

Nursing Documentation in Intensive Care Unit at Tertiary Level Public Hospitals in Bangladesh

Mst Thomina Akter¹ Mohammad Nurul Anowar² Md Abdul Latif³

¹RN, MSN Faculty of Nursing Management National Institute of Advanced Nursing Research and Education, Dhaka.

²RN, PhD, Faculty of Adult and Elderly Health Nursing, NIANER, Dhaka

³RN, PhD, Faculty of Nursing Management, NIANER, Dhaka

Corresponding Author: Mst Thomina Akter
(MSN, RN), Nursing Management, NIANER, Dhaka

Abstract

Background: Nursing documentation is the basic part of nurses' job responsibilities that ensure and guide the continuity of patient care. It promotes structured, constant and effective communication between caregivers and patients' safety. **Objective:** This study aims to explore the current practice of nursing documentation and its standard for intensive care unit (ICU) patients at two tertiary public hospitals in Bangladesh. **Methods:** A descriptive study design was used to evaluate 80 conveniently selected ICU patients' records. Data were collected using nursing care documentation auditing checklist and standard nursing care documentation questionnaires (Cronbach Alpha = 0.70). Descriptive statistics were used to describe the finding of the study. **Results:** The study found that nursing care to the ICU patients was not properly documented in the patients' records. Highly maintained nursing documentation temperature for 93% followed by medication chart was maintained for 80% patients. But some important nursing care activities like Glasgow coma scale; bed bath, heparin lock before and after medication etc. were not totally documented in patient's records. The standards of nursing documentation were very poor. Many standard criteria of nursing documentation were not also totally maintained such as late entries were declared, notes were clear about patient's complains or signs and symptoms, or nursing interventions and nurses' assessment findings were included in the nurses notes. **Conclusion:** The study affirmed the poor nursing documentation of ICU patients in Bangladesh. The policymakers and administrators should take initiative in establishing standardized nursing documentation system throughout the country to ensure the continuity and quality of care.

Key Words: Documentation, Records, Nursing care, Nurses notes,

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I. Introduction

Nursing documentation is the basic part of nurses' job responsibilities that ensure and guide the continuity of patient care in all health care setting including intensive care unit (Wahab & Elsayed, 2014). It promotes structured, constant and effective communication between caregivers and safety of patients care (Wang, Hailey & Yu, 2011). Nursing documentation is the record of nursing care that is planned and delivered to individual clients by qualified nurses or others caregivers under the direction of qualified nurses (Urquhart, Currell, Grant, & Hardiker, 2009). It is a written series record that communicates with patient's status and care or services provided during the visit of patients (Machudo & Mohidin, 2015). Nursing documentation is the written evidence of nursing practice and reflects the accountability of nurses to patients (Mtsha, 2009). Therefore, nursing documentation is an integral part of clinical documentation that ensures continuity and quality of nursing care.

Nursing documentation in ICU is vital regarding safe, ethical and effective nursing practice in clinical areas. It has been one of the most important functions of nurses since the time of Florence Nightingale because it serves multiple purpose (Cheevakasemsook, 2006). The importance of proper documentation in nursing cannot be overstated. Failure to nursing documentation of a patient's condition, medications administered, or anything else related to patient care can result in poor outcomes for patients, and liability issues for the facility, the physician in charge, and the nurse (College of Registered Nurses of British Columbia, 2014). Proper nursing documentation provide many function for patients, physicians, nurses and other care providers, and families. Accurate documentation is important for communication and continuation of care to everyone (American Nurses Association, 2010). Accurate documentation is an important prerequisite for individual and safe nursing

care. It is a severe threat for the individuality and safety of patient care if important aspects of nursing care remain undocumented (Mtsha, 2009).

Nursing documentation in ICU is important for quality assurance of the information contained in patient's charts is often used to evaluate the quality of service and the appropriateness of care delivered by nurses. Proper nursing documentation also establishes professional accountability, demonstrating a nurse's knowledge and judgment skills, and it can help funding and resource management. Nursing documentation is also very important for legal regarding patient's records that can be used as evidence in court. (Nakate et al, 2014). Clear, accurate, timely and accessible documentation is an essential element of safe, quality and evidence-based nursing practice (ANA, 2010). Incomplete, inaccurate, untimely, illegible or manipulated documentation can lead a number of undesirable outcomes (ANA, 2009) like medication error. Nursing is not complete until the care has been properly documented and the old saying "if it was not documented, it was not done" (Olivier, 2010). Additionally, nursing documentation is important for education, research, quality assurance and for reimbursement by third party claimants (Delaney & Lander 2011). Several studies have been done which focus on the benefits of nursing documentation. A study done by Bjorvell et al. suggests that the nurses perceive nursing documentation as an important element in their practice and also to ensure the safety of the patient (Bjorvell, 2002).

Main factors of poor documentation are poor workplace environment, wide workloads, difficult documentation forms; incomplete language, inadequate resources and hospital culture (Prideaux 2011; Jefferies, Johnson & Nicholls 2011; Taylor 2003). Some factor which are influencing the poor documentation system such as- motivational factor, lack of awareness, attitude problem inadequate knowledge and skill regarding documentation system and job accountably. nursing shortage, high patients workload, lack of training on documentation, shortage of resources like PC, Paper, form, color pencil marker and lack of establish recording & reporting system etc (Nakate et al, 2014). The essentials signify standard medical documentation as an enormously important requirement for providing safe and quality care to patients and in a broader perspective developing clinical process (College of Registered Nurses of British Columbia, 2014). Existing documentation system is very poor in Bangladesh especially in public hospital.

There are different systems to maintain nursing documentation. The currently most using documentation systems are the source oriented record; the problem oriented medical record; the problem interventions evaluation (PIE) model; focus charting; charting by exception (CBE); computerized documentation; and case management. Therefore, documentation practices can make the difference between positive and negative legal outcomes (American Nurses Association, 2017). However it is highly related to patients' care outcomes that should contain core areas such as: nutritional status, pain, sleep, urinary- and bowel elimination, skin and tissue, cognitive and psychosocial factors. Standard documentation carry on capturing by nurse such as vital signs, medication administrations, intake and output chart, admissions/discharges, births/deaths, and change of shift reports. For example, admissions/ discharges and births/deaths are recorded in a register book maintained in each unit (Nakate et.al, 2014). Basically two types of nursing documentation systems in nursing care exist, firstly manual or traditional documentation and secondly electronic nursing documentation (Mtsha, 2009).

The quality of nursing documentation examined and reported that although 64.7% of nursing documenting was acceptable, only 8.7% of nursing documentation was of good quality and 26.7% of nursing documentation was of poor quality (Setz VG et al, 2015). In Globally, reported the quality of nursing documentations in CCU as 17.09% in a desirable level, 35.81 % incomplete and 48% not recorded and in nurses' point of view, (Hanifi and Mohammadi.2008). Results of the relevant studies (Raskovic, 2010) showed that 54.2 % of nurses with secondary education do not perceive documentation as a nursing supportive tool. It was also established that 60.6 % of the respondents from the primary level of health care, 30.3 % from secondary level and 9.1 % from tertiary level do not use nursing documentation in their provision of care

Moreover, huge shortages of nurses are found in most of the hospital in Bangladesh. There are an estimated 3.05 physicians per 10,000 population and 1.07 nurses per 10,000 populations (World Bank, 2009). In the context of Bangladesh has not found yet of any study in this field. Therefore researchers would like to interest to explore the current practice of nursing documentation in intensive care unit patient at tertiary level public hospital in Bangladesh.

Objectives of the study

The aims of the study were (1) to describe the socio-demographic data of ICU patients. (2) to explore the current practice of nursing care documentation for ICU patients. (3) to identify the standard criteria of nursing care documentation for ICU patients.

II. Materials And Methods

In this chapter the methods of the study has been described including the points; study design, study setting, data source, sampling technique, research instruments, ethical issues, data collection procedure and data analysis.

Study Design

A descriptive study design was used to explore the current practice of nursing documentation and its standard for the patients of intensive care unit (ICU) in two tertiary public hospitals of Bangladesh.

Data source

Data were collected from the 80 ICU patients' records of Mugda Medical College and Shaheed Suhrawardy Medical College Hospital, Dhaka. The samples were selected conveniently. The critical patients with different medical and surgical diseases and condition are normally admitted in ICU. While selecting the patients' records, the researcher considered the diversity of the patient's problems. In this study 80 ICU patients' nursing care records were conveniently selected to collect data.

Research Instrument

The data collection instrument consists of two parts. Part I. Nursing care documentation check list: It consists of two sub parts: i) Demographic data (8 items) and ii) Nursing care activities (30 items). Part 2. Standard of Nursing Care Documentation questionnaire (14 items). First two parts of data collection tools were prepared by researcher based on existing literature review. Parts 3 was developed by Asamani (2014) and permission taken from him for used in this study.

Data Collection

Prior to data collection permission was taken from Institutional Review Board (IRB), NIANER and Bangabandhu Sheikh Mujib Medical University (BSMMU). Permission was taken from Director and nursing superintendent of both places. Written and verbal consent were taken from the patient's legal guardian. Data were collected from the patient records using auditing check list and assess standard. All confidentiality was maintained. Data was collected from December, 2018 to January 2019.

Data Analysis

After completion of data collection, data were process and analyzed by using computer statistical package. Descriptive statistics such as frequency, percentages, mean, and standard deviation were used to describe the socio demographic characteristics, nursing documentation and standard of documentation.

III. Result

This chapter presents the results of the analysis of the nursing documentation system for the patients of intensive care units in three sections. The first section provides about patients' socio-demographic data. The second sections explore the current practice of nursing care documentation of ICU patients. The third section included standard of nursing documentation for ICU patients.

1. Demographic data of the intensive care unit patients

Table 1 shows the distribution of socio demographic data. The result showed that patients' ages in the study were ranged from 13 to 99 years with the average age of 50.45(20.19) years. Most of them were male (68.8%), married (73.8%) and Muslim (88.8%). Majority of ICU patients were unconscious (48.7%) and within supporting ventilator (48.0%). On the basis of medical diagnosis most of patients were of hypertension (23%) followed by diabetes militias (13%), respiratory failure and chronic kidney diseases (9%). The average admission days of the patients were 05 days in the range of 01-60 days.

Table 1. Distribution of Demographic data of the Intensive Care Unit Patients (N=80).

| Characteristics | Categories | n (%) | M ± SD |
|---------------------------------------|-------------|----------|-------------|
| Age in years; (Mini =13 Maxi = 99) | <30 Years | 18(22.5) | 50.45±20.19 |
| | 30-60 years | 34(42.5) | |
| | >60 years | 28(35) | |
| Gender | Male | 55(68.8) | |
| | Female | 25(41.3) | |
| Marital status | Married | 59(73.8) | |
| | Single | 21(26.3) | |
| Religion | Muslim | 71(88.8) | |
| | Hindu | 7(8.8) | |
| | Christian | 2(2.4) | |

| Characteristics | Categories | n (%) | M ± SD |
|--|--------------------------|----------|------------|
| Level of consciousness | Conscious | 32(40.0) | |
| | Semiconscious | 9(11.3) | |
| | Unconscious | 39(48.7) | |
| Ventilation | Yes | 48(60.0) | |
| | No | 32(40.0) | |
| Medical diagnosis | Hypertension | 23(29.1) | |
| | Diabetes mellitus | 13(16.2) | |
| | Respiratory failure | 9(11.2) | |
| | Chronic kidney disease | 9(11.2) | |
| | Ischemic stroke | 8(10.0) | |
| | Chronic liver disease | 8(10.0) | |
| | Aspiration pneumonia | 7(8.7) | |
| | Subdural hemorrhage | 4(5.0) | |
| | Left ventricular failure | 4(5.0) | |
| | Myocardial infraction | 4(5.0) | |
| Duration of admission on data collection (days) Mini – 1, Maxi - 60 | <5days | 77(96.3) | 6.15±10.92 |
| | >5 days | 3(3.8) | |

2. Current Practice on Nursing Care Documentation for all Patients in ICU

Table 2 shows the result of the analysis of the information of 30 different patients which were regularly documented in patient record .The finding of this study showed that none of the nursing care activities were regularly documented. It was found that the patient’s temperature was highly documented for 75(93.7%) times of the ICU patients followed by medication chart maintenance for 67(83.8%) patients, and respiration rate was recorded for 64(80%).But some very important nursing care activities for ICU patients including Glasgow coma scale, bed bath, heparin lock before and after medication, sterile dressing, pulmonary artery pressure and central venous pressure, care of intra venous cannal and central venous catheter were not totally documented in patients records.

Table 2. Distribution of Current Practice on Nursing Care Documentation for all Patients in ICU (N = 80).

| Nursing cares activities | Yes | |
|---|-----|------|
| | n | % |
| Temperature records | 75 | 93.7 |
| Pulse were records | 60 | 75.0 |
| Respiration rate records | 64 | 80.0 |
| Blood pressure were records | 60 | 75.0 |
| Records partial Oxygen saturation | 58 | 72.5 |
| Medication chart maintain | 67 | 83.8 |
| Intra Venus Infusions noted | 48 | 57.8 |
| Nago gastric tube feeding noted | 50 | 62.2 |
| Inotropic Support noted | 32 | 40.0 |
| Urine output chart maintain | 39 | 42.9 |
| Blood sugar record and chart maintain | 44 | 55.0 |
| Maintain Oxygen source and flow rate | 48 | 60.0 |
| Records nebulizer therapy | 34 | 42.5 |
| Maintain position change 2hourly | 20 | 25.0 |
| Maintain oral care | 12 | 15.0 |
| Nurse notes maintain | 20 | 25.0 |
| Maintain Glasgow coma scale | 00 | 00.0 |
| Care of intravenous cannal | 00 | 00.0 |
| Care of central venous catheter | 00 | 00.0 |
| Care of Foleys Catheter | 00 | 00.0 |
| Maintain pulmonary artery pressure | 00 | 00.0 |
| Maintain central venous pressure | 00 | 00.0 |
| Maintain bed bath | 00 | 00.0 |
| Maintain sterile dressing | 00 | 00.0 |
| Maintain heparin lock before and after medication | 00 | 00.0 |

3. Current Practice on Nursing Care Documentation for ventilated patients in ICU.

Table 3.the result shows that 5 special activities related to nursing care for 48 ventilated patients were not regularly documented in patient’s records. All of those nursing activities documented for less than 50% of ventilated patients.

Table 3. Distribution of Current Practice on Nursing Care Documentation for ventilated patients in ICU (n=48).

| Nursing cares activities | Yes | |
|---|-----|------|
| | n | % |
| Maintain ventilator setting with vcv mode | 29 | 36.3 |
| Records ventilator setting with tidal volume | 26 | 32.5 |
| Maintain ventilator setting with respiratory rate | 27 | 33.8 |
| Maintain ventilator setting with Fio2 | 30 | 37.5 |
| Maintain ventilator setting with PEEP | 25 | 31.3 |

4. Standard Criteria of Nursing Care Documentation in Intensive Care Unit Patients.

Table 4 shows the distribution of standard criteria of nursing care documentation of ICU patients. This result showed that some standard criteria were not totally maintained in writing nurses progress notes. Late entries were not declared written on the document sheet. Notes were not clear about patients' complains, nursing interventions, patients' response to the nursing actions and nurses' assessment. However, official abbreviations were used for all patients. It was also found that the standard of hand writing was legible having percentage of 87.5%, cancellations and endorsement were clear for 85% patients. Around 50% documents maintained date and time while writing the notes. Only 25% maintained signature with the name and credential of the writer. Less than one fourth (23%) patients were maintained nurses' note on the day of admission (table-4).

Table 4. Distribution of Standards Nursing Care Documentation in Intensive Care Units Patients (N=80).

| Standards Nursing Care Documentation | Yes | |
|---|-----|------|
| | n | % |
| Date of writing the notes | 40 | 50.0 |
| Time of writing the notes | 40 | 50.0 |
| Time the procedure/intervention was or event occurred | 23 | 28.7 |
| Nature of procedure or response clears in the notes. | 23 | 28.7 |
| Handwritings were legible | 70 | 87.5 |
| Cancellations were clear and endorsed | 68 | 85.0 |
| Late entries were declared | 00 | 00.0 |
| Notes were clear about patient's complains or signs and symptoms | 00 | 00.0 |
| Notes were clear and specific about nursing interventions. | 00 | 00.0 |
| Notes were clear about patient's response to the nursing actions. | 00 | 00.0 |
| Notes were signed with the name and credential of the writer. | 20 | 25.0 |
| Official abbreviations were used (D/C on discharge) | 80 | 100 |
| Nurses' assessment findings were included in the nurses notes. | 00 | 00.0 |
| Nurses notes written on the day of admission. | 19 | 23.8 |

IV. Discussion

A descriptive study design was conducted to explore the current practice of nursing documentation and its standard for intensive care unit (ICU) patients in two tertiary public hospitals in Bangladesh. The interpretation of key findings is discussed in this chapter.

Nursing documentation is a major clinical source for the patients' condition, and it plays an important role in evaluating effective care delivery. Therefore, it should be based on solid scientific nursing knowledge which is fundamental for the nursing profession (Noureldin et al., 2014). The quality of nursing documentation, as indicated, has three attributes related to the content, process and structure (Wang et al., 2013). Improving nursing documentation is an urgent need in nursing and medical practice (Asamani et al., 2014). High-quality nursing documentation supports effective communication and cooperation among healthcare team members (Coffey et al., 2015). A well-performed nursing documentation process is of critical importance for the quality of nursing care and the development of nursing knowledge, as well as being one of the prerequisites of quality assurance in nursing care (Nguyen et al., 2014).

The present study showed that the average age of patients was 50. to 45 years and ranged from 13 to 99 years where this finding was nearly similar to another study conducted in New York & Iran where it was seen that the average age of patients was 62.7 years and ranged from 18 to 82 years (Penrod et al, 2012). It was found that most of the participants 42.5% were 30-60 years of age and this finding was similar to another study conducted in Uganda indicated patients' age average and that was between the ages of 31 to 60 years (Kwizera et al 2014). In addition, the present study showed that the majority of files audited 68.8% were that of male patients where this finding was nearly similar in another study of New York & Iran where it was estimated that the majority of files audited 66% were that of male patients (Penrod et al, 2012). Most of the patients were married 73.8% and Muslim 88.8%. The findings were consistent with the previous several studies (Cheevakasemsook et al, 2006; CRNBC, 2007; Jefferies et al, 2010; NMC, 2010). The intensive care unit patients were mostly unconscious (48.7%) and within supporting ventilator 48.0%. On the basis of medical diagnosis most of patients were hypertension 23% followed by diabetes mellitus (13%). Respiratory failure and chronic kidney diseases were (9%) where this finding was dissimilar in another study Uganda. In that study it

was seen that sepsis, head injury, acute lung injury, HIV/AIDS were the most common admission diagnosis (Kwizera et al, 2014). On the day of collecting date, the average admission day of the patients was 05 days in the range of 01 to 60 days. In similarity, interdisciplinary were documented for <20% of patients by intensive care unit day 5 (Penrod et al, 2012).

In the present study different nursing cares were evaluated for each patient who was regularly documented in patient record. The finding of this study showed that none of the nursing care was regularly documented. For all ICU patients, it was found that the patients' temperature was highly documented for 93.7% intensive care unit patients, that is similar to another study where 84.5% patients' temperature were maintained (Asamani et al., 2014). Respiration rate record for 64 (80%), pulse and blood pressure maintenance 60 (75%) have been recorded. Oxygen saturation maintenance in case of 58 (72.5 %) patients was recorded. Another study at King Faisal Specialist Hospital in Jeddah in Saudi Arabia. Mtsha 2009 indicates vital signs to be recorded are temperature, blood pressure, pulse, respiration, oxygen saturation and pain management scale. This is the policy of the hospital. The majority of respondents maintained correctly N=67 (83.8%) however it is expected that all nurses will have adequate knowledge of the policies and procedures. King Faisal hospital Jeddah has a clear policy which states that the vital signs and physical assessment must be documented once at least within two hours of having started the shift per day. Nursing documentation is an important part of clinical documentation, therefore it is expected that 100% nurses would be aware of the policies on documentation of nursing care. Thorough nursing documentation is a precondition for good patient care and for efficient communication and cooperation within the health care professional team (Ammenwerth, Eichstadter, Iller and Mansmann 2003:70).

In the present study about nursing documentation, it was seen that only vital signs were given more emphasis to other important of nursing care documentation. In the present study intake of fluid chart maintenance was 57.8% and urine output chart maintenance was 43% where in another similar study it indicated that only 14% was maintained (Mtsha, 2009)

But some important nursing care issues for ICU patients including glasgow coma scale, bed bath, and heparin lock before and after medication, sterile dressing, pulmonary artery pressure and central venous pressure, care of intra venous cannal and central venous catheter were not totally documented in patient's records.

In summary, the researcher assumes that may be nurses' lack of knowledge and lack of willingness is responsible for not maintaining above mentioned documentation which is absolutely a barrier to the proper treatment of a critical patient. However, more or less similar condition was found in other study (Elliot & conventry, 2014).

In a developing country like Bangladesh, nurses are not getting enough training, there are shortage of nursing personnel, nurses lack willingness, skill and there is a lack of strong monitoring on practice standard criteria of documentation. The study results reflect the present level of standard of nursing documentation. These findings are sometimes consistent and sometimes not consistent with other studied around the world.

V. Conclusion And Recommendation

Conclusion:

Nursing documentation was found to be inadequate in the intensive care units which affect all aspects of nursing care. The study affirmed the poor nursing documentation of ICU patients in Bangladesh. The policymakers and administrators should take initiatives in establishing standardized nursing documentation system though out the country to ensure the continuity and quality of care.

Limitations:

There would be not a single study without any limitation. The present study also had following limitations including:

- This study was conducted among two intensive care units in two public hospitals in Bangladesh that may not represent all hospitals' records.
- There was a lack of standardized tools to measure the nursing documentation and its standards.
- The finding would not represent the whole nursing documentation system of Bangladesh.

Recommendations:

The study would not be generalized to the normal. Further study would be recommended to assess the nursing documentation at different health care settings in the both public and private sectors. A standardized nursing documentation tools should be developed in the context of Bangladesh and update nurses' skills providing guidance to improve quality of nurse's documentation. Recommendations to improve the documentation include nursing practice supervision, quality improvement programmers', in-service training, evidence based practice and further research.

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