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Literature Review: Improving The Quality of Hospital Services through The Utilization of Electronic Nursing Documentation



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Abstract

One of the main causes of death in neonates is low birth weight (LBW), which is the condition of babies with birth weight < 2500 grams from gestational age < 37 weeks. Problems that often occur in LBW are thermoregulation disorders, respiratory disorders, nutritional disorders and others. This case study was conducted to describe developmental care interventions on the comfort level of premature LBW infants. This study used a case study design with an evidence-based practice implementation approach that focuses on interventional nursing. The study was conducted in the NICU of RSU UMM on 24-26 October 2023. The participants in this study were Baby Mrs. P aged 0 years, 0 month, 0 days, male, with LBW-Premature. Measurement of comfort level using NIPS and Comfort-B Scale through physical examination and observation every 7 hours for 3 days. Patient observation showed that there was a decrease in pain level and an increase in the baby's comfort level every day. This could be seen from the NIPS score on the first day of treatment from 7 points (severe pain) to 0 points (no pain) on the third day, and the Comfort-B score from 25 points (moderate comfort) to 8 points (high comfort). The application of Snuggle up Position can effectively reduce the level of pain scale and increase the comfort scale in LBW-premature infants in the hospital.

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INTRODUCTION

Documentation of nursing care from assessment to evaluation in the patient's medical record is very important because it is legal evidence of a case, an important indicator of the quality of patient care, and a tool for assessing the quality of service as well as being an important element of quality and effective clinical documentation and medical services. Quality nursing care documentation is essential in demonstrating the quality and continuity of nursing care, enhancing effective communication between nurses, and improving nursing continuity and personality. The quality of nursing documentation should be measurable using tools that describe the quality responses of different types of documents. Nursing documentation reflects a form of accountability for what nurses do in providing care to patients. Patient care documentation is very important because it is one of the indicators of the quality of nursing care. The incomplete documentation rate is still high, one of which is due to the manual evaluation system. The current evaluation method is electronic-based documentation evaluation.

The implementation of nursing documentation by nurses is affected by various factors. In Malaysia, the use of information technology is very helpful in increasing nurses' knowledge about nursing documentation and in America, the under-documentation is caused by the nurse's knowledge factor of 62% (Karp, et al, 2019; Rojjanasrirat, 2018). In Indonesia, nurses' knowledge of documentation is still low due to educational factors, abilities and skills as well as the use of information technology (Kamil et al., 2018).

So that efforts can be made to improve knowledge about nursing documentation is through changing paper-based documentation to electronic-based where providing information services about documentation on the platform used (Oreofe & Oyenike, 2018; Salameh, et al, 2019). The use of electronic-based nursing documentation is very effective for nurses (Cassano, 2018). This is in line with the results of research by Padila et al., (2018) where the results of the study were a program system design that has the advantage of sending patient medical documentation reporting data which includes the main complaints, the type of disease they feel (mild, moderate and severe), data visualization in image, sound and text, even video can be used as a digital-based patient health detector via video mail, and family health history

with multimedia medical records techniques connected to the health service center of RSUD. Dr. M. Yunus Bengkulu.

In the United States, 71% have been able to perform nursing documentation using information technology and 71.98% of nurses agree and already understand using electronic-based documentation to improve knowledge and skills about nursing documentation (Chand & Sarin, 2019; McNicol, et al, 2018). In Indonesia, nursing documentation reached 71.2% and 73.2% implemented in hospitals and at the primary care level, respectively (Pratama et al., 2018; Saputra & Arif, 2019). The process of implementing electronic-based documentation must of course be in accordance with nursing documentatin standards and terminology in the implementation of nursing documentation.

Nurses in overcoming the above problems need documentation guidelines or information systems that can accommodate the data needed systematically and efficiently. One of them is an android-based diagnosis and intervention documentation guideline that contains data on nursing diagnoses and interventions that refer to ten major cases of disease in SM Hospital, and based on NANDA (North American Nursing Diagnosis Association), Indonesian Ministry of Health, SDKI (Indonesian Nursing Diagnosis Standards), Q-DIO (Quality of Nursing Diagnosis Intervention and Outcomes) and NIC (Nursing Intervention Classification), and NOC (Nursing Outcome Classification). The application of android-based documentation guidelines is an effort to improve the quality and completeness of nursing care documentation, especially documentation of nursing diagnoses and interventions. This application is expected to be used as a guide by nurses in documenting nursing care so that it can save time, is more practical and easy to apply and can help documentation towards standards. This application improves the accuracy and efficiency of writing nursing documentation, facilitates communication between nurses when caring for patients, and prevents medication errors (Efendi, 2017).

The benefits of electronic nursing documentation include being able to lighten and facilitate the work of nurses in conducting nursing documentation. In addition, it can also speed up the work of nurses so that they can save time and ultimately improve the quality of nursing documentation which can have an impact on the

quality and safety of patients. The results of this literature review can be used as information for hospitals in using an electronic nursing documentation system or application system for nurses in conducting nursing documentation in hospitals.

METHODS

The method used in this literature review was a comprehensive strategy, such as searching for articles in research journal databases, searching

through the internet, reviewing articles. The database search included Google Scholar for 18 articles, ProQuest for 78 articles, Pubmed for 15 articles, and National Library for 7 articles. The keyword used in the article search was electronic nursing documentation and only 5 articles were used that were suitable through analysis of objectives, suitability of topics, research methods used, sample size, research ethics, results of each article, and limitations that occurred.

RESULTS

Table 1 The Articles Reviewed

Researcher	Title	Sample	Method	Results
Arif Puji Atmanto, Aggorowati, Muhammad Rofii (2020)	The Effectiveness of Android-Based Nursing Diagnosis and Intervention Documentation Guidelines on Improving the Quality of Nursing Documentation in the Inpatient Room. P-ISSN 2252-8865 E-ISSN 2598 – 4217 Vol. 9, No.1 Maret 2020 Tersedia Online: http://jurnal.stikeskendekiautamakudus.ac.id DOI: https://doi.org/10.31596/jcu.v9i1.517	35	Quasi experiment with pre-post test	This study proves that the documentation guidelines for diagnoses and documentation guidelines are effective in improving the quality of documentation of nursing diagnoses and interventions
Irma Gita Wardani, Tri Kurniati, Suhendar Sulaeman (2022)	Nurse Competence, Infrastructure Facilities on Electronic Nursing Documentation, its Impact on Patient Safety Nursing Journal Volume 14 Nomor S3, September 2022 e-ISSN 2549-8118; p-ISSN 2085-1049 https://journal2.stikeskendal.ac.id/index.php/keperawatan/articled/view/408	53	Cross-Sectional	Based on the results of the study, it can be concluded that nurse competence and infrastructure facilities affect electronic nursing documentation and its impact on patient safety in the inpatient unit of Mulya Tangerang Hospital. It was found that there was a significant influence between Nurse Competence, Infrastructure Facilities, on Electronic Nursing Documentation and its impact on Patient Safety with a Pvalue = 0.00. The use of electronic nursing documentation can improve patient safety in hospitals if supported by good nurse competence and good infrastructure.

Researcher	Title	Sample	Method	Results
Candra Saputra, Yulastri Arif, Fitra Yeni (2020)	Andra's Nursing Informatic System Application (Annisain an effort to improve nurses' knowledge about nursing documentation Silampari Nursing Journal. Volume 4, Nomor 1, Desember 2020 e-ISSN: 2581-1975 p-ISSN: 2597-7482. DOI: https://doi.org/10.31539/jks.v4i1.1281	48	Quantitative <i>Quasy Experiment</i>	<p>There is a difference in nurses' knowledge about nursing documentation before, posttest-1 and posttest-2 after using the ANNISA application at the Pekanbaru City Health Center. Furthermore, there is a difference in nurses' knowledge about nursing documentation before, posttest-1 and posttest-2 after using the ANNISA application in the intervention group and control group at the Pekanbaru City Health Center.</p> <p>The results showed that there was a difference in the measurement of nurses' knowledge about nursing documentation in the intervention group before the intervention by measuring posttest-1 with p value = 0.000. There was a difference in nurses' knowledge about nursing documentation between the intervention group and the control group in measuring posttest-1 and posttest-2 after the intervention using ANNISA with p value=0.000. There was an increase in the difference in nurses' knowledge about nursing documentation from pretest, posttest-1 and posttest-2 measurements after the use of ANNISA in the intervention group and control group with p value=0.000. In conclusion, the development of ANNISA has an effect on increasing nurses' knowledge about nursing documentation.</p>
Putri Eka Sari, Luky Dwiantoro, Andrew Johan (2022)	<i>The Effect of Electronic-Based Evaluation Methods (G-Spreadsheet) on Completeness of Nursing Documentation.</i> DOI: 10.20527/dk.v10i2.38 eISSN: 2541-5980; pISSN: 2337-8212 Dunia Keperawatan, Volume 10, Nomor 2, 2022: 255-259	120	Quasiy Experimen tal	<p>Completeness of nursing documentation before the G-Spreadsheet electronic-based evaluation was 61 (50.8%) documentation and Completeness of nursing documentation after the G-Spreadsheet electronic-based evaluation was 86 (71.7%) documentation.</p> <p>Completeness of nursing documentation after the G-Spreadsheet electronic-based evaluation was 86 (71.7%) documentation. There is an influence between the application of electronic-based evaluation methods (G-Spreadsheet) on the completeness of nursing documentation (p = 0.000).</p>

Researcher	Title	Sample	Method	Results
Kamran Ranjbar, Raheleh Sabetsarvestani, Hossein Oghlaee, Parisa Sabet Sarvestani, Azizallah Dehghan, Zahra Hadian Shirazi (2021)	Using Electronic Software for Nursing Documentation in Nursing. DOI: 10.5152/FNJJN.2021.20077 https://pubmed.ncbi.nlm.nih.gov/34263231/	80	Quasy Experimental	The analysis showed that the mean satisfaction scores in both groups increased significantly ($p < .05$). Furthermore, the results of the summative content analysis showed that the completeness and standard of nursing documentation improved significantly in the experimental group ($p < .05$). Conclusion: These findings confirm the usefulness of electronic software in improving the standard and completeness of nursing documentation and student satisfaction.

DISCUSSION

Nursing documentation is an important thing that must be done by nurses in carrying out nursing care. Where in doing nursing documentation must be written in full, so that to support this process, a system or an electronic application is needed to facilitate nurses in carrying out nursing documentation. According to Elisabet, et al (2020) at this time the world technology is entering the era of the industrial revolution 4.0 which also has an impact on developments in the world of health, especially hospital digital information technology related to EMR (Electronic medical records). This has an impact on significant progress in the nursing field, one of which is the nursing documentation system from previously manual, shifting to computerization (Dewi, 2019). According to Dyah and Hanny (2019) nursing documentation is any written or electronic record that describes nursing services provided to patients and can be used as evidence for authorized personnel. The quality of nursing documentation in electronic systems is significantly better than paper-based documentation systems (Firouzeh, 2016).

Based on Dewi's research, the development of electronic nursing documentation based on information technology provides benefits for nurses, including: shorter documentation time, ease of reading and accessing documents and allowing it as a learning tool (Dewi, 2010). Android-based documentation of nursing diagnoses and interventions is effective in improving the quality of documentation of nursing diagnoses and interventions. In addition, according to research by Candra Saputra, Yulastri Arif, Fitra Yeni (2020), it is said that there is an application that can be used, namely Andra's Nursing Informatic System Application (Annisa), which is one application that can be used in an effort to increase nurses'

knowledge about nursing documentation. This can be used as an innovation / method in improving the ability of nurses to perform electronic nursing documentation. Patient care documentation is very important because it is one of the indicators of the quality of nursing care. The incomplete documentation rate is still high, one of which is due to the manual evaluation system. The current evaluation method is electronic-based documentation evaluation. In line with this, based on research by Putri Eka Sari, Luky Dwiantoro, Andrew Johan (2022), it was found that there was an effect of electronic-based evaluation methods (G-Spreadsheet) on the completeness of nursing documentation.

Related findings from research by Kamran Ranjbar, Raheleh Sabetsarvestani, Hossein Oghlaee, Parisa Sabet Sarvestani, Azizallah Dehghan, Zahra Hadian Shirazi (2021) Florence Nightingale Journal of Nursing confirmed that the usefulness of electronic software in improving the standard and completeness and completeness of nursing documentation and student satisfaction. Broadly speaking, electronic nursing documentation is very supportive and helpful for nurses in providing services to patients, and there have been many studies that have been conducted, where the research also needs to be improved in improving innovations / methods that are more sophisticated, effective and efficient to improve the quality of nursing documentation oriented towards quality and patient safety.

CONCLUSION

Based on the literature review of 5 nursing information management journals on electronic nursing documentation, the following conclusions can be drawn:

1. Nursing documentation is an important thing that must be done by nurses in carrying out nursing care. Where in doing nursing documentation must be written in full, so that to support this process, a system or an electronic application is needed to facilitate nurses in carrying out nursing documentation.
2. Android-based documentation of nursing diagnoses and interventions is effective in improving the quality of documentation of nursing diagnoses and interventions.
3. Nurse competence and infrastructure facilities affect electronic nursing documentation and its impact on patient safety.
4. Andra's Nursing Informatic System Application (Annisa) is one application that can be used in an effort to increase nurses' knowledge about nursing documentation.
5. There is an effect of electronic-based evaluation methods (G-Spreadsheet) on the completeness of Nursing documentation
6. The usefulness of electronic software in improving the standards and completeness and completeness of nursing documentation and student satisfaction.

From some of the above conclusions, it can be said that to assist nurses in improving nursing documentation completely and correctly, it can be done by using electronic nursing documentation either using an application / system or android. Because it has been proven in these 5 journals that electronic nursing documentation can greatly help nurses as well as having an impact on patient safety.

SUGGESTIONS

Electronic nursing documentation can be used as one of the innovations in the field of nursing in improving the quality of nursing documentation, both in the form of applications / android systems depending on each agency so that the ultimate goal that can be achieved is to improve quality and patient safety. Researchers suggest that in further research this research can be used as basic data for the development of research in the field of information technology-based / android-based nursing.

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