Improvement Legal Aspects and Completeness of Documentation using Electronic Nursing Record: A Report Study

Krisna Yetty Malawat[1], Rr. Tutik Sri Hariyati[2*], Retno Purwandari[3], Efy Afifah[4]

1, 2, 4 Basic and Fundamental of Nursing Department Faculty of Nursing. Universitas Indonesia,
3 Basic Nursing and Fundamental Nursing, Faculty of Nursing, University of Jember
* *Corresponding*: rrtutik@yahoo.com;tutik@ui.ac.id

Abstract
Completeness of documentation as a legal aspect and proof a nursing activity. Nothing documentation means nothing activity. This research aims to identify the legal point and integrity of nursing documentation after applying electronic nursing documentation. Report study approach and using pre and post-test with the control group. Thirty-Four documentation collected using consecutive sampling on one-week observation before and after using electronic nursing information to Compare the legal aspect and completeness of data conducted before and after implementation of the new system. The study showed improvement of the legal elements increased by 45.7% (4,37 to 8,00) and completeness documentation by 10.39% (43,00 to 49,03) after use of the system. Nursing Electronic Documentation improved legal aspect, completeness nursing and enhance the quality of nursing care. Electronic nursing documentation can be done to support and increase the quality of nursing.

Keywords: completeness nurse documentation, electronic nurse documentation, legal aspect documentation.

1. Introduction

The nursing process is a continuous activity to the delivery of nursing care and documentation is proof of nursing care implementation. Nursing assessment is the first stages of nursing and after that continue with diagnosis statement and outcome planning and Intervention. Implementation and evaluation conducted to evaluate patient progress. Nurses have to complete the documentation after delivery of nursing care. Documentation is a form of nursing professionalism and communication tool to healthcare professionals on the patient's condition (1). Documentation will provide an accurate overview of clients, what happened and when it happened. The completeness in documentation is legal aspect proof of a nursing activity (2). Legal aspect showed the responsibility and nurse's accountability

in their profession. Nothing documentation means nothing activity and the legal issues of nursing have an impact on the manner in which care is delivered to patients by nurses (3).

Documentation comprehensiveness is still a problem in many countries, including Indonesia, so it cannot adequately demonstrate the evidence of nursing actions. Documentation can't demonstrate accountability, lack of completeness and poor quality. Documentation can be made as proof of legal if any lawsuit, but uncompleted of documentation made nurse on the weak position. Research by Setz and D'Innocnezo (2009), which review the medical records of patients, found that 8.7% is good quality, while 26.7% is poor (4). Nursing documentation contains unclear data and uses unstandardized terminology and using unstandardized acronyms. These conditions cause documentation to be invalid and unreliable. Another research stated the domain 'accuracy of the interventions' had the lowest accuracy scores: 95% of the records revealed a scale score not higher than five. However, the domain 'admission' had the highest scores: 80% of the records revealed a scale score over five (5).

Nursing care documentation can be done manually (paper-based) and also computerized (computer-based). The computerized system will help complete the generated documentation showed that the use of an integrated nursing information system could improve the quality of nursing documentation regarding comprehensiveness, relevance, decision-making functions, and legal aspects (2,6). Another study by Dwisatyadini et al. showed a mean value of documentation completeness on "X" Hospital was 1.63 (40.75%) of the total value (7).

"RST" hospital is a nonprofit hospital that provides health service free of charge for the poor with the warmth of a family approach, punctuality, professional and touches of hearts. Observation results indicate that many nursing documentations are without a name written down, and just some actions are filled in the documentation unclearly. Documentation evaluation carried out by the head of the nursing quality which directly done after the watch-duty shift. Nurses will be reminded when there is an empty part of the format or when it filled not by the provisions. Nurses must fill the number of sheets/formats. The reason documentation is not filled out by nurses are also often confused with the various forms. Conditions of nurses in RST remain mostly new graduates. Thus they do not have many clinical experiences, only educated with a nursing diploma and still less than one year of working hours.

In each inpatient room, there is a facility of a computer connected to the internet, thus allowing for the development of computer-based nursing documentation information system. Interviews with the head of hospitalization ward showed that there is a plan to use computerized nursing documentation. The reason is the paper-based of nursing care documentation format is expensive. Nursing information system provides the information needed by the nurses include medical records, test results, progress notes, hospital policies, and procedures. The system connected to the online literature searches such as Medline and ProQuest. The basic approach in nursing information systems is the nursing process and documentation (2). The primary purpose of an information system is the improvement of healthy communities, families, and individuals by optimizing information management and communication. Use of information systems and technology is expected to support all the nurse's activities not only on direct care but also including the development of effective administrative systems, the development of decision support systems (DSS) (6,8,9).

We developed and implemented electronic nurse documentation at RST hospital in Jakarta, Indonesia. We obtained the copyright system under the name 'SIMPRO' which means the information system of nursing professionals in the Indonesian language. The head-to-toe examination is used as the patient assessment approach. Whereas, for the nursing diagnosis and care plan, we apply NANDA, NIC, and NOC as the standardized language for assisting the nursing process, including nursing documentation. The electronic documenting system also covers management roles and functions, i.e., planning, organizing, actuating, staffing, and controlling (POSAC). This integration was made to facilitate the nursing managers in their decision-making process, nursing care, and other management (9). The new system application, "SIMPRO" used to explore completeness and aspect legal of documentation.

2. Objectives

The purpose of the study:

2.1 To compare the quality of aspect legal of nursing documentation before and after using electronic nursing documentation.

2.2 To compare the quality of completeness of nursing documentation before and after using electronic nursing documentation.

3. Methods

The quantitative research uses a report study of the implementation of the new system with the method of pretest-posttest designs with the comparison group. This approach uses the intervention group, and the control group, the application of electronic nursing documentation was done in the intervention group, and no intervention for the control group. The sample selected used consecutive sampling method that all patient chooses on one unit inpatient ward. Total samples of 34 nursing care documentation for each of the intervention and control groups. Questioner used previous research by Hariyati, Yani, Eryando, Hasibuan & Milanty (2016) (2). Documentation evaluated before and after the nursing electronic documentation application. The research ethics used is the principles of beneficence, respect for human dignity, justice, and informed consent. We always keep patient data safely, only use for study needs and not spread it out for another purpose. The data analysis used the dependent t-test, independent t-test, Wilcoxon and Mann Whitney.

4. Results

Description of nurse characteristics at RST hospital can be seen in Table 1. Nurse of the intervention group are mostly women with 55,6%, 88,9% has Diploma 3 education, 55,6 % had attended nursing documentation training, 77,8% had participated in training about NANDA, NIC, and NOC as basic standardized of nursing care, and 66,7% had participated in computer training. Description of control group show that 62,5 % nurses are women, 87,5% has Diploma 3 education, 75% had engaged in nursing documentation training, 87,5% % had been involved in training about NANDA, NIC, and NOC, and all of them had attended computer training.

Table 1. The Characteristics of Nursing In RST Hospital

Characteristics	Intervention Group (n=9)		Control Group (n=8)	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Sex				
Woman	5	55,6	5	62,5
Man	4	44,4	3	37,5
Education				
Diploma 3	8	88,9	7	87,5
Bachelor	1	11,1	1	12,5
Training of Nursing Documentation				
Never	4	44,4	2	25,0
Ever	5	55,6	6	75,0
Introduction of NANDA, NIC, and NOC				
Never	2	22,2	1	12,5
Ever	7	77,8	7	87,5
Computer Training				
Never	3	33,3	0	0
Ever	6	66,7	8	100

Legal aspects (p= 0.740) of nursing care documentation before not a significant difference on the control and intervention group, while before using electronic documentation, completeness of documentation has differences between control and intervention group (p= 0.0.24). Table 2.

Table 2. The Differences in Legal Aspects and completeness of Nursing Documentation Before and after Using Electronic Nursing Documentation

Variable	Before (n=68)			
	Mean	SD	95 % CI	p
Legal Aspects	4,40	4,2-4,6	4,33-4,41	0,740
Intervention	4,40	4,2-5,4	4,34-4,50	
Control				
	Median	**Min –Max**	**95 % CI**	**p**
Completeness				
Intervention	43,00	3,53	41,77-44,23	0,024*
Control	40,00	5,22	38,68-42,32	

*Significant at α 0.05

The legal aspect and completeness of control and intervention group have a significant difference (p= 0.0001; p=0.0001) after using electronic documentation. After using electronic nursing documentation legal aspect (4.35 to 8.00) and completeness (44.00 to 49.00) of documentation were improved. (Table 3)

Table 3. The Differences in the Legal Aspects and Completeness of documentation before and after using Electronic Nursing Documentation

Variable	After			
	Median	**Min-max**	**95 % CI**	**p**
Legal Aspect				
Intervention	8,00	8-8	4,34-4,50	0,0001*
Control	4,35	3,0-5,6	4,28-4,65	
	Median	**Min-Max**	**95% CI**	**p**
Completeness				
Intervention	49,00	43-55	47,98-50,08	
Control	44,00	32-51	40,88-44,70	0,0001*

*significant at α 0.05

5. Discussion

Completeness indicated the difference between the intervention group and control group before applying the new system, while for legal aspects there were no differences between the intervention group and the control group. While after using electronic documentation significant differences were conducted on control and intervention group. Completeness of documentation improved after using the new system. This is research related with previous research that stated the nursing information system supported quality of care and patient safety (2,10,11).

Legal aspects between the intervention group and the control group before the implementation of nursing care documentation show no difference because many of the nurses' signature and the name still do not show up. The legal aspects component is an important part in the documentation of nursing care because this signature and name will become the proof for nurses on the actions that they take. The result relevant to previous research that electronic supported the nurses to provide legally prudent information related to patient care and nursing activities performed (4,11). The research results showed that the nursing documentation made by the nurses have not all meet the legal aspects, because there are still nursing care documentation that is without signature or name. Documentation can be used as evidence in legal proceedings, as evidence of the record of activities that have been carried. The legal aspects of nursing have an impact on the manner in which care is delivered to patients by a nurse (3). The result of this research follows the statement that the record in the patient's medical records assists to cover various aspects and support ethical and legally for the responsible assistance professional and the patient (4).

Research by Hariyati (2016) also showed that the use of integrated nursing information system could improve the quality of nursing documentation regarding the completeness, relevance, decision-making functions, and legal aspects. Paans (2010) said that the use of standardized language has several advantages, including ease of communication between nurses with other health professionals; improving the clarity of nursing interventions; facilitate evaluation of treatment outcomes; and appropriate standard of care (5).

The results showed improvement have occurred in the intervention group is not yet maximized when compared to the documentation value in the control group. According to the researcher's analysis, the successful application of computer-based documentation is not only determined by the nurses, but the management role in carrying out the leadership function is also influential. Guidance and control functions become critical in this process. From the researcher's observation results, control functions by the nursing management need to be improved related to the implementation of nursing documentation; the condition referred to the previous study. Nurse manager must lead and support to the electronic nursing implementation (10,12). Hariyati (2016) mentions that motivation from their leaders will increase the nurses' comprehension of the nursing process. Mahler et al. (2007) also said that the quality of nursing care documentation is influenced by the leadership function that executed, without the ongoing support and monitoring from the leaders it will be difficult to achieve quality improvement (13).

Various previous research stated that the organization factors that influence to the information systems are the organization culture (decision-making, communication, and collaboration, management support, professional values), as well as support, maintenance and awards. Research by says the key to successful implementation of the computerized standardized language is an excellent collaboration between nurses and IT personnel; available support from the head nurse; and availability of specialists and nurses as program implementers (10,12,14).

Hariyati (2018), based on focus group discussion, said management aspects are a factor that influences the implementation of a new system that must be followed by good leadership skills to run optimally. The expected leadership role in here is how the head of the inpatient room provides evaluation and motivation in filling the new system (10). Siswanto (2013) also said that there is a relationship between the supervision frequencies to the quality of nursing documentation (15). Nurses, regularly supervised, have the opportunity to document times better than nurses who do not do regular supervision after controlled by the length of work and supervision technique. Mua, et al., also stated that managers must play a role in providing training and support for the program implementation on the ward (16).

Conclusion

The legal aspect and completeness of nursing care documentation were improved after the application of computer-based documentation. The legal aspects component is an essential part in the documentation of nursing care because this signature and name will become the proof for nurses on the actions that they take. The patient's records provide assistance to cover various aspects and support ethical and legally for the responsible help professional and the patient. The completeness of nursing record also promotes continuity of care and patient safety.

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References

1. Alkouri OA, Just T, Kawafhah M. Importance And Implementation Of Nursing Documentation: Review Study. Eur Sci J. 2016;12(3):101–6.
2. Hariyati RTS, Yani A, Eryando T, Hasibuan Z, Milanti A. The Effectiveness and Efficiency of Nursing Care Documentation Using the SIMPRO Model. Int J Nurs Knowl. 2016;27(3).
3. Spring S. ANA's Principles for Nursing Documentation Guidance for Registered Nurses [Internet]. 2010. Available from: www.Nursingworld.org
4. Setz VG, D'Innocenzo M. Evaluation of the quality of nursing documentation through the review of patient medical records [Portuguese]. Acta Paul Enferm [Internet]. 2009;22(3):313–7. Available from: http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip,shib&db=jlh&AN=2010354307&site=ehost-live
5. Paans W, Sermeus W, Nieweg RMB, Van Der Schans CP. Prevalence of accurate nursing documentation in patient records. J Adv Nurs. 2010;66(11):2481–9.
6. Ammenwerth E, Rauchegger F, Ehlers F, Hirsch, B & Schaubmayr C. Effect of a nursing information system on the quality of information processing in nursing: An evaluation study using the HIS-monitor instrument. Int J Med Inform [Internet]. 2011;80(1):25–38. Available from: http://dx.doi.org/10.1016/j.ijmedinf.2010.10.010
7. Dwisatyadini M, Hariyati RTS, Afifah E. The effects of the application of SIMPRO on the completeness and time efficiency of nursing documentation in the outpatient installation at Dompet Dhuafa Hospital Parung. In: IOP Conference Series: Materials Science and Engineering. 2018.
8. Tilahun B, Fritz F. Comprehensive evaluation of electronic medical record system use and user satisfaction at five low-resource setting hospitals in Ethiopia. JMIR Med informatics [Internet]. 2015;3(2):e22. Available from: http://medinform.jmir.org/2015/2/e22/
9. Hariyati RTS, Yani A, Eryando T, Hasibuan Z, & Milanti A. The effectiveness and efficiency of nursing care documentation using the SIMPRO model. 2015;1–7.
10. Hariyati RTS, Hamid AY, Eryando T, & Hasibuan ZA. Usability and satisfaction of using electronic nursing documentation, lesson-learned from new system implementation at a hospital in Indonesia. Int J Healthc Manag [Internet]. 2018;0(0):1–8. Available from: https://doi.org/10.1080/20479700.2018.1504387
11. Payne TH, Broek AE, Fletcher GS, Labuguen MC. Transition from paper to electronic inpatient physician notes. Vol. 17, Journal of the American Medical Informatics Association. 2010. p. 108–11.
12. Asiri H, AlDosari B, Saddik B. Nurses' attitude, acceptance and use of Electronic Medical Records (EMR) in King Abdulaziz Medical City (KAMC) in Riyadh, Saudi Arabia. 2014;2(3):66–77.
13. Steiner BA. Electronic Medical Record Implementation in Nursing Practice: a Literature Review of the Factors of Success. 2009;(April).
14. Whittaker A a, Aufdenkamp M, Tinley S. Barriers and facilitators to electronic documentation in a rural hospital. [Internet]. Vol. 41, Journal of nursing scholarship :

an official publication of Sigma Theta Tau International Honor Society of Nursing / Sigma Theta Tau. 2009. p. 293–300. Available from: http://www.ncbi.nlm.nih.gov/pubmed/19723278
15. Siswanto LMH, Hariyati RTS, Sukihananto. Faktor-Faktor yang berhubungan dengan kelengkapan pendokumentasian asuhan keperawatan. J Keperawatan Indonesia. 2013;16(2):77–84.
16. Mua EL, Hariyati RTS, Afifah E. Peningkatan kepuasan dan kinerja perawat melalui supervisi kepala ruangan. 2011; 14 (3):171-178