring continuity of care. With accurate, complete, and timely documentation—backed by proper training, supervision, and electronic health records where available—we can achieve safer and higher-quality healthcare delivery. However, it's clear that there are many aspects of nurses' documentation practices that can impact patient safety in primary healthcare settings. This study specifically examined the timeliness of documentation and the use of electronic health records.

Timeliness in documentation is all about quickly jotting down patients' health details, nursing actions, observations, medications given, and their responses to treatment right after care is provided or as soon as possible. In primary healthcare settings, keeping documentation timely is crucial for safe nursing practice. It guarantees that accurate and relevant patient information is readily available for clinical decision-making and ensures continuity of care. The promptness of documentation significantly impacts patient safety in these facilities. For starters, it fosters effective communication among healthcare professionals by making sure that details about patients' conditions, treatments, and responses are recorded without delay. This allows nurses, doctors, and other healthcare staff to access up-to-date patient information, which helps minimize the chances of communication errors, treatment duplication, and misguided clinical decisions (Bjerkan, Valderaune, & Olsen, 2021). Timely documentation also aids in the early detection and management of patient risks. When nurses quickly note changes in vital signs, symptoms, medication administration, and other clinical observations, healthcare professionals can spot any deterioration and take the necessary actions. If documentation is delayed, important information might be missed, increasing the risk of preventable complications and putting patient

safety at risk (Wahyuni, Nursalam, Dewi, Arifin & Benjamin, 2024).

Moreover, timely documentation boosts continuity of care. Patients visiting primary healthcare facilities often receive treatment from various nurses and healthcare providers. By promptly recording assessments, interventions, and patient responses, we ensure that the next caregivers have the relevant information they need for effective follow-up and treatment. Research in primary care documentation shows that delays in recording clinical encounters can lead to omissions that may compromise patient care.

Mistretta, Thomas, Billingsley, and Johnson (2025) carried out a quality-improvement study focused on enhancing the timeliness of nurses' documentation in the Electronic Health Record (EHR) to boost patient safety. The goal was to speed up how quickly nurses completed their clinical documentation and to explore how this improved timing could impact patient safety. The researchers took a quality-improvement approach, assessing the current documentation processes, identifying obstacles that hindered timely completion, and implementing interventions to help nurses meet the expected documentation timelines. After the interventions, they monitored the documentation-completion data to see if there were any changes. The results showed that nurses' documentation timeliness improved post-intervention, highlighting that changes in documentation workflow can significantly enhance the quick availability of clinical information. The study established a connection between timely documentation and better patient safety, as having current and accessible patient information allows healthcare professionals to communicate effectively, keep an eye on patients' conditions, and make informed clinical decisions. In essence, the study illustrated that improving the speed of nursing documentation can play a crucial role in patient safety by minimizing delays in accessing vital clinical information.

Bjerkan et al. (2021) carried out a qualitative exploratory study in Norway to dig into the barriers affecting patient safety through nursing

documentation. They held six focus group interviews with 12 nurses and social educators, along with 11 nursing and social educator students who were involved in primary care. The results highlighted various barriers—individual, social, organizational, and technological—that hinder documentation and the exchange of information. The study concluded that when clinical information is inadequate or delayed, it can put primary care patients in precarious situations. It emphasized that timely documentation is crucial for effective communication, continuity of care, and ensuring patient safety. However, it's worth noting that the study didn't statistically prove a significant impact of documentation timeliness on patient safety.

In a different study, Molla et al. (2024) conducted a cross-sectional analysis among nurses in eight public hospitals in the Amhara Region of Ethiopia. This research involved 372 nurses and their corresponding patient charts, utilizing questionnaires and structured checklists. The results showed that only 30.4% of the nurses practiced good nursing care documentation. They found that having enough time for documentation was significantly linked to better documentation practices (AOR = 3.85, 95% CI: 2.11–7.05). Additionally, only 63.2% of nursing assessments were completed within eight hours of patient admission. These findings suggest that having adequate time is a key factor in encouraging timely documentation, which in turn supports the availability of clinical information necessary for safe patient care. However, it's important to note that this study focused on documentation practices rather than directly assessing their statistical impact on patient safety outcomes.

Dokuba et al. (2024) carried out a thorough review of research comparing electronic and paper-based nursing documentation. They used the PICO framework and followed PRISMA guidelines, sifting through 8,856 records to select 11 relevant studies. The results showed that around 75% of the studies focused on timeliness found that electronic documentation significantly cut down on documentation time, with an average difference of –10.97 minutes.

The review concluded that using electronic documentation enhances both the timeliness and accuracy of nursing care records. This is particularly important for patient safety in primary healthcare settings, as quicker documentation can lead to better access to patient information for communication, monitoring, and clinical decision-making. However, it's worth noting that the review mainly looked at documentation timeliness and accuracy, rather than directly assessing patient safety outcomes.

Ismail (2025) carried out a descriptive cross-sectional study aimed at assessing nursing documentation practices and their impact on patient care, focusing on 105 nurses and midwives at General Hospital Gusau in Zamfara State, Nigeria. The researchers gathered data using a validated, self-structured questionnaire. The results showed that while most participants recognized the significance of documentation and claimed to document patient care consistently, there were still notable gaps in how timely and comprehensive their entries were. The study highlighted the need for regular training, orientation, and the implementation of electronic documentation systems as key strategies to enhance documentation practices. These insights suggest that improving the timeliness of nursing documentation could lead to safer patient care by fostering better communication, ensuring continuity of care, and aiding in risk identification. However, it is worth noting that the study did not find a statistically significant direct link between the timeliness of documentation and patient safety.

In a different part of their research, Bjerkan et al. (2021) highlighted that having accurate and timely patient documentation is essential for ensuring safe and ongoing primary care. Their study revealed that obstacles to documentation and information sharing could seriously impact the quality and safety of care provided. The researchers suggested that healthcare organizations should offer sufficient resources, establish clear policies, and provide professional support to make documentation more effective. This finding underscores how crucial timely documentation is, as it plays a vital role in patient

safety by making sure that healthcare workers have access to important clinical information when they need it.

On the other hand, use of electronic health records is another component that seems to have bearings with patient safety in primary healthcare facilities. Electronic health records (EHRs) are crucial for enhancing patient safety in primary healthcare settings. They provide healthcare professionals with timely, accurate, and easily accessible patient information. With EHRs, nurses and other providers can digitally document patients' medical histories, diagnoses, medications, allergies, lab results, vital signs, and treatment responses. This shift away from fragmented paper records not only streamlines access to essential information but also supports better clinical decision-making. Recent studies indicate that when digital health interventions are effectively integrated into primary care workflows, they can significantly boost various patient-safety processes (Tsang et al., 2026). Additionally, EHRs improve the continuity and coordination of care. Since patient information is stored electronically, different healthcare professionals can easily access past assessments, diagnoses, medications, and treatments during follow-up visits. This is especially vital in primary care, where patients often see different providers at various appointments. Research in primary care shows that electronic medical record data can help identify patients at risk of hospitalization, emergency department visits, and even mortality, paving the way for earlier interventions and better care planning (Johnson, Chang, Moineddin, Upshaw, Crampton, Wallace & Pinto, 2024).

In Nigeria, the successful rollout of Electronic Health Records (EHRs) faces several hurdles, particularly related to infrastructure and organizational issues. According to Babatope et al. (2024), there are various factors that can impede the effective implementation of EHRs, even though these electronic records hold great promise for enhancing care processes and minimizing medication errors and wait times. To truly harness the patient-safety advantages of electronic records, primary healthcare facilities need reliable electricity and internet access,

comprehensive staff training, ongoing technical support, robust data security, and suitable EHR systems. When utilized effectively, electronic health records can significantly boost patient safety by ensuring that patient information is readily available and accurate, cutting down on medication and diagnostic mistakes, enhancing continuity of care, improving documentation practices, and facilitating timely clinical decision-making. However, the success of EHRs hinges on thoughtful system design, the competence of healthcare workers, dependable infrastructure, and seamless integration into everyday primary healthcare routines.

Abioye et al. (2024) carried out a systematic review to explore how electronic medical records (EMRs) affect healthcare delivery in Nigeria. The team scoured databases like PubMed/MEDLINE, EMBASE, Web of Science, African Journals Online, and Google Scholar, ultimately pinpointing five original studies that fit their criteria. Out of these, four studies focused on the impact of introducing or enhancing EMRs on data collection and documentation, while one looked into patient satisfaction with pharmacy services. The combined analysis showed that implementing or upgrading EMRs led to a remarkable 142% boost in data quality (95% CI: 82%–203%, $p < .001$). The authors concluded that rolling out EMRs significantly enhances the quality of healthcare data in Nigerian facilities. This improved data quality is crucial for patient safety, as having accurate and easily accessible patient information aids in making informed clinical decisions, ensuring continuity of care, and minimizing errors. Meanwhile, Nguyen et al. (2024) conducted a systematic review of 54 randomized clinical trials that examined the effects of electronic health record (EHR) nudges in primary care settings. They searched through five major databases and included studies that assessed clinician-facing EHR interventions and their impact on healthcare quality and patient outcomes. Their results indicated that EHR interventions were positively linked to various aspects of healthcare quality. Notably, 4 out of 12 patient safety measures showed improvement, especially those related to appropriate medication prescribing.

Additionally, 30 out of 38 descriptive measures, including those related to documentation, also showed positive changes. These findings suggest that EHR-based interventions can enhance patient safety by refining documentation practices and supporting safer prescribing decisions in primary healthcare.

Tarrant and colleagues (2026) conducted a thorough systematic review and meta-analysis focusing on digital patient-safety interventions in primary care. They scoured MEDLINE, EMBASE, and CENTRAL for randomized controlled trials published from January 2001 to June 2025, ultimately including 74 trials in their analysis. The results of the meta-analysis revealed notable enhancements in medication-safety processes (OR = 1.46, 95% CI: 1.30–1.64), non-medication safety processes (OR = 1.77, 95% CI: 1.56–2.01), and adverse-event outcomes (OR = 1.17, 95% CI: 1.06–1.30). Interestingly, the study found that multicomponent digital interventions, especially those that paired clinical decision support with audit and feedback, led to even greater safety improvements. Given that electronic health records (EHRs) are a key part of digital health initiatives, these findings lend strong empirical backing to the idea that electronic information systems can enhance patient safety in primary care settings. Similarly, Cahill et al. (2025) carried out a systematic review that explored how the design of EHRs impacts usability and medication safety. Their research pointed out that while EHRs can boost access to patient information and enhance medication safety, poorly designed systems might lead to usability challenges and introduce new risks. This suggests that the safety benefits of EHRs depend not just on their presence but also on how user-friendly they are, how well they fit into clinical workflows, and how effectively healthcare professionals can navigate the system.

However, the researcher has observed the poor safety of patients in primary healthcare facilities Calabar South Local Government Area, Cross River State and the country at-large. This lack of patient safety is a significant worry, often showing up in the form of long wait times for care, medication errors, delays in diagnosis and

treatment, and insufficient attention to patients' health needs. The researchers found that many patients end up making repeated trips to healthcare facilities because their health issues remain unresolved, complications arise from improper treatment, communication with healthcare providers is lacking, and follow-up care is inadequate. These hurdles can lead to preventable harm, higher healthcare costs, dissatisfaction, and a loss of trust in primary healthcare services. Additionally, poor patient safety can result in healthcare-associated infections, incorrect medication administration, incomplete documentation, and delays in referring patients who need specialized care. As a result, the researchers are worried that these challenges could compromise the quality of healthcare delivery and lead to poor health outcomes for patients using primary healthcare facilities.

In response, the Cross River State Government has rolled out several initiatives aimed at enhancing patient safety in these facilities. These include renovating and equipping health centers, recruiting and training healthcare workers, implementing the Basic Healthcare Provision Fund (BHCPF), and digitizing health records. The government has also bolstered maternal and child healthcare services and introduced quality assurance and anti-quackery measures to improve healthcare delivery (Cross River State Ministry of Information, 2025, 2026). Despite these efforts, issues with patient safety persist. Therefore, this study aims to explore how nurses' documentation practices influence these challenges.

Objectives of the study

The purpose of the study is to examine the influence of nurses' documentation practices on patient safety in primary healthcare facilities in Calabar South Local Government Area, Cross River State, Nigeria. Specifically, the study seeks to investigate influence of:

1. Timeliness of documentation on patient safety in primary healthcare facilities.

2. Use of electronic health records on patient safety in primary healthcare facilities.

Research question

1. What is the influence of timeliness of documentation on patient safety in primary healthcare facilities on patient safety in primary healthcare facilities?
2. What is the influence of use of electronic health records on patient safety in primary healthcare facilities?

Research Hypotheses

Ho₁: There is no significant influence of timeliness of documentation on patient safety in primary healthcare facilities.

Ho₂: There is no significant influence of use of electronic health records on patient safety in primary healthcare facilities.

Methodology

The participants of the study are all the registered nurses working in primary healthcare facilities and patients in Calabar South Local Government Area, Cross River State, Nigeria. The design adopted for the study was descriptive survey research. Simple random sampling technique was used to select one hundred (100) nurses and three hundred and forty-three (343) patients that constituted the sample. The researcher developed two instruments for the study from the knowledge of literature and was used to collect the required data. The instruments are Nurses Documentation Practices Questionnaire (NDPQ) and Patient Safety Questionnaire (PSQ). The first instrument, NDPQ for the nurses had two sections: A and B. Section A elicited information on sex and age of the respondents. Section B elicited information of the independent variables, (timeliness of documentation and use of electronic health records); each of the scales

has five items, with the response option of 4-point Likert- scale of strongly agree (SA), agree (A), disagree (D) and strongly disagree (SD). The second instrument PSQ was to measure patient safety - safe care, communication, medication safety, prevention of errors, continuity of care and protection from avoidable harm. It was constructed using a four-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D) Strongly Disagree (SD) coded 4, 3, 2, and 1; with twenty (25) items. The data collection instruments were scrutinized and validated by experts by Measurement and Evaluation experts from the Faculty of Education, University of Calabar. To determine the reliability of the instruments, split-half method was used. Fifty (50) copies of questionnaire were administered to fifty respondents who are not part of the study, nor in the selected primary healthcare facilities. The instruments were administered once; after administration, the questionnaires were split into two and correlated using Pearson Product Moment correlation. A correlation coefficient of the half test was obtained and the Spearman Brown Prophecy formula was used to obtain the reliability of the full test. *After the administration, coefficient of internal consistency was obtained and the indices ranged from 0.74 and 0.88 respectively. Analysis of variance (ANOVA) was used to analyse the collected and prepared data for all the hypotheses; at 0.5 level of significance.*

Null Hypothesis One

There is no significant influence of timeliness of documentation on patient safety (categorised as Low, Average and High). To test this hypothesis, timeliness of documentation were classified into three groups based on patient safety (Low, Average and High). Based on the classification, their means and standard deviation were compared and analysed using One Way Analysis of Variance were used. The result is presented in Table 1.

Table 1: One-Way Analysis of Variance on the influence of timeliness of documentation on patient safety

Timeliness of documentation	N	X	SD	Std Error	
High	111	64.6847	7.81023	.74131	
Average	172	59.3953	9.05897	.69074	
Low	60	59.0833	8.07442	1.04240	
Total	343	61.0525	8.84550	.47761	
Sources of variation	SS	Df	MS	F	P-value
Between group	2169.392	2	1084.696	14.998	.000
Within group	24589.664	340	72.323		
Total	26759.055	342			
Timeliness of documentation	High	Average	Low		
High	64.6847 ^a	5.2893 ^b	5.6014		
Average	.000 ^c	59.3953	.3120		
Low	.000	.807	59.0833		

*Significant at .05 level, $P < .05$.31202

a= Group mean along the principal diagonal

b= Mean differences(MD) above the principal diagonal

c= p-values below the principal diagonal.

The result presented in Table 1 shows a significant influence of timeliness of documentation on patient safety ($F=14.998$; $p=.000$) at .05 alpha level with 2 and 340 degrees of freedom (two-tailed test). With this result, the null hypothesis was retained while the alternative was rejected. The result also shows that high timeliness of documentation with the mean score of 64.6847 has highest influence on patient safety, followed by average timeliness of documentation with the mean score of 59.3953 and the least is low timeliness of documentation

with the mean score of 59.0833. Based on the result of the analysis, a post hoc test-multiple comparison was used to examine the difference in patient safety between the groups. The result is presented in Table 1.

The Post hoc test-multiple comparisons result presented in Table 1 show a significant difference between high and average timeliness of documentation on patient safety ($MD=5.2893$; $p=.000$), a significant difference between high and low timeliness of documentation on patient safety

(MD=5.6014;p=.000), and no significant difference between average and low timeliness of documentation on patient safety (MD=.3120;p=.807).

Null Hypothesis Two

There is no significant influence of use of electronic health records on patient safety

(categorized as Low, Average and High). To test this hypothesis, use of electronic health records were classified into three groups based on patient safety (low, Average and high). Based on the classification, their means and standard deviation were compared and analyzed using One Way Analysis of Variance were used. The result is presented in Table 2.

Table 2: One-Way Analysis of Variance on Influence of use of electronic health records on patient safety

Use of electronic	N	X	SD	Std Error	
High	85	64.1529	8.72122	.94595	
Average	192	60.7031	8.47913	.61193	
Low	66	58.0758	8.95512	1.10230	
Total	343	61.0525	8.84550	.47761	
Sources of variation	SS	Df	MS	F	P-value
Between group	1425.344	2	712.672	9.565	.000
Within group	25333.711	340	74.511		
Total	26759.055	342			
Use of electronic	High	Average	Low		
High	64.1529 ^a	3.44982 ^b	6.07718		
Average	.002 ^c	60.7031	2.62737		
Low	.000	.034	58.0758		

*Significant at .05 level, $P < .05$.31202

a= Group mean along the principal diagonal

b= Mean differences (MD) above the principal diagonal

c= p-values below the principal diagonal.

The result presented in Table 2 shows a significant influence of use of electronic health

records on patient safety ($F=9.565$; $p=.000$) at .05 alpha level with 2 and 340 degrees of

freedom (two-tailed test). With this result, the null hypothesis was retained while the alternative was rejected. The result also shows that high use of electronic health records with the mean score of 64.1529 has highest influence on patient safety, followed by average use of electronic health records with the mean score of 60.7031 and the least is low use of electronic health records with the mean score of 58.0758. Based on the result of the analysis, a post hoc test-multiple comparison was used to examine the difference in patient safety between the groups. The result is presented in Table 2. The Post hoc test-multiple comparisons result presented in Table 2 show a significant difference between high and average use of electronic health records on patient safety ($MD=3.44982^b$; $p=.002$), significant difference between high and low use of electronic health records on patient safety ($MD=6.07718$; $p=.000$), and a significant difference between average and low use of electronic health records on patient safety ($MD=.2.62737$; $p=.034$).

Discussion of findings

The discussion of findings is based on the variables examined in the study which are guided by the hypotheses.

The result of hypothesis 1 revealed that there is a significant influence of timeliness of documentation on patient safety. As shown in Table 1 indicates that when healthcare providers promptly and accurately document patients' conditions, nursing interventions, medications, and their responses to care, it leads to better access to up-to-date information for making clinical decisions. Additionally, timely documentation promotes clear communication and seamless continuity of care among healthcare professionals, which helps to minimize the chances of errors, omissions, delays, and other avoidable risks that could jeopardize patient safety.

The finding is in line with Mistretta, Thomas, Billingsley, and Johnson (2025) who found that improvement in nurses' documentation timeliness after the intervention, indicating that interventions directed at documentation

workflow can significantly improve the prompt availability of clinical information. The study linked timely documentation with enhanced patient safety because current and accessible patient information enables healthcare professionals to communicate effectively, monitor patients' conditions and make appropriate clinical decisions. Thus, the study demonstrated that improving the timeliness of nursing documentation can contribute significantly to patient safety by reducing delays in the availability of essential clinical information. The finding is also agreement with Bjerkan et al. (2021) who found that timely documentation is necessary for effective communication, continuity of care and patient safety. The finding also agreed with the finding of Ismail (2025) who found that improving timeliness of nursing documentation may contribute to safer patient care through better communication, continuity of care and risk identification.

The result of hypothesis 2 revealed that there is a significant influence of use of electronic health records on patient safety. As shown in Table 2 indicates that when electronic health records are used effectively, they boost the availability, accuracy, and accessibility of patients' health information. This, in turn, aids in making timely clinical decisions and fosters better communication among healthcare professionals. As a result, using electronic health records appropriately can help cut down on documentation errors, enhance continuity of care, and reduce preventable risks for patients.

The finding is in line with Abioye Olukorode, Adedeji, Adetokun and Abioye (2024) who found that the introduction or improvement of EMRs produced a 142% increase in data quality (95% CI: 82%–203%, $p < .001$). The authors concluded that EMR implementation meaningfully improves the quality of healthcare data in Nigerian health facilities. Improved data quality is important for patient safety because accurate and readily accessible patient information supports appropriate clinical decisions, continuity of care and reduction of errors. The finding also agreed with Nguyen et al. (2024) who found that EHR interventions

were positively associated with several aspects of healthcare quality. Specifically, 4 of 12 patient-safety measures showed improvement, particularly measures involving appropriate medication prescribing. In addition, 30 of 38 descriptive measures, including documentation-related measures, demonstrated improvement. These findings indicate that EHR-based interventions can influence patient safety by improving documentation practices and supporting safer prescribing decisions in primary healthcare. The finding is in line with Tarrant et al (2026) who found a significant improvements in medication-safety processes (OR = 1.46, 95% CI: 1.30–1.64), non-medication safety processes (OR = 1.77, 95% CI: 1.56–2.01), and adverse-event outcomes (OR = 1.17, 95% CI: 1.06–1.30). The study further found that multicomponent digital interventions, particularly those combining clinical decision support with audit and feedback, produced stronger safety improvements. Since EHRs constitute an important component of digital health interventions, these findings provide recent empirical support for the role of electronic information systems in improving patient safety in primary healthcare.

Conclusion

The results showed that how quickly documentation is done and the use of electronic health records play a crucial role in ensuring patient safety. This means that when documentation is both prompt and precise, backed by electronic health record systems, it leads to better access to trustworthy patient information, minimizes errors and delays in documentation, and fosters clear communication and continuity in care. Thus, prioritizing timely documentation and making the most of electronic health records are essential steps toward enhancing the quality and safety of patient care.

Recommendations

Based on the findings in the study, it was recommended that:

1. Healthcare institutions should implement strict policies for timely documentation, ensuring that healthcare professionals accurately and promptly record patient information after every relevant clinical encounter.
2. It's essential to provide regular training for healthcare professionals on how to effectively use electronic health records, focusing on accurate data entry, information retrieval, and timely updates of patient records.
3. Healthcare facilities should work on enhancing the availability and reliability of their electronic health record systems. This includes ensuring there are enough computers, solid network connectivity, technical support, and routine system maintenance to reduce any interruptions in documentation.
4. Hospital management should keep an eye on compliance with documentation standards by conducting periodic audits and providing feedback. This will help identify any delays or errors in record-keeping and allow for appropriate corrective actions to ensure patient safety.

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