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# Health Workers' Documentation Process as a Prerequisite to the Integration of Patient Care at a Regional Referral Hospital in Uganda

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## Abstract

**Background:** Integrated patient care is necessary for better care outcomes. Documentation enhances the integration of care; however, in the Ugandan setting, documentation of care is poor (e.g., omissions and incomplete records) and integration of patient care is not visible. This study presents a review of patient health records that was undertaken to understand documentation of care at a regional referral hospital in Eastern Uganda. This information will help in developing a documentation model to facilitate the integration of patient care in Uganda. **Methodology:** This retrospective review involved 513 patient health records from the medical-surgical, pediatric, and obstetric/gynecological departments of Jinja Regional Referral Hospital. Data were collected using checklists. Stratified sampling was used to capture variations in ward unit records and identify a fair representation of each department. Data were analyzed with descriptive and inferential statistics. All analyses were performed with SPSS version 22. **Results:** On average, the study hospital attended to 1000 patients per day and discharged 100 patients per ward unit per month. Our record review showed that documentation by both nurses and doctors was incomplete, and care was fragmented. However, doctors documented care more often than nurses, although the integration of patient care was not evident in doctors' documentation. **Conclusion:** To establish integrated patient care, documentation must meet standards set by relevant professional bodies. The findings of this study will inform the development of a feasible documentation model to facilitate the integration of patient care in Uganda.

## Keywords

Documentation, Clinical Records, Integrated Patient Care, Audit Records, Uganda

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## 1. Introduction

Documentation of patient care is a critical component of healthcare. Documentation validates the care provided and shares key data with subsequent caregivers, thereby improving the safety and quality of care [1]. Documentation is also important for communication, education, research, medico-legal, statutory, and funding purposes [2]. In addition, documentation of care is central to understanding the importance of providing integrated care to patients, which aims to achieve better patient care outcomes; therefore, documentation enhances the integration process [3]. Health facilities in developed countries and some low-resource countries (e.g., Kenya) along with various private for-profit organizations, use electronic health record (EHR) systems to document integrated patient healthcare [4] [5]. However, paper-based documentation remains the norm in Africa, and most healthcare providers rely on paper-based medication and nursing records as primary sources of patient information.

Studies focused on documentation of patient care in Uganda have consistently identified challenges in documenting care [6] [7] [8]. Ugandan literature has highlighted that documentation of patient care is poor (e.g., omissions and incomplete records) and integration of patient care is lacking [7] [8] [9] [10] [11]. In addition, practice-based observations suggest some care records completed by nurses were not accessible to the rest of the healthcare team, which resulted in fragmentation and a lack of patient/family involvement in care planning [12]. Consequences of poorly documented patient care and the resulting lack of integrated care include misdiagnosis, care omissions, and prolonged patient stays in health facilities, all of which compromise the safety and quality of the care provided to patients [13] [14].

This study reviewed patient health records at a regional referral hospital in Uganda to describe the process of documentation by doctors and nurses. The findings are expected to inform the development of a feasible documentation model (to be presented in a subsequent study) to facilitate the integration of patient care in Uganda.

## 2. Methods

### 2.1. Research Design and Sampling

A retrospective audit was conducted using available records for patients discharged within 1 month from the medical, surgical, pediatric, and obstetric/gynecological units of Jinja Regional Referral Hospital. Checklists were used to collect data and evaluate the quantity and quality of documentation com-

pleted by doctors and nurses. Stratified sampling was used to capture variations in the records, identify a fair representation of the departments studied, and minimize sampling errors [15] [16]. Each of the studied departments at the target health facility had several ward units. The patient records were stratified by ward units, and two ward units were selected from each department. To enhance the representativeness of the sampled records, we selected units with different patient conditions based on patient turnover and staffing [17] [18]. A list of the registration numbers for discharged patients from each selected ward unit was compiled and used as the sampling frame [16]. A sample of records was then randomly selected from each ward unit using systematic random sampling, with every third patient's registration number selected from the sampling list [19]. Patient records from the selected ward units documented in 1 month (October 1-30, 2017) were included in this study.

On average, Jinja Regional Referral Hospital discharges about 100 patients per ward unit per month. At the departmental level, approximately 200 patients were discharged from the two sampled ward units. Therefore, the sampling table indicated that 135 records were needed from each department, giving a total sample size of approximately 540 records [20]. Only records for patients who were hospitalized for more than 1 day were included to allow sufficient time for care/information to be documented. Records with minimal and overt omissions in documentation were excluded. In total, 513 records met the inclusion criteria and were included in this study.

## 2.2. Data Collection

Data were collected using separate checklists for doctors' documentation and nurses' documentation. The doctors' checklist covered the patient's history and physical examination, diagnosis, management plan, investigations and treatment procedures, records of implementation of care, completion of all patient care forms, progress/evaluation notes, and signing of documentation [9] [21] [22] [23]. The checklist for nurses was modified from the N-Catch checklist [21], which is an open-access tool that permits open use. This checklist followed the five steps of the nursing process [23]. Both checklists contained three identifiers: identification number, department, and ward unit. Checklist items were evaluated based on specific measures: complete entries as required by the profession, legibility, date of entry, author's signature, and printed name and designation. In addition, we evaluated the evidence of integration of care by nurses and doctors, as well as patients' involvement in healthcare. Finally, the checklists recorded whether any errors were crossed out with a single line [22].

A three-point Likert scale was used to rate the documentation process: 1 = fully documented; 2 = partially documented; and 3 = not documented. A component was considered "fully documented" if all information required for the patient's care was consistently documented. A component was "partially documented" if the information required for the patient's care was inconsistently documented or some information was missing. Finally, a component was classi-

fied as “not documented” if most of the information needed for the patient’s care was not documented as required by that discipline.

### 2.3. Validity

The data collection tools were first validated through a pilot study, which was conducted in a government hospital in the central region of Uganda. The pilot sample included five patient health records, and data were collected using checklists for both doctors and nurses. The methodology and instructions for the checklists were modified for use in the present analysis based on the results of the pilot study. Although doctors’ and nurses’ documentation processes were reviewed with two different tools, both tools measured one construct in the standards of these professions. Records from 1 month (October 1-30, 2017) were selected to avoid events that may have occurred (e.g., an epidemic) that could unduly influence the results [24].

### 2.4. Data Analysis

Completed checklists were collected, and the data were cleaned and entered into a computer using Epidata version 4.2.0. The data were entered twice using two different files and then compared to identify discrepancies, which were corrected against the original paper-based checklists, and the final results were exported to SPSS version 22.0 for analysis [25]. Descriptive statistics were used to analyze the data and the results were presented as frequencies and percentages. Relationships among the observed variables were explored using chi-square tests. Statistical significance was set at  $p < 0.05$ .

### 2.5. Ethical Considerations

Approval for this study was obtained from the University of South Africa Higher Degree Ethics Committee and the Jinja Regional Referral Hospital, where the study was conducted (HSHDC/621/2017 and SS4172, respectively). The need for consent from patients to access this information was waived.

## 3. Results

Data were obtained from patient health records in four departments (medical, surgical, pediatrics, obstetrics/gynecology). **Table 1** presents the frequency distribution of the included records across the different departments and corresponding ward units.

The largest number of records (31%) was obtained from the medical department, followed by the obstetrics/gynecological department (29%). The surgical department had the lowest number of records (13%).

### 3.1. Doctors’ Documentation Process

**Table 2** shows the results of the review of doctors’ documentation of history taking, physical examination, diagnosis, planning, interventions/implementation,

**Table 1.** Distribution of records by department and ward unit (N = 513).

Department	n	%	
Surgical (n = 66) 13%	66	13	
Obstetrics/gynecological (n = 147) 29%	Grade A annex high dependence	9	2
	Gynecology ward	95	19
	Labor/postnatal	41	8
	Male ward	66	13
Medical (n = 158) 31%	Female ward	82	16
	TB ward	11	2
	General children's ward	120	23
Pediatrics (n = 23) 4%	Special care unit children's ward	23	4
	<b>Total</b>	<b>513</b>	<b>100</b>

completion of medical records, and the quality of documentation records.

The two aspects of history taking that were commonly fully documented by doctors were the history of the presenting complaint (30%) and the patient's medical history (25%). The patient's history of allergies was the component that was least commonly fully documented (3%). In most records (89%), doctors fully or partially documented the patient's general appearance, and over half (59%) of the records had fully/partially documented the examination of the cardiovascular system. The remaining physical examination aspects were less frequently documented. A principal diagnosis was fully documented in the majority (79%) of records, and more than half (58%) of the records fully documented procedures/interventions performed for patients. However, where invasive procedures/interventions were indicated, full documentation was only observed in 8% of records. Similarly, among records where an operation was indicated, only 7% of records had full documentation of patients' examination results before anesthesia. The majority (71%) of the records had fully documented treatment forms. However, investigations were not documented in almost 50% of records, and only 9% of records had fully documented discharge information.

Assessment of the legibility of doctors' documentation showed that most (95%) records were legible, and most (89%) were dated. In 60% of the records, the doctor's first and last names were fully documented, but only 3% of records had full documentation of the doctor's title. Only 7% of records showed that doctors had fully documented integrated patient care. Finally, errors were erased in 9% of records, with a single line used to cross out the error in 32% of those instances (**Table 2**).

### 3.2. Nurses' Documentation Process

**Table 3** presents the status of the nursing documentation for history taking,

**Table 2.** Documentation of checklist items by doctors.

Variable	Documentation status			
	NO, n (%)	P, n (%)	FD, n (%)	NA, n (%)
<b>History taking</b>				
History of presenting complaint	138 (27)	222 (43)	153 (30)	-
Medical history	295 (58)	87 (17)	131 (25)	-
History of previous medication	395 (77)	58 (11)	60 (12)	-
History of allergies	484 (94)	15 (3)	14 (3)	-
Surgical history	434 (85)	38 (7)	41 (8)	-
Social history	455 (89)	20 (4)	38 (7)	-
Family history	440 (87)	23 (5)	41 (8)	-
Gynecological and obstetric history (female patients)	155 (30)	68 (13)	54 (11)	236 (46)
Review of systems	208 (40)	281 (55)	24 (5)	-
<b>Documentation of physical examination</b>				
General Appearance	56 (11)	248 (48)	209 (41)	-
Cardiovascular system	211 (41)	170 (33)	132 (26)	-
Nervous system	409 (80)	35 (7)	69 (13)	-
Genitourinary system	396 (77)	70 (14)	47 (9)	-
Musculoskeletal system	476 (93)	21 (4)	16 (3)	-
<b>Diagnosis</b>				
Principal diagnosis	38 (7)	72 (14)	403 (79)	-
<b>Plan</b>				
Plan of care	23 (4)	187 (38)	302 (58)	-
<b>Interventions/implementation</b>				
Procedures/interventions recorded	24 (4)	187 (38)	302 (58)	-
Invasive procedures recorded	72 (14)	27 (5)	40 (8)	374 (73)
<b>Records</b>				
Record of examination before anesthesia	86 (17)	15 (3)	38 (7)	374 (73)
Treatment records	38 (7)	109 (21)	364 (71)	2 (1)
Investigation forms completed	254 (50)	89 (17)	159 (31)	11 (2)
Discharge forms	154 (30)	301 (59)	45 (9)	13 (2)
<b>Quality improvement of the records</b>				
The documentation is legible	15 (3)	9 (2)	489 (95)	-
Date of record entry	25 (5)	30 (6)	458 (89)	-
Integration of doctors' and nurses' documentation in the records	239 (47)	236 (46)	38 (7)	-
Name of the doctor indicated	29 (6)	176 (34)	308 (60)	-
Title of the doctor	455 (89)	41 (8)	17 (3)	-
Errors erased with a single line	15 (3)	20 (4)	11 (2)	467 (91)

Notes: NO = Not documented, P = Partially documented, FD = Fully documented, NA = Not applicable.

**Table 3.** Nursing documentation process.

Variables	Documentation status			
	NO, n (%)	P, n (%)	FD, n (%)	NA, n (%)
<b>Patient assessment</b>				
<b>History taking (subjective data)</b>				
History taking	413 (80.5)	73 (14.2)	27 (5.3)	-
<b>Physical examination (objective data)</b>				
Vital observations	243 (48.0)	227 (44.0)	43 (8.0)	-
Evidence of physical examination	407 (79.0)	72 (14.0)	34 (7.0)	-
<b>Problem identification</b>				
Problem stated	435 (85.0)	70 (14.0)	8 (1.0)	-
Identification of the related factors	471 (91.8)	41 (8.0)	1 (0.2)	-
Documentation of signs and symptoms	470 (91.6)	41 (8.0)	2 (0.4)	-
Documentation of nursing concerns	454 (88.5)	55 (10.7)	4 (0.8)	-
<b>Planning</b>				
Documented short-term goals	443 (86.4)	66 (12.9)	4 (0.8)	-
Documented long-term goals	476 (92.8)	36 (7.0)	1 (0.2)	-
Expected outcomes	469 (91)	44 (9)	-	-
<b>Implementation</b>				
Documented implementation	420 (81.9)	63 (12.3)	30 (5.8)	--
Rationale for implementation	471 (91.8)	42 (8.2)	-	-
Evaluation of expected outcomes	455 (88.7)	43 (8.4)	15 (2.9)	-
<b>Completion of charts</b>				
Observation charts	135 (26.3)	290 (56.5)	88 (17.2)	-
Treatment charts	186 (36.3)	327 (63.7)	-	-
Input and output charts	338 (65.9)	175 (34.1)	-	-
Completed antenatal records	69 (13.5)	18 (3.5)	35 (6.8)	391 (76.2)
Completed partograph	48 (9.4)	14 (2.7)	17 (3.3)	434 (84.6)
Completed postnatal forms	31 (6.0)	17 (3.3)	25 (4.9)	440 (85.8)
Date of entry indicated	43 (8.0)	81 (16.0)	389 (76.0)	-
<b>Integration of patient care</b>				
Evidence of integration of patient care (use of nurses', doctors', and patients' information in decision making)	249 (48.5)	232 (45.2)	32 (6.2)	-
<b>COMPLETION OF CHARTS</b>				
The title of the nurse indicated	465 (90.3)	24 (4.7)	24 (4.7)	-
Erasing errors (single line)	16 (3.1)	8 (1.6)	4 (0.8)	485 (94.5)

Note: NO = Not documented, P = partially documented, FD = fully documented, NA = Not applicable.



physical examination, problem identification or diagnosis, planning, implementation, and completion of patients' records.

Nurses fully documented history taking in only 5% of records. The patient's vital signs were not documented in almost half (48%) of the records, and the physical examination was not documented in 79% of records. Full documentation of the identified problems was only observed in 2% of records. In records where nurses had documented the identified problem, related factors were only fully documented in one record (0.2%). Similarly, nursing concerns were only fully documented in 8% of records. Short- and long-term goals were not documented in most records (86% and 93%, respectively), and 91% of records had no expected patient outcomes documented. Furthermore, 81.9% of records had no documented implementation, and the rationale for implementation was not documented in 91.8% of records. In addition, most (88.7%) records had no documentation of the evaluation of patient care by nurses. In about 17% of the records, observations of temperature, pulse, and respiration were fully documented, and 63.7% of records had partially completed treatment charts. Input and output fluid balance charts were partially documented in 34.1% of records. In the obstetrics ward unit, among the 120 records reviewed at the antenatal ward 29% of them had fully documented antenatal charts. Furthermore, out of 79 charts for women who delivered at the study hospital, 22% of records had fully completed partographs. However, out of 73 postnatal charts, only 25 (34%) records were fully documented.

Around 90% of nurses' records were legible, and 76% included the date for the entry. However, nurses did not fully document their names in 44% of records, and most records (90.3%) did not include the title of the nurse who made the entry. Errors were erased in 28% of records, with errors in four (0.8%) records erased using a single line. Finally, fully documented integration of care was only evident in 6.2% of the records.

### 3.3. Comparison of Doctors' and Nurses' Documentation

Doctors' and nurses' documentation were compared to identify differences in their documentation processes. This comparison considered history taking, physical examination, diagnosis, planning, interventions/implementation, and completion of records. In addition, the quality of the documentation by each professional group was assessed using descriptive statistics, frequencies, and percentages, with chi-square tests used to examine the significance of the results (Table 4).

Analysis of the differences between doctors' and nurses' documentation indicated that doctors fully documented history taking significantly more often than nurses ( $n = 370$ , 72% vs.  $n = 72$ , 14%;  $p < 0.0001$ ). Overall, the physical examination was partially documented by doctors in 359 (70%) records and by nurses in 72 (14%) records. A comparison of the documentation of diagnosis by doctors and nurses showed that doctors fully documented the diagnoses significantly

**Table 4.** Comparison of doctors' and nurses' documentation processes.

Variable	Doctors (N = 513)	Nurses (N = 513)	C P-value
<b>History</b>			
Not documented	130 (25)	406 (79)	
Partially documented	13 (3)	35 (7)	
Fully documented	370 (72)	72 (14)	<0.0001
<b>Physical examination</b>			
Not documented	104 (20)	407 (79)	
Partially documented	359 (70)	72 (14)	
Fully documented	50 (10)	34 (7)	<0.0001
<b>Diagnosis</b>			
Not documented	38 (7)	435 (85)	
Partially documented	72 (14)	76 (15)	
Fully documented	403 (79)	2 (0)	<0.0001
<b>Plan of care</b>			
Not documented	23 (5)	443 (86.4)	
Partially documented	192 (37)	66 (13.4)	
Fully documented	297 (58)	4 (0.2)	<0.0001
<b>Implementation of care</b>			
Not documented	137 (27)	422 (82)	
Partially documented	186 (36)	61 (12)	
Fully documented	190 (37)	30 (6)	<0.0001
<b>Completion of records</b>			
Not documented	36 (7)	127 (25)	
Partially documented	108 (21)	308 (60)	
Fully documented	369 (72)	78 (15)	<0.0001

more often than nurses ( $n = 403$ , 79% vs.  $n = 2$ , proximally 0%;  $p < 0.0001$ ). A plan of care was fully documented in more records completed by doctors ( $n = 297$ , 58%) than in those completed by nurses ( $n = 4$ , 0.2%;  $p < 0.0001$ ). Doctors fully documented implementation of patient care significantly more than nurses ( $n = 190$ , 37% vs.  $n = 30$ , 6%;  $p < 0.0001$ ). Finally, a review of the completion of the records (e.g., investigations, consultations, and drug cards) showed that doctors fully documented the majority of their records ( $n = 369$ , 72%), and nurses fully documented just over one-third ( $n = 178$ , 35%) of their records. These findings were statistically significant ( $p < 0.0001$ ).

#### 4. Discussion

This study reviewed records for discharged patients who had stayed in selected

ward units at the study hospital for more than 24 hours over 1 month. The largest number of records was from the medical department. This may be attributed to the heterogeneous group of patients admitted to medical units compared with the narrowly defined patient groups admitted to other departments [26]. The consolidated number of records was obtained from the pediatric ward units. These records were more organized and complete as compared to the other records at the facility; the records forms were printed and readily available. These findings are supported by Chaturvedi *et al.* (2016), who assessed the quality of clinical documentation in India and found out that the tertiary health facility where printed documentation forms were available had a higher level of documentation in the health records compared to the other facilities. Similarly, the availability of completed records is a starting point for the integration of patient care. The results of this study showed there were issues related to documentation of patient care by both nurses and doctors.

#### **4.1. Documentation of Patient Care by Doctors**

In almost all the records reviewed, doctors documented the history of presenting complaints more frequently than other history components. [27] [28] emphasized that although taking a full patient history may seem time-consuming, it saves time when identifying clues for a diagnosis. Our review showed that 77% of the records had no documentation related to the patient's history of previous medications. Medication discrepancies occur when the admitting doctor does not perform drug reconciliation, meaning the review of previous medication for that patient is important to prevent prescription errors [29] [30]. It is also interesting that the examination of the cardiovascular system was documented more frequently than other systems. Around half of the records documented an examination of the cardiovascular system, whereas other aspects of physical examination were minimally documented. Barnawi *et al.* (2017), after their study that assessed the junior doctors' admission notes, state that the reasons for the grave omissions might be related to the perceptions that the details are unnecessary or time-wasting or the doctors may think that omitting the details may not affect the patient's care. Yet the omission has clinical implications, such as missed diagnoses, as a diagnosis may be made more easily using information obtained from a complete physical examination [31] [32] [33]. However, there could be other inevitable factors like lack of time caused by workover load and limited knowledge in the area of assessment and documentation skills. Similar institutional factors like lack of the appropriate diagnostic equipment might be one of the contributory factors to the incomplete records from the doctors [34].

Similarly, our results showed that in around half of the reviewed records, doctors fully documented planned procedures and interventions. This documentation highlighted any gap when procedures were not recorded, as it can be assumed that it did not happen [35]. Saravi *et al.* (2016) [23] investigated documentation of medical records in hospitals in Mazandaran and noted a reason for

incomplete records was that doctors and surgeons believed medical/surgical care required for patients was vital, whereas documentation was not considered part of treatment. It should be noted that the care plan is part of patients' permanent records and should be updated continuously [36].

Regarding the quality of documentation, doctors' records tended to be legible, dated and signed by the attending doctor, although few doctors indicated their designation. These results showed areas of good practice compared with a previous study by Davis *et al.* (2015) [37] that indicated time and date were documented in less than half of health records. Finally, doctors' documentation in almost half of the reviewed patient records did not show the integration of patient care; doctors' references to nursing documentation of care and patients' preferences were missing. This implied that decisions about patient care were made based on the doctors' assessment alone. Similar studies indicated that interdisciplinary collaboration improved care [38] [39].

#### **4.2. Documentation of Patient's Health Records by Nurses**

Patients' biographic data tended to be fully documented by nurses, suggesting that nurses sought to know their patients through documenting their demographic data [2]. However, nurses rarely documented other components of history taking. Similar results were reported in a study conducted in Uganda by [7], which showed documentation of nurses' assessments was rare. Substandard nursing assessment is associated with increased patient mortality [1] [39].

Our review indicated that nurses had documented vital signs (blood pressure, temperature, breathing effort) in almost half of the records, with blood pressure measurements documented more than the other vital observation components. However, other aspects of the physical examination were poorly documented. These findings were consistent with a previous study that found the physical assessment sets nurses used regularly in the clinical area were limited and mainly comprised vital signs [7] [39]. Research shows that several challenges may lead to incomplete records completed by the nurse; work overload, shortage of nurses, lack of knowledge regarding the importance of nursing documentation, limited in-service training, and lack of motivation from the nursing leadership [6] [9] [40]. Nurses have the opportunity to observe patients more frequently than other members of the interdisciplinary team. Therefore, physical examinations performed by nurses can have an immediate impact on patient care outcomes [39]. These results suggest that nursing education curricula need to be reviewed, and goals and activities set and implemented to emphasize the need for a complete patient assessment by nurses. Emphasis should be placed on the depth rather than the breadth of these activities. Nurses should be able to interpret assessment findings and apply clinical judgment and critical thinking skills. This can only be achieved if nursing models such as the nursing process are emphasized during patient care [41].

Nursing diagnoses were missing in most of the reviewed records. Among the

records where nurses had documented diagnoses, only one nurse used descriptive words to explain the problem. Similarly, a study by [21] found nursing diagnoses were documented in only 19% of records. Murphy *et al.* (2018) [42] noted that nurses gained self-sufficiency and control over their practices by developing complete nursing diagnoses. This review showed that nurses did not document goals and expected outcomes. These results were consistent with a Jamaican study, where less than 5% of records had documentation of goals [43]. In contrast, an Australian study by Wang *et al.* (2015) [44] found goals were sufficiently documented but were abstract rather than achievable and were not patient-centered. Nurses' documentation of the implementation of care was mainly concerned with documenting drugs administered to patients, whereas they omitted the evaluation of care given. These results were consistent with a study by Instefford *et al.* (2014) [21], where nursing interventions were specific in content and frequency in only 5% of records. In this situation, it becomes difficult to ascertain whether the patient has achieved the expected outcomes.

In terms of quality, nurses' records were legible, but they did not fully document their name or their designation. Similar findings were reported in Jordan, where hand-written records lacked nurses' signatures [9]. Research has shown that EHR has a better structure than hand-written records; however, EHR has pitfalls that could be related to the structure and layout of data entry. Another issue could be related to EHR being highly or partially structured [45]. However, clinical supervision improves the completion of health records [46].

We found minimal evidence of full integration of patient care. It was evident that nurses were only implementing doctors' orders when they recorded the administration of medications. As noted by Pain *et al.* (2017) [47], nurses seek information from health records for direction and support in patient care. This may partly explain why nurses documented drugs that were ordered by doctors. Our comparison of doctors' and nurses' documentation of patient care showed that doctors tended to complete more documentation for all aspects of patient health records than nurses. However, most documentation was only partially completed by both doctors and nurses. Asamani *et al.* (2014) [48] examined current practices of nursing care documentation in Ghana and reported similar results. They revealed that information captured in physicians' records was missing in nurses' health records and asserted that nursing documentation was inadequate for estimating the actual care given.

The effect of inadequate and incomplete records on patient care may include adverse events where the patients suffer serious harm. Similarly, omissions in treatment and lack of continuity and integrated patient care may lead to poor-quality care. These events compromise the outcome of the patient and may lead to an increased hospital stay, increased cost of patient care, and legal actions being taken against the health care providers [13] [14] [49].

In our study, the doctors' and nurses' documentation processes were reviewed with two different tools; both tools measured one construct in the standards of

these professions [50]. The results show the documentation process at the facility under study. Regarding the findings in this study, the documentation process may be improved in terms of assessment, diagnosis, planning implementation, and evaluation. Furthermore, to improve the quality of the documentation, the records must be legible and dated, and the integration of doctors' and nurses' documentation in the records must be evident. Similarly, the name and title of the doctor or nurse must be indicated, and errors erased with a single line [38]. The quality of the records can be enhanced using Electron Health Records (EHR), where some of the required documentation is automated [4] [5]. Challenges in the documentation are still evident as indicated in the previous research studies [6] [7] [8], but these challenges may be overcome by motivating the health care workers through clinical supervision, recognition of excellence in documentation, and the use of documentation champions to improve the completeness of health records [34].

## 5. Limitations

The different departments at the study hospital used different documentation record forms; some departments documented care using plain paper and exercise books, and others used more structured documentation forms. This affected the audit process as there were inconsistencies in identifying details from the less structured record forms.

## 6. Conclusion

Good documentation communicates actions, improves coordination among the interdisciplinary team, and improves outcomes of care on time. Although health workers struggle to accurately document care, omissions, fragmentation of care, and inconsistency in the documentation were observed. Failure to document care presents a risk to patient safety. Documentation of patient care is a prerequisite for the integration of care, and integration leads to improved care outcomes.

## Publication

The results of this study will be published in an open research journal to enhance its accessibility for the policymakers and the nurses who are the stakeholders. Similarly, it will be presented at different fora, at conferences both nationally and internationally, and to the policymakers at the Ministry of Health and at the local facility levels to enhance the patient care documentation and integration of care, particularly in Uganda.

## Recommendations

This paper describes the documentation processes using quantitative research methods; it does not bring out the perceptions of the health workers regarding the documentation processes, facilitators, and challenges at each ward unit level.

Therefore, a qualitative research study would be appropriate to explain the findings in the quantitative study at each ward unit level.

### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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