# Investigating Nursing Documentation Practices and Influencing Factors: A Cross-Sectional Study in Public Hospitals of Ashanti Akim South District, Ghana

# Abstract

**Introduction:** Nursing documentation is the record of nursing care planned and delivered to individual patients by qualified nurses or other caregivers under the direction of a qualified nurse.

**Objectives:** The purpose of the study was to explore nursing documentation practice and associated factors among public hospital nurses in the Asante Akim South District.

**Methodology:** A cross-sectional design was used for the study. The study used nurses from public hospitals in the Ashanti Akim South district in the Ashanti region. A simple random sampling technique was used to select 136 nurses for the study. Data was collected with a questionnaire. Data entry, cleaning and analysis were done with SPSS version 26. Descriptive statistics including frequencies and their percentages were done. The chi-square test of independence and logistic regression analysis was done to determine the associated factors (significance at α=0.05).

**Results and discussion:** The majority of study respondents were females. On the extent of clinical documentation majority of respondents perform. Work experience from 6 to 10 years, ward of operation and level of education influenced the extent of clinical documentation. About 23.5% of the respondents adequately identified common errors in patient records. Possible common errors identified by nurses included non-authorization of documents, improper cancellation of records, incomplete patient name and time, absence of biodata on recorded shows and illegible handwriting. Work experience for 6 to 10 years and 11 to 15 years, ward of operation and level of education influenced the identification of common errors.

**Conclusion;** The main mode of documentation was the paper-based handwriting method among 94.1% of respondents. Although the extent of clinical documentation among the nurses was good, the level of identifying common errors in documentation was low among nurses. Also, the use of manual paper-based handwriting methods of documentation at the hospitals needs urgent attention and possible review of the electronic medical records system.

**Keywords;** Nursing Documentation, healthcare practitioners, medical records, nursing leadership

**1.1 Introduction**

Nursing documentation, according to one definition of the term, is a record or chart of nursing care that is organized and provided to individual patients by licensed nurses or other caregivers under the supervision of a qualified nurse [65]. Globally clinical documentation has been seen as a means of seeking revenue. The story has changed; the world now sees it as an appropriate means of ensuring quality care (1). This positively affects the patient by ensuring that all the information within the health records is of high quality and will assist in ensuring good medical decisions (2). The documentation standard in the form of data gathered, preserved, and reported can be used to gauge a hospital's activities. Documenting includes gathering patient medical records (2). As a result, effective relationships between caregivers are made possible by superior nursing documentation, which promotes autonomy and continuity of care. Researchers are still looking for new audit tools to evaluate the caliber of nursing documentation in various contexts and nations (3). The future of nursing depends on the systematic efforts to label and define nursing contributions to healthcare delivery system. Standardized nursing language provides a structure to manage nursing data in a computerized patient record [66].

 Nevertheless, there is a lot of misinformation and ignorance regarding the process and caliber of nursing documentation, as well as its significance as a major point of reference in the healthcare system to guarantee the preservation of a high caliber of care (4,5). The record of nursing care that is planned and provided to specific patients by nurses or other caregivers working under a nurse's supervision is known as nursing documentation. According to Daskein R. (2019), the primary clinical information source for fulfilling legal and professional standards is nursing documentation (6). Whether done manually or electronically, documentation is an essential part of safe, moral, and efficient nursing practice (7). According to The Federal Democratic Republic of Ethiopia (2015), nursing documentation must satisfy the legal need for nursing care documentation. The interdisciplinary team's plan to record services and make progress toward goals is carried out by the nurse, who handles a lot of duties. Documentation is the cornerstone of this plan, providing a thorough account of a patient's care.

Based on an assessment conducted by WHO, research has indicated that one contributing cause to medical errors is inadequate documentation by healthcare practitioners (8) Additionally, research suggests a connection between patient mortality and nursing documentation (Collins et al., 2013). Even though maintaining a patient record is a duty of care for nurses, numerous studies have shown shortcomings in documenting practices among nurses worldwide (10). It is concerning because there is a widespread trend toward insufficient, coherent, and ambiguous nursing care documentation (11). According to reports, nursing records are frequently inaccurate, incomplete, and of low quality (12). According to a WHO report, one of the components of appropriate continuity of care is poor communication between healthcare providers due to insufficient clinical documentation. Additional difficulties with documentation have been noted, such as a staffing deficit (Sum et al., 2013), a patient load, a lack of in-service training, and a lack of support from nursing leadership (13)

The benefits of documentation, whether done manually or electronically, cannot be overstated in Africa as it is an essential part of safe, ethical, and successful nursing practice (7). Proper documentation is a prerequisite for high-quality care and fosters efficient coordination and effective, dependable communication and collaboration among medical professionals (4), ( Cannie & CFCS, 2002; Johnson, 2011).An issue with adequate and equal staffing is present in developing nations like Ghana (14). Furthermore, it is impossible to ignore the significant likelihood of documentation errors brought on by an expanding workload. Therefore, a need to examine the extent to which nurses document care given, investigate common errors that occur during documentation, and the mode through which documentation is carried on in the hospital.

## **1.2 Problem Statement**

In recent years, the Ashanti Akim South District has faced significant challenges in the healthcare sector, particularly within its public hospitals. Important problems with nursing documentation practices have been brought to light by a year-end evaluation report. Notably, there have been several cases where inadequate documentation of patient records has resulted in serious consequences. Revenue has significantly decreased due to the weak paperwork, mostly due to patient submissions being rejected by health insurance. These denials happen when records are inaccurate or full enough to satisfy the requirements for filing insurance claims. The problem of insufficient documentation practices among nurses in public hospitals is multifaceted(15). It affects not only the operational efficiency of healthcare facilities but also has direct consequences on patient care and financial sustainability. Patients may face delays in receiving care, incorrect treatments, or even denial of necessary services due to missing or inaccurate records. Moreover, the financial health of these hospitals is compromised when insurance claims are rejected, leading to reduced revenue and potentially limiting the resources available for patient care and hospital operations. Several factors may contribute to this problem, including but not limited to:

**Lack of Training:** Nurses may not receive adequate training on the importance of thorough documentation and how to properly complete patient records.

**Workload and Time Constraints:** High patient-to-nurse ratios and excessive workloads can lead to rushed or incomplete documentation.

**System Inefficiencies:** Outdated or inefficient record-keeping systems can make documentation more time-consuming and prone to errors.

**Awareness and Attitude:** Nurses may not fully understand the implications of poor documentation on patient care and hospital finances.

Resolving these problems is essential to raising the standard of healthcare in Ashanti Akim South District. This study is to investigate the district's public hospitals' current nursing documentation methods, pinpoint the causes of insufficient documentation, and offer doable fixes to improve documentation procedures. By doing this, it aims to enhance patient treatment, lower the number of insurance claim denials, and guarantee the financial viability of the healthcare facilities.

## **1.3 Objectives of the study**

1. To determine the extent nurses in public hospitals, Asante Akim South documentspatient care given.
2. To investigate the common errors committed by nurses during the documentation of patient care.
3. To determine the mode of recording clinical documentation of inpatients.

##  **1.4 Research Questions**

1. To what extent do nurses in public hospitals in Asante Aim South District document care given to in-patients?
2. What are common errors committed by nurses during the documentation of patient care?
3. What is the mode (electronically or manually) of patient care documentation?

**1.5.1 General objectives**

This study explores nursing documentation practice and associated factors among nurses in the Asante Akim South District public hospitals.

**1.5.2** **Specific Objectives**

The specific objectives of this study include the following:

1. To determine the extent nurses in public hospitals, Asante Akim South documents patient care given.
2. To investigate the common errors committed by nurses during the documentation of patient care.
3. To determine the mode of recording clinical documentation of inpatients.

## **1.6 Justification of the Study**

Nursing documentation is a fundamental aspect of healthcare delivery that plays a pivotal role in ensuring the quality, safety, and continuity of patient care. Effective nursing documentation not only serves as a record of patient assessments, interventions, and outcomes but also supports communication among healthcare team members, aids in legal and ethical accountability, and informs clinical decision-making. Given its multifaceted significance, investigating nursing documentation practices and the associated factors is of paramount importance to enhance patient outcomes and elevate the overall quality of healthcare services.

This study focuses on nursing documentation practices among nurses in the Asante Akim South District public hospital, and is justified for several reasons:

**Quality and Safety of Patient Care:** Accurate and comprehensive nursing documentation is closely linked to the provision of high-quality patient care. It helps prevent errors, ensures adherence to evidence-based practices, and contributes to timely and appropriate interventions (16). By understanding the current state of nursing documentation practices, the study can identify potential gaps that may compromise patient safety and care quality.

**Legal and Ethical Accountability:** Adequate documentation is a critical aspect of legal and ethical responsibilities in healthcare. Inadequate or inaccurate documentation can lead to medico-legal complications, disputes, and compromised patient rights. On the other hand, adequate documentation is essential for meeting legal and ethical obligations, protecting both patients and healthcare providers from potential legal disputes, and ensuring accountability (18). Investigating nursing documentation practices can shed light on potential legal vulnerabilities and facilitate measures to mitigate legal risks.

**Communication and Collaboration.** For the best possible patient results, healthcare workers must collaborate and communicate effectively. Nursing documentation serves as a means of communication among various members of the healthcare team, leading to better-coordinated care and improved patient outcomes (20). By studying documentation practices, the research can uncover factors that hinder or enhance interprofessional communication and collaboration.

**Resource Allocation and Efficiency:** Efficient documentation practices are closely tied to resource optimization and time management. Identifying factors that influence documentation practices can lead to streamlined workflows, reducing administrative burdens and freeing up more time for direct patient care. Streamlined documentation practices save time and resources, enabling nurses to dedicate more time to direct patient care (21).

**Evidence-Based Decision-Making:** Clinical decisions are often influenced by the information available in-patient records. Accurate and complete documentation provides a foundation for evidence-based decision-making (23,24). Understanding the factors affecting documentation can contribute to more informed clinical judgments.

**Contextual Relevance:** Focusing on the nursing documentation practices in the Asante Akim South District public hospital allows for a context-specific analysis. Factors such as available resources, technology adoption, workflow patterns, and patient demographics can vary across different healthcare settings. This study's findings will be directly relevant to improving documentation practices in the Asante Akim South District public hospitals, providing insights into local challenges, and practices, and contributing to tailored interventions for improvement (25,26).

In conclusion, this study holds the promise of yielding insights into nursing documentation practices and their associated factors among nurses in the Asante Akim South District public hospital. By addressing these issues, the research can inform targeted strategies to enhance documentation quality, patient safety, interprofessional collaboration, and overall healthcare service delivery. The study, therefore, attempts to answer the following research questions.

## **1.7 Significance of the Study**

The study explored nursing documentation practice and associated factors among nurses in public hospitals, Asante Akim South District, and recommends ways of ensuring standardization of clinical documentation processes to suit this era of the information age and help in the disease burden analysis by the public health unit of the district. The study is significant in determining the extent of clinical documentation by nurses as well as identifying common errors to influence appropriate documentation by nurses. Many researchers and policymakers will be able to use this study as a resource to create policies and guidelines on nursing care documentation using a multidisciplinary approach, as well as to offer nurses opportunities for ongoing, continuous training on the usefulness of documentation (27). It is the goal of nurses and other healthcare professionals to exchange accurate, timely, contemporaneous, brief, comprehensive, organized, and private patient and organizational information, hence this study will bring to light the clear means of sharing information with colleagues and the importance to doing so as it promotes the health of their clients. This work will provide empirical emphasis to support the ability of the healthcare team to ensure informed decisions and high-quality care in the continuity of patient care. This study will promote patient credentialing at our hospitals such as patient care records, process evaluations, and outcome measurements from various organizational contexts, which support the monitoring of healthcare practitioners' performance and facilities' adherence to regulations controlling their profession and the delivery of healthcare. The credentials that healthcare professionals inside the organization will be awarded are decided using this material.

## **2.6. Conceptual framework**

**Nurses’ characteristics**

* *Gender*
* *Cadre or professional category*
* *Years of nursing practice*
* *Level of education*
* *Ward or unit of practice*
* *Trained in clinical documentation.*

Extent of Clinical Documentation

*Records of date, time, procedures, biodata, authorization, etc.*

Mode of Clinical Documentation

*Electronic or Manual paper-based methods*

Knowledge on Common Possible Errors in Clinical Documentation among Nurses

*Incomplete recording, illegible handwriting, absence of biodata*

**NURSING DOCUMENTATION PRACTICE AND ASSOCIATED FACTORS AMONG NURSES IN PUBLIC HOSPITAL**

**Figure 1 Conceptual framework**

(Source: Author’s Construct)

The conceptual framework informing the study is shown in Figure 1. The study focused on exploring nursing documentation practices among the nurses in public hospitals in the Asante Akim district in the Ashanti region of Ghana. The documentation practices were sub-classified into three outcomes and assessed as the extent of clinical documentation, knowledge, level of identifying common possible errors of clinical documentation, and the mode of clinical documentation among the nurses.

Nursing documentation is an important determinant of the quality and continuity of healthcare for patients (10,28). Nurses are expected to record all relevant information during the performance of activities and nursing processes. The documentation by nurses should include the procedures performed, relevant biodata, date and time of procedure or activity, patient complaints, and authorization of documentation including name and signature of the care provider. Nursing documentation should, therefore, be adequate and complete in its extent (28).

Nurses’ knowledge of the importance of appropriate clinical documentation and identifying common possible errors are critical determinants of nursing documentation practices (14,29). The understanding of the common errors can guide nurses to document appropriately. Such common errors may include incomplete recordings, absence of biodata, date, time, and signatures as well as the use of unofficial abbreviations on documents(14, 30).

Nurse documentation can be manual using paper-based handwriting or electronic means (31). The manual forms of nursing documentation practice involve handwritten notes when nurse procedures and processes are being carried out. These manual systems can be done using electronic systems which have been identified to have some advantages over manual systems although may be associated with challenges such as high initial cost for installation and maintenance costs (32).

The framework also depicts the influence of nurses’ characteristics on the extent of clinical documentation, identifying common errors and the mode of clinical documentation. These include gender, years of working experience, nurses’ professional category, level of education, and previous training in clinical documentation.

# METHODOLOGY

## **3.1 Background of the study area**

The study was conducted at the Juaso Government Hospital, the only public hospital in the Asante Akim South Municipal in the Asante Region of Ghana. Asante Akim South Municipal District is one of the forty-three districts located in Ghana's Ashanti Region. Asante Akim South District was established in 1988 as an ordinary assembly from the reorganized Asante Akim District Council. On March 15, 2018, it was later upgraded to municipal district assembly status. The Municipality's capital town is Juaso, and it is in the eastern portion of the Asante Region. The Juaso Government Hospital, a 90-bed facility, serves as the district hospital for this predominately farming community.

It provides health care services to many people in Juaso and its environs and serves as a referring center for the surrounding communities. The hospital provides and wisely oversees accessible and all-encompassing health services with particular emphasis on primary health care per approved national policies. The purpose of the study is to explore nursing documentation practice and associated factors among nurses in public hospitals in Juaso Government Hospital in the Asante Akim South district. This chapter covers the research method the researcher adopted to arrive at the results. The study design, methodology, target population, sampling strategy, sample methods, data collection tools, data collection techniques, data analysis, and ethical considerations are all covered.

**3.2 Study Design and Type**

The researcher used a cross-sectional design for the study. The quantitative research method was employed. This choice was appropriate as the research aimed at identifying respondents' characteristics, using frequencies and correlation to analyze the data on the problem.

**3.3 Study Population**

All nurses working at Juaso Government Hospital in the Asante Akim South District comprised the research population. Nurses at the Juaso Government Hospital in the Asante Akim South District made up the study's population. Including two hundred and six (206) representing all nursing disciplines, with the following composition:16 nurse specialists, 30 preventive nurses,50 midwives, and 110 general nurses.

**3.4 Sampling Technique and Sample Size**

Seidu (2021) defines sampling as the process of choosing a representative unit from a population(33). Cohen et al., (2009) provide an expanded definition of sampling, stating that the researcher aims to gather data from a smaller group or subset of the population so that the information gathered is representative of the entire population being studied (34). Because the target population of all nurses in the Juaso Government Hospital in Asante Akim South district cannot all be effectively studied, some were selected for the study. The sample size was determined using the standard formula through the Yamane formula(35):

Yamane formula

$$n=\frac{N}{1+N\*e^{2}}$$

 n = Sample size

N = Population size (206)

e = Margin of error 5% (0.05)

$$n=206/(1+206(0.05\*0.05)$$

n = 206/ (1 +206 \* 0.0025) n = 206/ 1.515 n = 135.973

n = 136, the sample size is equal to 136

The survey or questionnaire was distributed to approximately **136 nurses** after computing the above formula with a population size of 206.

A simple random sampling procedure was used, where sample units were selected randomly without a specific pattern. The nurses were approached during their morning meeting and changed over shit in the afternoon. They were made to select from a box which contained yes, and no written on the pieces of paper and placed in a box. The box shook vigorously, and each nurse was allowed to pick one. The box shakes after each pick. Nurses who picked yes during the morning shift were noted and continued during the afternoon shift until the total number of 136 nurses was obtained. Nurses who picked yes as an answer were given questionnaires to answer.

In addition, 248 documents were selected, using simple random sampling covering 3 months of patient admission. With a population of 655 documented records of patients, the Yaman’s formula was used to obtain a sample of 248.

Yamane formula

$$n=\frac{N}{1+N\*e^{2}}$$

 n = Sample size

N = Population size (655)

e = Margin of error 5% (0.05)

n = 655/ (1 +655 \* 0.0025) n = 248.341

n = 248

**3.5 Study Variables**

The study variables were grouped as dependent and independent variables.

**3.5.1 Dependent Variables**

The study measured three outcomes that concerned nursing documentation practices. These were the extent of clinical documentation, the level of identifying common possible errors of documentation, and the mode of documentation among nurses at the public hospital. The first outcome, i.e., the extent of clinical documentation was measured as a dichotomous categorical outcome and coded as ‘0’ = high extent (adequate) of clinical documentation and ‘1’ – Low extent (inadequate) clinical documentation. Similarly, the second outcome which concerned nurses’ level of identifying common errors was also a dichotomous categorical variable coded as ’0’ = High level (adequate) of identifying common errors and ‘1’ = Low level (inadequate) identifying common errors. Finally, the mode of documenting clinical processes and activities among nurses was also a dichotomous categorical variable coded as ‘0’ = handwriting and ‘1’ = electronic.

**3.5.2 Independent variables**

The independent variables were the socio-demographic variables of the nurses summarized in Table 1.

**Table 1 Independent variables**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable name** | **Variable definition** | **Variable measurement** | **Measurement scale** |
| **Socio-demographic variables** |
| Gender of respondents | Gender classification of respondent | 0 = Male1 = Female | Nominal |
| Professional certificate | The professional cadre of the nurse at the time of the study | 0 – Registered General Nurse (RGN)1= Staff Registered Nurse (SRN) | Nominal |
| Years in practice | The cumulative number of nursing practices of respondent | 0 = 0-5 years1= 6-10 years2=11-15 years3 = >15 years | Ordinal |
| Ward or Unit  | The current ward or unit of practice of the respondent at the time of the study | 0 = Males ward1 = Females ward2 = Pediatric ward3= Maternity ward | Nominal |
| Educational level | Highest educational level achieved by respondent | 0 = Diploma1 = Bachelor2=Masters3=Doctorate/PhD4=Specialty | Ordinal |
| Received training or education related to clinical practice | Whether the nurse had received any training on clinical documentation during nursing practice | 0=No1=Yes | Categorical |
| Number of times, training has been received | The approximate number of times the respondent had received such training on clinical documentation | 0 = None1=Once2= Twice or more | Categorical |

**3.6 Data Collection Tool and Technique**

To ensure that the data collected would address the study objectives, the data collection instrument selected should be appropriate to avoid collecting irrelevant information (36). A questionnaire was employed to gather information from the participants. A checklist was developed and used as an instrument for data collection on nursing documentation completeness. Closed-ended questions on the questionnaire have the benefit of collecting quantifiable data. The questionnaire was divided into four sections covering the research objectives and questions. The researcher used the primary data collection method, a structured questionnaire, in soliciting data from selected participants for the study because they can read and write.

The first section contained demographic information of the respondents, which includes their age, gender, working experience level of education, and marital status. This primarily enables the researcher to have background information on respondents. However, the shortcomings of the questionnaire may be that the personal subjective view may not be expatriate, or follow-up questions cannot be used for further clarification.

**Section 2** identified the extent to which clinical documentation was done and common errors in clinical documentation by nurses in Juaso Government Hospital.

**Section 3** talked about nurses' knowledge of the various ways of correction regarding clinical documentation.

**Section 4** also focuses on the mode through which clinical documentation was done at Juaso Government Hospital in the Asante Akim district.

**3.7 Data Analysis**

The data were entered, cleaned, and analyzed using SPSS version 26. Editing and examining the data pieces to find straightforward errors, questions that respondents answered incorrectly, and any blank spaces they failed to fill in were all part of the data cleansing process. Descriptive Statistics were used as the main method to analyze the research questions, generating the frequency and percentage and presented using a frequency distribution table.

In using a set of questions to determine the extent of clinical documentation and the level of identifying common possible errors among nurses, a cumulative score was determined and expressed as a percentage. Scores below 70% were categorized as low or inadequate for the extent of clinical documentation and level of identifying common errors. Those who attained a score above 70% were classified as high extent or adequate clinical documentation and level of identifying common errors.

The chi-square test of independence was used to determine the association between each socio-demographic level and the dependent variables reporting their chi-square test statistic and p-values significant at α=0.05. Additionally, the logistic regression analysis was used to examine the socio-demographic factors that influenced the outcome variables reporting the adjusted odds ratio (aOR), 95% confidence interval (CI), and the p-values also significant at α=0.05 for the extent of clinical documentation and the level of identifying common possible errors among nurses.

**3.8 Limitations of the Study**

As the study primarily looked at public hospitals in the Ashanti region's Asante Akim South Municipality, one potential drawback was the researcher's inability to include a wide range of respondents from a big geographic area. The findings may, therefore, differ from context with other geographical areas or with other private facilities in other districts and regions in Ghana. Another researcher-based shortcoming was that there was poor literature support time while conducting research, and those available were old. The data collection was based on respondents’ recall of events regarding clinical documentation. There could therefore be the introduction of recall biases among nurses.

The researcher to the best of his ability ensured that these biases were controlled to the barest minimum. These included the use of a simple random sampling technique to offer an equal chance for all nurses to be included in the study. The data collection tool was also pre-tested to identify challenging and ambiguous variables which were refined to generate the best responses. Notwithstanding the limitations, the study provides findings that are relevant to nursing documentation practices and suggests recommendations that can be implemented to improve the practice among nurses.

# RESULTS

The study sought to investigate the extent of clinical documentation by nurses. That was to examine if nurses document every care given to the inpatient. Also, investigate the errors during the documentation process and how the documentation was done in the Asante Akim District. This chapter presents the study's outcome, which was analyzed using descriptive and statistical measures. These study results were arranged according to the demographic characteristics of the respondents and the study's specific objectives. The information about the results was provided with appropriate illustrations in the form of frequencies, percentages, and means. One hundred and thirty-six (136) respondents were randomly selected, and questionnaires were administered to them in Juaso Government Hospital in the Asante Akim South District of Asante.

## **4.2 Demographic Characteristics of Respondents**

The study showed that female health workers who participated in the study were 79% and the remaining 21% were males. The majority (98%) of the participants were Registered General Nurses. More than half (54%) of the participants had worked for up to 5 years. Those who had worked for 6 to 10 years were 38% whereas 11 to 15 years were 6% and 3% had worked for more than 15 years. The study revealed that 68% of the nurses had received training or orientation on documentation. Out of those who had been trained, 62% had been trained once and 38% received such training 2 times or more. The demographic characteristics of the participants are shown in Table 2

**Table 2 Demographic characteristics of respondents**

|  |  |  |
| --- | --- | --- |
| **Demographic Data** | Frequency | Percent |
| **Gender (n=136)** |  |  |
| Male | 29 | 21 |
| Female | 107 | 79 |
| **Profession (n=136)** |  |  |
| SRN | 3 | 2 |
| RGN | 133 | 98 |
| **Years of practice (n=136)** |  |  |
| 0 to 5years | 73 | 54 |
| 6 to 10 years | 51 | 38 |
| 11 to 15 years | 8 | 6 |
| Above 15years | 4 | 2 |
| **Ward/Unit of practice (n=136)** |  |  |
| Male | 31 | 23 |
| Female | 26 | 19 |
| Pediatric | 23 | 17 |
| Maternity | 56 | 41 |
| **Level of education (n=136)** |  |  |
| Dip | 78 | 57 |
| BSc | 36 | 27 |
| MSc | 6 | 4 |
| Specialty | 16 | 12 |
| **Trained on documentation (n=136)** |  |  |
| Yes | 93 | 68 |
| No | 43 | 32 |
| **Number of times trained (n=93)** |  |  |
| One | 58 | 62 |
| 2+ Times | 35 | 38 |

## **4.3 Extent of Clinical Documentation**

Table 3 shows the factors used in determining the extent of clinical documentation among the nurses. The study showed that 97% agree to record all biodata of patients. Those who recorded patients’ complaints to the prescriber were 81% and 92% recorded patients’ complaints to the nurse. It was also revealed that 93% recorded patients’ responses and reactions to procedures that were carried out on them.

Those who documented patients’ social concerns while on admission were 74% and 98% recorded tele-medical information and orders. All the nurses documented all nursing procedures in the past 24 hours. Whereas 98% of them recorded all clinical incidents. Summarily, the study found that 85% of the nurses had a high extent of clinical documentation while 15% had low or inadequate clinical documentation (Table 3).

**Table 3 Extent of clinical documentation**

|  |  |  |
| --- | --- | --- |
| **Extent of documentation** | **Frequency** **(n=136)** | **Per cent** |
| **Record all biodata** |  |  |
| Agree | 132 | 97 |
| Disagree | 4 | 3 |
| **Record patients’ complaints to the prescriber** |  |  |
| Agree | 110 | 81 |
| Disagree | 26 | 19 |
| **Record patient complaints to the nurse** |  |  |
| Agree | 125 | 92 |
| Disagree | 11 | 8 |
| **Record patient response and reaction to procedures** |  |
| Agree | 127 | 93 |
| Disagree | 9 | 7 |
| **Record patient social concerns while on admission** |  |  |
| Agree | 101 | 74 |
| Disagree | 35 | 26 |
| **Record telemedical information/order** |  |  |
| Agree | 133 | 98 |
| Disagree | 3 | 2 |
| **Record all nursing procedures in the past 24 hours** |  |  |
| Agree | 136 | 100 |
| Disagree | 0 | 0 |
| **Record all incidents**  |  |  |
| Agree | 133 | 98 |
| Disagree | 3 | 2 |
| **Extent of Clinical Documentation by Nurses** |  |  |
| Adequate | 115 | 85 |
| Inadequate | 21 | 15 |

**Table 4 Association between demographic factors and extent of clinical documentation (chi-square test)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Demographic variables** | **Extent of Clinical Documentation** | **𝝌𝟐¥** | **P-value** |
| High | Low |
| **Gender** |  |  | 0.733 | 0.565 |
| Male | 26 (22.6) | 3 (14.3) |  |  |
| Female | 89 (77.4) | 18 (85.7) |  |  |
| **Profession** |  |  | 0.560 | 1.000 |
| SRN | 3 (2.6) | 0 (0.0) |  |  |
| RGN | 112 (97.4) | 21 (100.0) |  |  |
| **Years of practice** |  |  |  |  |
| 0 to 5years | 60 (52.2) | 13 (61.9) | 8.602 | 0.024 |
| 6 to 10 years | 47 (40.9) | 4 (19.0) |  |  |
| 11 to 15 years | 4 (3.5) | 4 (19.0) |  |  |
| Above 15years | 4 (3.50 | 0 (0.0) |  |  |
| **Ward/Unit of practice** |  |  | 27.849 | 0.000 |
| Males | 31 (27.0) | 0 (0.0) |  |  |
| Female | 13 (11.3) | 13 (61.9) |  |  |
| Pediatric | 19 (16.5) | 4 (19.0) |  |  |
| Maternity | 52 (45.2) | 4 (19.0) |  |  |
| **Level of education** |  |  | 14.038 | 0.002 |
| Diploma | 71 (61.7) | 7 (33.3) |  |  |
| BSc | 30 (26.1) | 6(28.6) |  |  |
| MSc | 6 (5.2) | 0 (0.0) |  |  |
| Specialty | 8 (7.0) | 8 (38.1) |  |  |
| **Trained on documentation** |  |  | 2.941 | 0.086 |
| Yes | 82 (71.3) | 11 (52.4) |  |  |
| No | 33 (28.7) | 10 (47.6) |  |  |
| **Number of times trained** |  |  | 16.120 | 0.000 |
| None | 51 (44.3) | 10 (47.6) |  |  |
| One | 40 (34.8) | 0 (0.0) |  |  |
| Above 2 Times | 24 (20.9) | 11 (52.4) |   |   |

% = Column percentages

¥ = Fisher Exact Test (FE) and p-values reported for variables with less than 5 cases in cells

P-value – Significant at 5% (α=0.050

Table 4 shows the association between demographic variables and the extent of clinical documentation by nurses. The study showed that ward of practice (𝝌𝟐 = 27.849, p<0.0001) was significantly associated with the extent of clinical documentation. It was also revealed that the level of participants’ education (𝝌𝟐=14.038, p=0.002) had a significant association with the extent of clinical documentation. The number of training of nurses on clinical documentation (𝝌𝟐=16.120, p<0.0001) was statistically associated with the extent of clinical documentation by nurses.

|  |  |  |  |
| --- | --- | --- | --- |
| **Demographic variables** | **Extent of Clinical Documentation** | **aOR (95% CI)** | **P-value**  |
| High | Low |
| **Gender** |  |  |  |  |
| Male | 26 (22.6) | 3 (14.3) | 1 |  |
| Female | 89 (77.4) | 18 (85.7) | 1.14 (0.25, 5.06) | 0.861 |
| **Profession** |  |  |  |  |
| SRN | 3 (2.6) | 0 (0.0) | Omitted |  |
| RGN | 112 (97.4) | 21 (100.0) |  |  |
| **Years of practice** |  |  |  |  |
| 0 to 5years | 60 (52.2) | 13 (61.9) | 1 |  |
| 6 to 10 years | 47 (40.9) | 4 (19.0) | 0.18 (0.04, 0.76) | 0.02 |
| 11 to 15 years | 4 (3.5) | 4 (19.0) | 2.06 (0.24, 17.68) | 0.508 |
| Above 15years | 4 (3.50 | 0 (0.0) | 1 |  |
| **Ward/Unit of practice** |  |  |  |  |
| Males | 31 (27.0) | 0 (0.0) | 1 |  |
| Female | 13 (11.3) | 13 (61.9) | 31.71 (4.29, 234.26) | 0.001 |
| Pediatric | 19 (16.5) | 4 (19.0) | 0.13 (0.01, 1.51) | 0.104 |
| Maternity | 52 (45.2) | 4 (19.0) | 1 |  |
| **Level of education** |  |  |  |  |
| Diploma | 71 (61.7) | 7 (33.3) | 1 |  |
| BSc | 30 (26.1) | 6(28.6) | 1.83 (044, 7.61) | 0.405 |
| MSc | 6 (5.2) | 0 (0.0) | 1 |  |
| Specialty | 8 (7.0) | 8 (38.1) | 14.0 (2.87, 68.22) | 0.001 |
| **Trained on documentation** |  |  |  |  |
| Yes | 82 (71.3) | 11 (52.4) | Omitted |  |
| No | 33 (28.7) | 10 (47.6) |  |  |
| **Number of times trained** |  |  |  |  |
| None | 51 (44.3) | 10 (47.6) | 1 |  |
| One | 40 (34.8) | 0 (0.0) | 1 |  |
| Above 2 Times | 24 (20.9) | 11 (52.4) | 2.24 (0.66, 7.63) | 0.199 |

**Table 5 Association between demographic factors and extent of clinical documentation (logistic regression)**

% = Column percentages

¥ = Fisher Exact Test (FE) and p-values reported for variables with less than 5 cases in cells

P-value – Significant at 5% (α=0.050

aOR – Adjusted Odds Ratio; CI – Confidence Interval

The logistic regression model however, revealed that nurses who had worked for more than 6 to 10 (aOR = 0.18, p=0.02) years at the hospital had an 18% increase in having a high extent of clinical documentation when compared with those who had worked for up to 5 years. The study further showed that nurses who worked in the female ward (aOR=31.71, p=0.001) at the time of the study were more than 31 times more likely to have adequate clinical documentation when compared with those from the male ward.

Those with a specialty level of education (aOR=14.0, p=0.001) at the hospital were about 14 times more likely to have a high extent of clinical documentation compared with those with a diploma level of education (Table 5).

## 4.4 Common Errors Identified by Nurses

The common errors identified by nurses have been presented in Table 6. From the findings, about half (51%) agreed that the absence of data and time on patient records and documentation constituted common errors by nurses. It was also shown that 43% of nurses identified the absence of patients’ biodata on recorded sheets. From the study, more than half (54%) identified the incomplete names of patients during clinical documentation.

More than two-thirds (68%) of the nurses acknowledge that patients’ clinical documents were sometimes not authorized by caregivers and 59% indicated the improper cancellation of patient reports. About 43% of the nurses acknowledged illegible handwriting of nurses constituting common errors. The study showed that 41% of nurses acknowledge the absence of clinical documentation entirely. In sum, 24% of the nurses had a high acknowledgment of common errors in patient records (Table 6).

Table 6 Common errors identified by nurses

|  |  |  |
| --- | --- | --- |
| **Common errors in patient records** | **Frequency (n=136)** | **Per cent** |
| **No authorization of documentation** |  |  |
| Agree | 93 | 68 |
| Disagree | 43 | 32 |
| **Cancellation of reports improperly** |  |  |
| Agree | 80 | 59 |
| Disagree | 56 | 41 |
| **Incomplete patient name and records** |  |  |
| Agree | 73 | 54 |
| Disagree | 63 | 46 |
| **Absence of date and time** |  |  |
| Agree | 69 | 51 |
| Disagree | 67 | 49 |
| **Absence of biodata on recorded sheet** |  |  |
| Agree | 58 | 43 |
| Disagree | 78 | 57 |
| **Illegible handwriting** |  |  |
| Agree | 58 | 43 |
| Disagree | 78 | 57 |
| **No documentation at all** |  |  |
| Agree | 56 | 41 |
| Disagree | 80 | 59 |
| **Level of identifying common errors** |  |  |
| High | 32 | 24 |
| Low | 104 | 76 |

The association between demographic factors and identifying common errors among nurses is shown in Table 7.

The findings showed that the professional category (𝝌𝟐=9.970, p=0.002) was significantly associated with identifying common errors in clinical documentation. The ward of practice (𝝌𝟐=44.917, p<0.0001) had a statistically significant association with the identification of common errors in clinical documentation. The study also showed that the level of nurses’ education (𝝌𝟐=25.149, p<0.0001) was significantly associated with identifying common errors in documentation. It was revealed that the number of times nurses were trained on documents (𝝌𝟐=11.005, p=0.004) had a significant association with identifying common errors in documentation.

**Table 7 Association between demographic variables and identifying common errors**

|  |  |  |  |
| --- | --- | --- | --- |
| **Demographic variables** | **Level of identifying Common errors**  | **𝝌𝟐¥** | **P-value** |
| **High** | **Low** |
| **Gender** |  |  | 0.008 | 0.931 |
| Male | 7 (21.9) | 22 (21.2) |  |  |
| Female | 25 (78.1) | 82 (78.8) |  |  |
| **Profession** |  |  | 9.970 | **0.002** |
| SRN | 3 (9.4) | 0 (0.0) |  |  |
| RGN | 29 (90.6) | 104 (100.0) |  |  |
| **Years of practice** |  |  | 5.962 | 0.090 |
| 0 to 5years | 13 (40.6) | 60 (57.7) |  |  |
| 6 to 10 years | 15 (46.9) | 36 (34.6) |  |  |
| 11 to 15 years | 4 (12.5) | 4 (3.8) |  |  |
| Above 15years | 0 (0.0) | 4 (3.8) |  |  |
| **Ward/Unit of practice** |  |  | 44.917 | **0.000** |
| Males | 14 (43.8) | 17 (16.3) |  |  |
| Female | 14 (43.8) | 12 (11.5) |  |  |
| Pediatric | 4 (12.5) | 19 (18.3) |  |  |
| Maternity | 0 (0.0) | 56 (53.8) |  |  |
| **Level of education** |  |  | 25.149 | **0.000** |
| Diploma | 7 (21.9) | 71 (68.3) |  |  |
| BSc | 18 (56.3) | 18 (17.3) |  |  |
| MSc | 3 (9.4) | 3 (2.9) |  |  |
| Specialty | 4 (12.5) | 12 (11.5) |  |  |
| **Trained on documentation** |  |  | 0.147 | 0.828 |
| Yes | 21 (65.6) | 72 (69.2) |  |  |
| No | 11 (34.4) | 32 (30.8) |  |  |
| **Number of times trained** |  |  | 11.005 | **0.004** |
| None | 11(34.4) | 50 (48.1) |  |  |
| One | 17 (53.1) | 23 (22.1) |  |  |
| Above 2 Times | 4 (12.5) | 31 (29.8) |   |   |

aOR – Adjusted Odds Ratio; CI – Confidence Interval

The logistic regression analysis showed that nurses who had worked for 6 to 10 years (aOR = 0.10, p=0.004) were about 10% likely to identify common errors when compared with those with up to 5 years of practice and those with 11 to 15 years of practice (aOR = 0.01, p<0.0001) were about 1% likely to identify common errors more than those with up to 5 years of practice. The study revealed that nurses who worked at the pediatric ward (aOR=16.92, p<0.0001) were more than 16 times more likely to identify a common error in documentation when compared with those from the male wards. From the findings, nurses with a specialty (aOR=0.09, p=0.026) level of education were also more likely to identify common errors of documentation when compared with those with a diploma level of education (Table 8).

**Table 8 Relationship between demographic variables and identifying common errors**

|  |  |  |  |
| --- | --- | --- | --- |
| **Demographic variables** | **Level of identifying Common errors**  | **aOR (95% CI)** | **P-value** |
| **High** | **Low** |
| **Gender** |  |  |  |  |
| Male | 7 (21.9) | 22 (21.2) | 1 |  |
| Female | 25 (78.1) | 82 (78.8) | 2.06 (0.44, 9.60) | 0.360 |
| **Profession** |  |  |  |  |
| SRN | 3 (9.4) | 0 (0.0) | Omitted |  |
| RGN | 29 (90.6) | 104 (100.0) |  |  |
| **Years of practice** |  |  |  |  |
| 0 to 5years | 13 (40.6) | 60 (57.7) | 1 |  |
| 6 to 10 years | 15 (46.9) | 36 (34.6) | 0.10 (0.02, 0.48) | **0.004** |
| 11 to 15 years | 4 (12.5) | 4 (3.8) | 0.01 (0.00, 0.09) | **0.000** |
| Above 15years | 0 (0.0) | 4 (3.8) | 1 |  |
| **Ward/Unit of practice** |  |  |  |  |
| Males | 14 (43.8) | 17 (16.3) | 1 |  |
| Female | 14 (43.8) | 12 (11.5) | 0.16 (0.02, 1.10) | 0.062 |
| Pediatric | 4 (12.5) | 19 (18.3) | 16.92 (8.51, 33.62) | **0.000** |
| Maternity | 0 (0.0) | 56 (53.8) |  |  |
| **Level of education** |  |  |  |  |
| Diploma | 7 (21.9) | 71 (68.3) | 1 |  |
| BSc | 18 (56.3) | 18 (17.3) | 0.38 (0.09, 1.61) | 0.187 |
| MSc | 3 (9.4) | 3 (2.9) | 0.59 (0.07, 5.13) | 0.633 |
| Specialty | 4 (12.5) | 12 (11.5) | 0.09 (0.01, 0.75) | **0.026** |
| **Trained on documentation** |  |  |  |  |
| Yes | 21 (65.6) | 72 (69.2) | 1 |  |
| No | 11 (34.4) | 32 (30.8) | 0.27 (0.05, 1.47) | 0.132 |
| **Number of times trained** |  |  |  |  |
| None | 11(34.4) | 50 (48.1) | 1 |  |
| One | 17 (53.1) | 23 (22.1) | 1.18 (0.38, 3.62) | 0.777 |
| Above 2 Times | 4 (12.5) | 31 (29.8) | 1 |   |

aOR – Adjusted Odds Ratio; CI – Confidence Interval

## 4.5 Mode of Documenting Patient Records

The study showed that 94% of nurses documented patient records manually through handwritten notes whereas those who documented records electronically were 6%.

**Figure 2 Mode of documenting patient records**

The association between demographic variables and the mode of documenting patient records is shown in Table 9. The findings showed that the ward of practice (𝝌𝟐=7.396, p=0.03) was significantly associated with the mode of documentation. It was also revealed that nurses’ level of education (𝝌𝟐=9.195, p=0.013) had a statistically significant association with the mode of documentation. The logistic regression, however, did not show any statistically significant relationship between the independent demographic variables and the mode of documenting patient records (Table 9).

**Table 9. Association between demographic variables and mode of documenting patient records.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Demographic variables** | **Mode of Documentation** | **𝝌𝟐¥** | **P-value** | **aOR (95% CI)** | **P-value** |
| **Handwriting** | **Electronic** |
| **Gender** |  |  | 2.304 | 0.202 |  |  |
| Male | 29 (22.7) | 0 (0.0) |  |  | 1 |  |
| Female | 99 (77.3) | 8 (100.0) |  |  | 0.23 (-1.24, 20.18) | 0.772 |
| **Profession** |  |  | 0.192 | 1.000 |  |  |
| SRN | 3 (2.3) | 0 (0.0) |  |  | 1 |  |
| RGN | 125 (97.7) | 8 (100.0) |  |  | 1.74 (0.45, 3.07) | 1.000 |
| **Years of practice** |  |  | 6.723 | 0.069 |  |  |
| 0 to 5years | 65 (50.8) | 8 (100.0) |  |  | Omitted |  |
| 6 to 10 years | 51 (39.8) | 0 (0.0) |  |  |  |  |
| 11 to 15 years | 8 (6.3) | 0 (0.0) |  |  |  |  |
| Above 15years | 4 (3.1) | 0 (0.0) |  |  |  |  |
| **Ward/Unit of practice** |  |  | 7.396 | **0.030** |  |  |
| Males | 31 (24.2) | 0 (0.0) |  |  | 1 |  |
| Female | 24 (20.3) | 0 (0.0) |  |  | 1 |  |
| Pediatric | 19 (14.8) | 4 (50.0) |  |  | 1.39 (0.21, 9.14) | 0.734 |
| Maternity | 52 (40.6) | 4 (50.0) |  |  | 1 |  |
| **Level of education** |  |  | 9.195 | **0.013** |  |  |
| Diploma | 74 (57.8) | 4 (50.0) |  |  | 1 |  |
| BSc | 36 (28.1) | 0 (0.0) |  |  | 1 |  |
| MSc | 6 (4.7) | 0 (0.0) |  |  | 1 |  |
| Specialty | 12 (9.4) | 4 (50.0) |  |  | 2.80 (0.37, 21.39) | 0.322 |
| **Trained on documentation** |  |  | 3.930 | 0.056 |  |  |
| Yes | 85 (66.4) | 8 (100.0) |  |  | Omitted |  |
| No | 43(33.6) | 0 (0.0) |  |  |  |  |
| **Number of times trained** |  |  | 4.581 | 0.086 |  |  |
| None | 57 (44.5) | 4 (50.0) |  |  | 1 |  |
| One | 50 (31.3) | 0 (0.0) |  |  | 1 |  |
| Above 2 Times | 31 (24.2) | 4 (50.0) |   |   | 0.91 (1.66, 5.05) | 0.918 |

% = Column percentages

¥ = Fisher Exact Test (FE) and p-values reported for variables with less than 5 cases in cells

P-value – Significant at 5% (α=0.050

aOR – Adjusted Odds Ratio; CI – Confidence Interval

Table 10Patient Records Between Jan. to March 2023



The purpose of this analysis was to evaluate the extent or completeness of different medical records by nurses. There are 248 cases in the dataset. With values ranging from 0.56 to 0.63, the average completeness for patient history, medical data, and progress notes is relatively low. This suggests that between 56 and 63 percent of these records are complete. The accuracy of vital signs has a slightly higher mean (0.68), which suggests greater performance. The highest mean of 0.78 for legibility indicates that most records are readable. However, accuracy and completeness cannot be guaranteed by this factor alone. This means that approximately 62% of patient histories, 63% of medical records, and 56% of progress notes are complete. The accuracy of vital signs is slightly higher at 68%. The standard deviations point to a moderate degree of variations in the completeness of these records. Most of the skewness values for these variables are negative, suggesting a little leftward bias in the data showing that most of the records are slightly, but not significantly, more complete. Overall, the records are approximately 62.25% complete on average.

Errors and omissions are somewhat prevalent, with average values of 0.46 and 0.53, respectively. The low mean (0.07) suggests that duplicate errors are uncommon, but their distribution is highly skewed. The omission and inaccuracy standard deviations are approximately 0.5, which suggests a considerable variation in the frequency of these errors amongst various records. While inaccuracies have a nearly zero skewness, indicating a symmetric distribution around the mean, omissions have a slightly negative skewness, indicating a little tendency for lower frequencies of omissions. The average error rate of 35.3% suggests that mistakes like omissions, inaccuracies, or duplications are present in a significant percentage of the records.

**DISCUSSION**

The study examined nursing documentation practice and related factors in the districts, and the results are discussed in this chapter, which is arranged by the research questions. The study was carried out in the public hospital of the Asante Akin South District. The discussion therefore begins with the extent of clinical documentation which is followed by the possible common errors by nurses and the mode of recording clinical documentation of patients. The discussion is based on the findings from 136 nurses within the district who responded to the research instrument.

**5.1 Extent of Clinical Documentation**

The study found that clinical documentation was adequate among the majority (84.6%) of the nurses interviewed and a review of patient records shows 63% completeness in the Ashanti Akim South district in the Ashanti region of Ghana. The finding demonstrates a high extent of records by nursing during the provision of care. Most of the nurses were observed to record all biodata of patients, their complaints to prescribers and nurses, responses and reactions to procedures, tele-medical information, and nursing procedures at the hospital. The finding of adequate nursing documentation corroborates that of (33) from the Tamale Teaching Hospital in the Northern region of Ghana where about 74% of nurses practice adequate documentation.

The finding from this study showed a higher extent of clinical documentation when compared with the findings of Asamani et al., (2014) from the Eastern region of Ghana. Also, the extent of documentation among nurses from this current study is better than the report on an assessment of nursing documentation practices from the Tamale metropolis in the Northern region of Ghana (38). From their report, (38) found documentation among nurses to be very poor. The study findings are congruent with the findings of (39) where documentation among nurses in the Amhara region in Ethiopia demonstrated a good extent of medical documentation. Comparing the current study's results to those of Tasew et al. (2019) and Tamir et al. (2021), which found that nurses in Ethiopia's public hospitals lacked proper documentation, the former indicated a greater degree of clinical documentation(40,41).

Clinical documentation by nurses during the provision of care is critical as it improves programs and overall performance (42). Sometimes, nurses have perceived a high workload due to documentation, resulting in the inadequacy of clinical documentation (43). Nurses must have periodic training and orientation to foster the understanding of the demands and importance of documenting their clinical activities to enhance the practice of documentation (43,44).

Adequate collaboration between nurses and other healthcare providers such as physicians and medical records staff can improve the accuracy and completeness of nurse documentation. In addition, the development and implementation of nursing policies as well as the involvement of health managers and authorities in monitoring and evaluating documentation can improve the practice in public hospitals (45,46).

The study showed that the nurses’ years of practice, the ward/unit of operation and their level of education influenced the extent of clinical documentation among nurses. Nurses from the hospital who had worked for more than five years had a higher extent of documenting clinical and nursing procedures when they were compared with those who had worked for less than five years. Nurses who begin their clinical work at the hospital need to be orientated and periodically supervised to ensure that they document all required nursing practices and processes.

The findings of (33) also showed that higher years of practice or work experience among nurses influenced their extent of clinical documentation and thus were consistent with the findings from this study (33). However, the influence of the male gender and age of respondents on nursing documentation was not found in this current study. Similarly, the finding also agrees with that of (47,29) in Ethiopia where years of experience were found to influence nursing documentation.

It further corroborates the findings of (48) in Missouri, United States where nurses’ years of experience influenced their documentation practices positively. This finding shows that, as nurses build on experience over time, the importance of clinical documentation is enhanced leading to positive practice. It is important, therefore, for experienced nurses to adequately support new nurses to enhance the practice of clinical documentation. Such support has been identified to improve documentation and further contribute to removing barriers that hinder effective documentation (47,29).

In addition to the nurses’ years of work experience, clinical documentation among the nurses was influenced by the unit within which they worked. From the study, nurses who worked in the female ward were more likely to document clinical procedures better than the other wards. This is supported by the report by (50) where the unit of operation of nurses was one of the organizational factors that influenced the level of clinical documentation by nurses. It is important for nurses to adequately document all nursing processes and activities on the ward as diligent documentation of these processes influences the continuity of patient care (51). Nurses in wards with inadequate documentation practices should be encouraged and monitored to improve document practices in the hospital. Ensuring intentional efforts among nurses such as setting time after discharging duties to document clinical activities on the ward should also be put under close monitoring and supervision by nurse managers (52).

**5.2 Common Impatient Medical Record Errors by Nurses**

The study revealed that only 23.5% of nurses were able to adequately identify various common errors of documentation among nurses. The common errors identified included non-authorization of clinical records, improper cancellation of regions, incomplete patient names and records, absence of data and time, absence of biodata on recorded sheets, illegible handwriting, and non-documentation of clinical activities. A review of patient records shows an average error rate of 35.3% suggesting that mistakes like omissions, inaccuracies, or duplications are present in a significant percentage of the records. During their evaluation of nursing documentation procedures in five hospitals in Ghana's Tamale metropolis, Buunaaisie et al. (2018) revealed the incidence of these errors in nursing documentation. Similarly,( 14) identified common errors of documentation among nurses including not dating their clinical notes, not recording the time of procedures, non-authorization of notes, and poor handwriting. Others were the wrong time of writing notes, poor cancellation of notes, and use of unofficial abbreviations in notes ( 14).

The findings of this study are further supported by (41) in Ethiopia where non-documenting nursing processes and activities was a common error. In their study, (41) also identified incomplete records and unstandardized records among nurses. The findings of (53) on three public hospitals in Jamaica on nursing documentation showed that, although adequate data existed from most of the records reviewed, common among the records were incomplete records and included the absence of date, time, and nurses’ authorization. Congruent to the above findings, (49) identify incomplete data and missing information including date, time, biodata, and wrong entries as common errors in nursing documentation. These common errors have also been found in Iran (54).

The occurrence of these common errors during documentation among nurses suggests the need to invest additional efforts in making nurses aware and knowledgeable of the common errors and their medical as well as legal implications. The need to ensure that, nurses avoid these common errors of documentation remains critical and necessitates regular reviews and audits of nurses' notes and adherence to documentation guidelines (5,53). This is because it has been shown that these audit and records review procedures are successful in producing high-quality documentation performance (55,56).

According to the study, nurses were more likely to spot frequent mistakes in nursing documentation if they had more years of experience, worked in a ward where they were practicing, or had a higher level of education. More than five years of experience increases a nurse's ability to spot common mistakes in nursing paperwork. Additionally, those who worked in the pediatric unit were more likely to identify common errors compared with their counterparts in the male, female, and maternity wards. These findings are supported by (33) in Ghana where the work experience of nurses influences their knowledge of clinical documentation and the occurrence of errors during documentation.

The findings underscore the importance of using experienced nurses as role models for newly recruited nurses as mentees for improvement in nursing documentation. The need for orientating nurses on these common errors in documentation is also necessitated. This is because adequate training to build nurses' knowledge of these common errors can lead to their avoidance during the documentation of nursing activities and processes (57).

**5.3 Mode of Documenting Patient Records**

The findings revealed that the majority (94.1%) of nurses documented patient records manually which are paper-based systems. The findings indicate the use of mainly manual systems for documenting clinical processes and activities among the public health hospitals in the Asante Akim district. Nurses, therefore, kept their clinical documents manually using handwritten notes. This study's level of documentation is higher than that of a similar study conducted in the Eastern region of Ghana by Essuman et al., (2020) when 41% of participants employed manual systems (58).

Currently, many hospitals are transitioning to complete electronic systems in Ghana due to their advantages over the manual paper-based method of managing patient records and documentation (31). The manual system of documentation has its accompanying common errors which include incomplete recordings, cancellations, missing date and time as well as biodata and signatures which can be overcome by electronic systems (59,60).

The advocation for electronic systems has escalated over the years with many hospitals using a kind of electronic system. The Ghana Health Service has over a decade now migrated from paper-based and standalone methods of managing data to web-based electronic district health information management systems (61). This venture by the Ghana Health Service should encourage public hospitals to consider enhancing their electronic means of handling patient records.

According to the study, there is no correlation between a nurse's demographics and whether they employ handwriting or electronic documentation among hospitalized nurses. According to (58), several factors such as lack of computer competence, cost of electronic systems and resources, lack of technical personnel, and absence of electronic systems at facilities influenced manual systems of documentation and record keeping these variables are comparable to those from other nations in sub-Saharan Africa. For example, Msiska et al., (2017) stated that the lack of managerial support and supply of electronic medical records facilities, computer incompetence, and unavailability of computers in Malawi affected the use of manual systems.

The consideration of an electronic medical records system at public hospitals in the district is of essence to support accuracy in documentation, timely entry of records, and generation of accurate and complete reports. Electronic systems also can have the advantage of reducing or eliminating common errors associated with documentation at the hospital and further facilitate quality and continuity of patient care(62,63). Although electronic systems have their associated challenges, electronic health records have been identified to have some improvements over paper-based systems (64).

**5.4 Contribution to Knowledge**

The study focused on exploring the nursing documentary practice and associated factors among nurses in public hospitals in the Ashanti Akim South district in the Ashanti region. From the study, it became evident that there is a paucity of existing studies on the extent of clinical documentation among nurses as well as the identification of common documentation errors among nurses in Ghana. This study, therefore, adds to the few studies conducted on documentary practices among nurses, specifically on the extent of clinical documentation and identifying common errors.

The study's conclusions point to the need for nurses to get in-service training on the need for thorough and precise clinical documentation of procedures and activities on the ward. It is also important for new nurses to be adequately orientated on clinical documentation when they join the workforce. The importance of clinical documentation and the standard documentation guidelines should be incorporated into the existing curriculum to abreast nurses in school with such provisions.

The study also identifies empirically possible common errors that are associated with clinical documentation among nurses. Work experience, unit of operation, and educational level of nurses were important influencing factors in determining the extent of clinical documentation as well as the identification of common errors among nurses. The study also highlights the need for more research on nurses' knowledge, attitudes, and clinical documenting procedures as well as the determining the influence of organizational and other contextual factors on nursing documentation practices which were not included in this study.

The study revealed that clinical documentation among nurses was adequate among 84.6% of the respondents and inadequate among only 15.4%. The study revealed that all nurses recorded all nursing procedures within 24 hours. Many of the nurses also recorded all biodata, patients’ complaints to the prescriber and nurse, patients’ responses and reactions to procedures, tele-medical information, and all incidents. The factors that influenced the extent of clinical documentation were years of experience, ward of practice, and the level of education of nurses. The study further showed that a little over one-fifth (23.5%) of the nurses adequately identified common errors in patient records.

Among the common errors identified were non-authorization of documents, cancelling of reports improperly, incomplete patient names and records, absence of date, time, and biodata, and illegible handwriting. Factors that influenced the identification of common errors were years of nursing practice, ward or unit of practice, and level of education. The findings revealed that 94.1% of the nurses documented their records paper-based handwriting method.

**6.3 Conclusion**

Nursing documentation continues to stand as a critical component of care, considering its significant impact on patient care continuity and quality. Although the total amount of clinical records among nurses was satisfactory, their ability to identify common documentation errors remained notably low. This underscores the potential for substantial improvement in this aspect. There is a pressing necessity to comprehensively and deliberately orient nurses about the pivotal role that proper documentation plays, along with its associated medico-legal implications—an imperative of the highest order.

Furthermore, the employment of manual paper-based handwriting for documentation within hospitals demands immediate attention and warrants a potential transition toward an electronic medical records system. This shift could yield transformative benefits for efficiency, accuracy, and overall healthcare delivery.

**6.4 Recommendations**

The study's conclusions led to the following recommendations being made. There should be scheduled monitoring and supervision of nurses’ notes and documentation by ward in-charges and nurse managers. The monitoring and supervision activity will ensure a check on nursing documentation practice and further provide support to nurses who have challenges in documenting their clinical practice and activities. Such monitoring and supervision of the documentation practice will enhance nurses’ documentation practices.

There should be periodic orientation of nurses on the significance of precise and thorough clinical note documentation. Regular in-service training for nurses will enhance their understanding of the importance of clinical documentation by nurses to their nursing practice. Newly recruited nurses should also be adequately orientated to have the understanding and practice of effective nursing documentation practices when they join the hospital.

Health managers should standardize nursing documentation policies and guidelines and copies made available to nurses. There should be clearly defined policies and guidelines on nursing documentation practice. These should be shared with nurses and copies placed on the wards. Summarized recommended protocols on effective nursing documentation practices should be kept on the nurses’ desks or walls as a reference and reminder for nurses.

Health managers at the hospital should consider the electronic medical records system. Examining the possibility of using an electronic medical records system can improve hospital nurses' documentation practices. The electronic system offers opportunities for reminding nurses to document in an organized manner leaving little or no room for forgetfulness, incompleteness, and error entries. Additionally, the computerized systems provide constant supervisory inspections and sufficient oversight by superiors.

Future research should be conducted to further investigate the nurses' understanding, perspectives, and behaviors about nursing documentation, as well as their preparedness for the adoption of an electronic health record system.

**Ethical Approval and consent**

Researchers ensured that ethical concerns were seriously taken to avoid issues of morality, right, and wrong (37). The respondent was informed of the study's goal, the confidentiality guarantee, and their opportunity to withdraw. Additionally, the Ghana Health Service provided formal authorization and ethical clearance before the study's commencement.

The Ghana Health Service Ethical Review Committee granted ethical approval before the study's start because it involved human subjects (GHS-ERC: 082/06/22). Consent of the respondents was obtained as part of the introductory page of the questionnaire before respondents answered the questionnaire. The right to withdraw at any point was prioritized and explained to respondents.

The respondents were assured that the data collected were to be used to answer only the research questions. The data in the hard copy forms were, therefore, kept under lock and key and accessible to only the research and supervisors when demands were made for them. In their soft copy forms, the data were secured with passcodes.

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

Option 2:

Author(s) hereby declare that generative AI technologies such as Large Language Models, etc. have been used during the writing or editing of manuscripts. This explanation will include the name, version, model, and source of the generative AI technology and as well as all input prompts provided to the generative AI technology

Details of the AI usage are given below:

1.

2.

3.

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