Effect of Nursing Audit Feedback on the Documentation of Nursing Care Actions in a Tertiary Hospital in the Southeastern Nigeria: A Quasi-Experimental Study

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ABSTRACT

Accurate nursing documentation is essential for maintaining continuity of care, ensuring patient safety, and evaluating nursing performance. However, documentation practices remain suboptimal in many healthcare settings. Nursing audit feedback interventions have been widely used to improve clinical practice, yet their effectiveness in improving nursing documentation remains insufficiently explored in low-resource healthcare systems. This study evaluated the effect of nursing audit feedback intervention on the documentation of nursing care actions in in a tertiary hospital in the Southeastern Nigeria. A quasi-experimental pre- and post-intervention study was conducted in the federal tertiary hospital. One hundred and fifty patient care folders from medical and paediatric wards were selected using quota sampling. Documentation of 28 nursing care actions was assessed using a validated Nursing Action Audit Checklist. Baseline documentation was evaluated prior to the intervention, followed by the implementation of a structured audit feedback intervention. Post-intervention documentation was assessed two months later. Data were analyzed using descriptive statistics, Chi-square tests, and relative risk estimation at a significance level of $p < 0.05$. Findings indicated that only 6 of 28 nursing care actions (21.4%) were adequately documented. Following the audit feedback intervention, adequate documentation increased to 24 of 28 actions (85.7%). Statistical analysis demonstrated a significant improvement in documentation practices ($\chi^2 = 23.26$, $p < 0.001$). The intervention increased the likelihood of adequate documentation by approximately fivefold (RR = 5.50, 95% CI: 2.17–13.91). In conclusion, nursing audit feedback significantly improved the documentation of nursing care activities in the study setting.

Keywords: Nursing documentation, Nursing Audit and feedback, Nursing care, Clinical audit

INTRODUCTION

Accurate nursing documentation constitutes a core component of professional nursing practice and is essential for ensuring safe, effective, and continuous patient care. It involves the systematic recording of nursing assessments, interventions, and patient outcomes, thereby providing an official account of the care delivered during hospitalization.[1] In addition to supporting clinical decision-making, documentation serves as an important communication medium among healthcare professionals and facilitates continuity of care across different levels of the healthcare system.[2]

Within hospital environments, nurses assume extensive responsibilities that extend from patient admission to discharge. These responsibilities include patient assessment, formulation of nursing diagnoses, development and implementation of care plans, administration of therapeutic interventions, and evaluation of patient outcomes.[3] Nurses also perform a variety of supportive care activities such as health education, monitoring of fluid balance, assisting with mobility, providing emotional support, and maintaining patient hygiene.[4]

Given the breadth of nursing responsibilities, proper documentation of all nursing activities is essential for maintaining professional accountability and ensuring that patient care is accurately reflected in clinical records.

Failure to document nursing interventions may create gaps in patient management, weaken interprofessional communication, and compromise continuity of care.[5]

Quality improvement strategies such as nursing audit feedback have been widely recommended as mechanisms for improving clinical practice and documentation standards. Audit and feedback involve the systematic review of professional performance followed by the provision of structured feedback intended to promote adherence to recommended practice standards.[6] Although this approach has been widely studied in medical and surgical practice, relatively limited research has explored its impact on nursing documentation.[7]

Moreover, nursing practice differs from physician practice in several important ways, including the collaborative nature of nursing work and the continuous bedside presence of nurses.[8] Consequently, interventions aimed at improving documentation practices must consider the unique workflow and organizational structure of nursing practice. Effective nursing documentation should demonstrate completeness, accuracy, timeliness, and clarity to support coordinated patient care.[9]

Documented nursing activities also serve as measurable indicators of nursing performance and healthcare quality. Comprehensive documentation ensures that information regarding patient care can be communicated effectively across healthcare settings, thereby facilitating individualized care and improving patient outcomes.[10] Given these benefits, interventions aimed at improving documentation quality remain a priority within healthcare systems.

Objective of the Study

This study aimed to determine the effect of a nursing audit feedback intervention on the documentation of nursing care actions in patient care folders in a tertiary hospital in the Southeastern Nigeria.

Hypothesis

The study tested the following null hypothesis:

H_0: Nursing audit feedback intervention will not produce a statistically significant improvement in the documentation of nursing care actions.

METHODS

Study Design and Setting

This study employed a quasi-experimental pre- and post-intervention design to evaluate the effect of audit feedback on nursing documentation practices.

The research was conducted at Nnamdi Azikiwe University Teaching Hospital, Nnewi, a federal tertiary healthcare institution that serves as a referral centre for several public, private, and mission hospitals in Anambra State and neighbouring regions of Southeastern Nigeria.

Study population and sampling

The study population comprises 279 nursing care folders of individuals admitted into medical, surgical, and paediatric wards and cared for by 81 nurses in the tertiary hospital. Quota sampling technique was utilized to select 150 nursing care folders of patients admitted into the tertiary hospital (sample size of 150 nursing care folders). The nursing care folders were selected such that 60 folders were drawn from male medical ward, 60 folders were drawn from female medical ward, and 30 folders were drawn from paediatric ward. The inclusion criteria included nursing care records with complete demographic information and for individuals currently on admission at the time of the study. Patients who were less than 5 days on admission and presumably short-stay patients were excluded from this study.

Folders were included if they contained complete demographic information and belonged to patients who were actively admitted during the study period. Records belonging to patients admitted for fewer than five days were excluded to minimize the influence of short-stay admissions on documentation patterns.

Instrument Development and Validation

Data were collected using a researcher-developed Nursing Action Audit Checklist (NAA-Checklist) consisting of 28 items designed to evaluate documentation of essential nursing care activities.

Each item had three response categories:

- Yes – action documented
- No – action not documented
- Not applicable

Face and content validity of the instrument were established through expert review by five nurse researchers from public universities in Southeastern Nigeria. The experts assessed the relevance of each item to the study objective. A content validity index of 0.883 was obtained, indicating strong agreement among reviewers.[12]

Intervention Procedure

Data collection occurred between November 2019 and March 2021 and consisted of three phases.

Baseline Audit

In the first phase, the research team and ward managers conducted an audit of patient care folders using the NAA-Checklist to determine the baseline level of nursing documentation.

Audit Feedback Intervention

Following the baseline audit, the research team prepared structured written feedback summarizing observed documentation gaps and providing recommendations for improvement. The feedback was delivered to nursing staff within 72 hours of the audit.

Post-Intervention Assessment

Two months after the intervention, patient care folders were reassessed using the same checklist to evaluate changes in documentation practices.

To minimize observer bias, nurses were not informed of the specific date scheduled for the post-intervention assessment.

Data Analysis

Data were analyzed using SPSS version 25. Descriptive statistics (frequencies and percentages) were used to summarize documentation patterns. Differences between baseline and post-intervention documentation were examined using the Chi-square test of independence, and relative risk (RR) was calculated to determine the magnitude of improvement. Statistical significance was set at $p < 0.05$.

Ethical Considerations

Ethical approval was obtained from the Institutional Review Board of Nnamdi Azikiwe University Teaching Hospital (Approval ID: NAUTH/CS/93/Vol.3/66).

The study adhered to the principles of the Helsinki Declaration, and confidentiality of patient information was strictly maintained.

RESULTS

Table 1: Documented nursing care actions prior to nursing audit feedback (n = 150)

Documented nursing care	Yes n (%)	No n (%)	NA n (%)
Patient's vital signs observed on admission	68 (45.3)	82 (54.7)	-
Patient's urine investigated for abnormalities on admission	71 (47.3)	79 (52.7)	-
Patient given ward orientation during the admission process including visiting, medication and meal times	57 (38.0)	93 (62.0)	-
Physical examination carried out: Head to toe examination	63 (42.0)	87 (58.0)	-
Physical examination carried out: Palpation	58 (38.7)	92 (61.3)	-
Physical examination: Auscultation	58 (38.7)	92 (61.3)	-
Daily (routine) vital signs observation	84 (56.0)	66 (44.0)	-
Weighing of patient	53 (35.3)	97 (64.7)	-
Intake and output recording	67 (44.7)	79 (52.7)	4 (2.7)
Nursing care chart put in place during the admission process	94 (62.7)	56 (37.3)	-
Diet discussed and planned in line with the patient's problem	61 (40.7)	65 (43.3)	24 (16.0)
Rules guiding the ward explained to the patient and relation	74 (49.3)	76 (50.7)	-
Introduction of patient to other patients on admission	47 (31.3)	99 (66.0)	4 (2.7)
Daily nursing cares rendered and recorded in the care plan chart	75 (50.0)	69 (46.0)	6 (4.0)
Introduction to insurance scheme (if registered)	24 (16.0)	73 (48.7)	53 (35.3)
Health education of patient in line with the existing illness	42 (28.0)	106 (70.7)	2 (1.3)
Serving of bed pan/urinal at appropriate time/when needed	45 (30.0)	98 (65.3)	7 (4.7)
Turning of patient (unconscious and bed-ridden) 2 hourly	56 (37.3)	77 (51.3)	17(11.3)
Bed bath	65 (43.3)	81 (54.0)	4 (2.7)
Oral care	61 (40.7)	88 (58.7)	1 (0.7)
Advised patient on personal hygiene	73 (48.7)	77 (51.3)	-
Discussed the need to carry out investigation ordered by the doctor with the patient.	79 (52.7)	69 (46.0)	2 (1.3)

Serve meal at appropriate time especially those on special diet.	50 (33.3)	93 (62.0)	7 (4.7)
Treatment of pressure areas	61 (40.7)	56 (37.3)	33 (22.0)
Timely serving or administration of drugs	74 (49.3)	73 (48.7)	3 (2.0)
Explain possible side effect(s) of drugs to the patient	49 (32.7)	99 (66.0)	2 (1.3)
Diversion therapy to manage anxiety	57 (38.0)	92 (61.3)	1 (0.7)
Advice patient before discharge	68 (45.3)	82 (54.7)	-

Abbreviation: NA = Not Applicable, n = frequency, % = percentage

Table 1 summarized the documented nursing services prior to audit and feedback intervention and showed that the majority of administered nursing services were not documented in 22 out of 28 nursing care actions.

Table 2: Documented nursing care actions after nursing audit feedback (n = 150)

Documented nursing care	**Yes n (%)**	**No n (%)**	**NA n (%)**
Patient's vital signs observed on admission	126 (84.0)	24 (16.0)	-
Patient's urine investigated for abnormalities on admission	59 (39.3)	91 (60.7)	-
Patient given ward orientation during the admission process including visiting, medication and meal times	76 (50.7)	74 (49.3)	-
Physical examination carried out: Head to toe examination	108 (72.0)	44 (28.0)	-
Physical examination carried out: Palpation	94 (63.7)	56 (36.3)	-
Physical examination: Auscultation	82 (54.7)	68 (45.3)	-
Daily (routine) vital signs observation (consistent)	116 (77.3)	34 (22.7)	-
Weighing of patient	67 (44.7)	61 (40.7)	22 (14.4)
Intake and output recording	102 (68.0)	48 (32.0)	-
Nursing care plan chart put in place during the admission process	98 (65.3)	52 (34.7)	-
Diet discussed and planned in line with the patient's problem	65 (43.3)	52 (34.7)	33 (22.0)
Rules guiding the ward explained to the patient and relation	101 (67.3)	49 (32.7)	-
Introduction of patient to other patients on admission	52 (34.7)	64 (42.7)	34 (22.0)
Daily nursing care rendered properly recorded in the care plan chart	82 (54.6)	68 (45.4)	-
Introduction to insurance scheme (if registered)	33 (22.0)	84 (56.7)	30 (20.0)
Health education of patient in line with the existing illness	102 (68.0)	42 (32.0)	-

Serving of bed pan/urinal at appropriate time/when needed	59 (39.3)	44 (29.3)	47 (31.4)
Turning of patient (unconscious and bed-ridden) 2 hourly	62 (41.3)	53 (35.3)	35 (23.4)
Bed bath	56 (36.0)	46 (30.7)	50 (33.3)
Oral care	55 (36.7)	32 (21.3)	63 (42.0)
Advised patient on personal hygiene	79 (52.7)	71 (47.3)	-
Discussed the need to carry out investigation ordered by the doctor with the patient.	81 (54.0)	69 (46.0)	-
Serve meal at appropriate time especially those on special diet.	80 (53.3)	64 (42.7)	6 (4.0)
Treatment of pressure areas	81 (54.0)	30 (20.0)	39 (26.0)
Timely serving or administration of drugs	101 (67.3)	49 (32.7)	-
Explain possible side effect(s) of drugs to the patient	69 (46.0)	81 (54.0)	-
Was patient taken on diversional therapy?	53 (35.3)	83 (55.3)	14 (9.4)
Was patient advised before discharge?	88 (58.7)	62 (41.3)	-

Abbreviation: NA = Not Applicable, n = frequency, % = percentage

Table 2 summarized the documented nursing care actions after nursing audit and feedback and showed that the majority of administered nursing services were not documented in 4 out of 28 nursing care actions.

Table 3: Overall documentation status of nursing care actions before and after intervention

Documentation status	**Pre-intervention (n=28 actions)**	**Post-intervention (n=28 actions)**
Adequately documented	6 (21.4%)	24 (85.7%)
Not documented	22 (78.6%)	4 (14.3%)

Table 4: Chi square test of association between improvement in nursing care actions and nursing audit feedback **N = 28 items**

Variables	**Documentation of nursing actions**		**df**	**χ^2**	**RR (95% CI)**	***p***
	Not documented	*Adequately documented*	1	23.26	5.50(2.17-13.91)	<0.001
Pre-intervention	22	6				
Post-intervention	4	24				

df = degree of freedom, RR = relative risk, p = probability value; $p < 0.05$ = significant

Table 4 summarized the test of hypothesis and showed that nursing audit feedback significantly increased the likelihood of adequate documentation of nursing care actions by about 5 folds ($p < 0.001$).

DISCUSSION

The present study demonstrated that documentation of nursing care activities in the study setting was markedly inadequate prior to the implementation of the audit feedback intervention. Baseline findings showed that nearly four-fifths of the expected nursing care actions were not documented in patient care folders. This finding highlights a substantial gap in clinical documentation practices and underscores the need for systematic quality improvement initiatives within nursing practice.

Incomplete documentation poses significant risks for patient safety and healthcare quality. Clinical records serve not only as legal documentation of care but also as a critical communication tool that supports interdisciplinary collaboration and continuity of care. When nursing interventions are poorly documented, important clinical information may be lost, potentially compromising patient outcomes and limiting the ability of healthcare teams to evaluate the effectiveness of care interventions.

The high rate of undocumented nursing activities observed in this study aligns with findings reported in similar studies conducted in resource-limited healthcare environments. For instance, research conducted in Jamaica reported that over 80% of nursing care activities were inadequately documented in patient records. These similarities suggest that documentation challenges may be systemic in healthcare settings where structured documentation monitoring systems are limited.

Conversely, studies conducted in healthcare systems with advanced digital infrastructure have reported substantially lower levels of documentation deficiencies. For example, a Norwegian study reported only 29% incomplete nursing documentation, which was largely attributed to the use of electronic health record systems that incorporate automated prompts and structured documentation templates. Such systems reduce the likelihood of omitted entries by guiding clinicians through required documentation elements.

Following the implementation of the audit feedback intervention, the proportion of undocumented nursing care actions decreased dramatically from 78.6% to 14.3%. This substantial improvement indicates that audit-based quality improvement strategies can effectively influence professional behavior and enhance compliance with documentation standards.

Audit and feedback interventions operate primarily by increasing practitioners' awareness of performance gaps and providing structured guidance for improvement. When clinicians receive timely feedback regarding their performance relative to established standards, they are more likely to modify their practices to align with recommended guidelines. The improvement observed in this study therefore supports the growing body of evidence demonstrating that audit feedback represents an effective strategy for improving healthcare quality.

The magnitude of improvement observed in the present study is consistent with findings reported in previous studies conducted in the United Kingdom and Australia, where audit-driven interventions significantly improved documentation completeness. These studies similarly reported that structured audit processes enhanced the recording of nursing activities such as patient education, vital signs monitoring, and care planning.

The significant association observed between audit feedback and documentation improvement further reinforces the effectiveness of this intervention. The relative risk estimate indicated that the likelihood of adequate documentation increased approximately fivefold following the intervention. This finding suggests that even relatively simple feedback mechanisms can produce meaningful improvements in clinical documentation practices.

The structured Nursing Action Audit Checklist (NAA-Checklist) used in this study may have contributed to the effectiveness of the intervention. Checklists provide a systematic framework that standardizes expectations and reduces variability in documentation practices. By clearly outlining the required components of nursing care documentation, the checklist likely facilitated greater consistency and completeness in record-keeping.

Despite these promising findings, the study has some limitations. The NAA-Checklist was developed specifically for this research and has not yet been widely validated in other healthcare settings. Consequently, comparisons with existing literature are somewhat limited. Future studies should consider applying and validating the checklist in diverse clinical contexts to further assess its reliability and generalizability.

Overall, the findings of this study provide strong evidence that audit and feedback interventions can serve as effective and feasible strategies for improving nursing documentation practices in tertiary healthcare institutions, particularly in resource-constrained settings.

CONCLUSION

The results of this study demonstrate that audit and feedback interventions can significantly enhance the documentation of nursing care activities in hospital settings. Implementation of the audit feedback system increased adequate documentation from 21% to 86%, representing a substantial improvement in compliance with documentation standards.

Routine integration of structured audit feedback mechanisms into nursing practice may therefore represent a practical strategy for strengthening clinical documentation and improving the quality and accountability of nursing care in healthcare institutions.

Consent to Participate

Permission to access patient records was obtained from ward managers and hospital administration.

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Conflict of Interest

The authors declare no conflicts of interest.

Data Availability

The datasets generated and analyzed during the study are available from the corresponding author upon reasonable request.

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