

Research Article

Perception of nurse administrators regarding electronic nursing documentation

Sulakshana Chand*, Jyoti Sarin

Maharishi Markandeshwar University, Mullana, Ambala, Haryana, India

Received: 07 November 2015

Revised: 10 November 2015

Accepted: 23 November 2015

***Correspondence:**

Sulakshana Chand,

E-mail: suenagi@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Nurses represent the largest profession in the healthcare. Always present at patient's bedside, nurses weave together many facets and create order in the work environment. In addition to providing direct patient care, nurses are also responsible for recording the nursing activities. Handwritten documents however, run a risk of being inconsistent and unstructured often leading to omission of pertinent patient data which may ultimately impact nursing interventions and patient outcomes. Research studies continue to reveal substandard nursing documentation. Hence, nurse administrators today are challenged to achieve; outstanding outcome measures; highest quality quartile ratings for patient care; stellar accreditation performance and various other quality measures. Therefore, development of strategies to improve quality of nursing documentation remains a top priority among nurse administrators. In order to accomplish this, moving from paper to electronic clinical documentation system may be a key tool. For almost two decades, electronic health records have become increasingly popular. Although nurses' perception regarding electronic nursing documentation is one of the most important indicators of the application of nursing information system, it is however, equally important to explore the perception of nurse administrators regarding electronic nursing documentation. The purpose of this study was to explore the perceptions of nurse administrator's regarding electronic nursing documentation.

Methods: A descriptive study was undertaken to explore the perception of 26 nurse administrators working in a teaching hospital. A valid and reliable perception assessment scale was developed to generate data. The collected data was analysed using descriptive analysis.

Results: Findings revealed that nearly half of the nurse administrators reported a moderately favourable perception towards electronic nursing documentation.

Conclusions: It was concluded that overall nurse administrators have a positive perception of electronic nursing documentation which would be beneficial in promoting a positive organization climate towards the acceptance of electronic health records.

Keywords: Nursing documentation, Perception, Nurse administrators, Electronic health records

INTRODUCTION

The purpose of the medical records originated to document patient's history allowing physicians to recall the past and organize sharing of information. Nurses have a long tradition of documenting nursing care in patient

records collecting hundreds of thousands of pieces of information, everyday-facts in regards to patients, diseases, and procedures among other things. Process of nursing documentation was formalized during the years of Florence Nightingale. There is no doubt that nurses bear a huge burden in the management and

implementation of plan of care in addition to documentation of the care and the progress towards the mutually set goals. Nursing record is a valuable means for demonstrating nursing knowledge, skills and judgment as per professional standards within the scope of nurse-client relationship. A time and motion study by Hendrich A et al showed that nurses spend more than 1/3 of their time on documentation.¹

Although nurses are responsible and accountable for the direct patient care and the documentation of the nursing activities, yet the ultimate responsibility to maintain optimal standard of nursing documentation rests mainly on the shoulders of the nurse administrators. As quality documentation translates into safe care, therefore, much emphasis is focused on developing strategies to improve the quality of nursing documentation. The need for documentation is on the rise as a consequence of management issues, practice standards and consistent regulatory requirements. Nurses remain under consistent surveillance as legislations such as the Human Rights Act 1998 and the Data Protection Act 1998 has increased the profile and access to health records. Comprehensive records also play a vital role and are used as evidence legal cases.²

Research studies repeatedly report that deficiencies in nursing documentation continue to exist. Most commonly observed problems with documentation include; poor record-keeping; poor planning of care; incomplete admission records; failing systems of communication; lack of reported care evaluation. Setz VG et al examined the quality of nursing documentation 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.³

To resolve these insufficiencies, strategies have to be developed and implemented in timely fashion in order to maintain nursing excellence and meet the nursing standards. Introduction of technology in the healthcare industry has been proving to be as a vital element. Although complicated, the implementation of electronic medical records positively affects workflow and practice efficiency in hospitals. Electronic medical records represent a major investment of capital and human resources and affect multiple service providers. They have the potential to improve or create obstacle to work performance, communication and documentation. Because nurses play a key role in providing and coordinating care, the extent to which electronic medical records enhances or detracts from nurses' role performance can be expected to affect patient outcome.⁴

Nursing leaders are at the forefront to affect the design, development, implementation and reception of electronic medical records. Because of their clinical workflow knowledge, decision-making capacity, and leadership role, nursing leaders are able to achieve high-quality on

electronic medical records. Nurse administrators play a significant role in being proactive and maintaining the organizational culture that allows for the flow of data efficiently and accurately through computerization.⁵ Nurse administrators need to continually engage with nurses along the continuum of an electronic health record design, as well as the need to encourage nurses to speak up and acknowledge workflow changes that threaten patient safety or do not support work efficiency.⁶ Therefore, they need to translate the mission of healthcare organizations into desired outcomes that accomplish what is best for the patient.

With the trend of electronic health records, nurse administrators must lead a workforce that understands, accepts and embraces these technologies effectively. Though studies have been conducted to understand the perception of nurses regarding the electronic nursing documentation, however, only handful studies have attempted to understand the perception of nurse administrators regarding electronic nursing documentation. Even though nurses are the potential end users of the electronic records, yet it is nurse administrators that cultivate and promote the culture of computerization in the health care setting. The role of nurse administrators remains pivotal in organizational transition into electronic patient records. Hence, it is imperative to explore the perception of nurse administrators regarding electronic nursing documentation.

METHODS

A descriptive study design was adopted to conduct the present study. The sample comprised of 26 nurse administrators working in a teaching hospital of Haryana selected by total enumeration.

Exclusion criteria

Nurse administrators not working in the clinical departments

Inclusion criteria

Nurses administrators working in the selected clinical departments

Perception assessment scale (Likert scale) was developed and used to collect data. It comprised of items pertaining to electronic nursing documentation categorized into two sections.

1. Section I comprised of eight items pertaining to demographic and personal profile of nurse administrators to obtain information related to; age, gender, general education, professional qualification, total experience, ownership, frequency and purpose computer use, computer training and skill, awareness of and exposure to electronic nursing documentation

2. Section II comprised of randomly scattered seven positive and eight negative items pertaining to electronic nursing documentation. The responses varied from; strongly agree; agree; undecided; disagree to strongly disagree. Each positive item was assigned a score of five for strongly agree and a score of 1 for strongly disagree and were scored as 5, 4, 3, 2, 1. Each negative item was assigned a score of five for strongly disagree and a score of 1 for strongly agree and were scored as 1, 2, 3, 4, 5.

The collected data was analysed using SPSS 20.0 version. Frequency and percentage were computed to calculate age, gender, general education, professional qualification, years of nursing experience, own a computer, frequency and purpose of computer use, computer skills, awareness and documentation of electronic nursing documentation.

Mean standard deviation and range of perception scores obtained by nurse administrators was computed.

Percentage distribution of perception scores of nurse administrators on the positively and negatively stated items regarding electronic nursing documentation.

Analysis

Section 1 describes sample characteristics of 26 nurse administrators. Data presented in table 1 below depicts the characteristics of nurse administrators by age, gender, general education, professional qualification, years of nursing experience, own a computer, frequency and purpose of computer use, computer skills, awareness and documentation of electronic nursing documentation. Frequency and percentage were computed for describing the sample characteristics.

RESULTS

Percentage and frequency of nurse administrators in terms of sample characteristics.

Data presented in Table 1 showed that 76.92% of nurse administrators were more than 25 years in age. Majority of the nurse administrators (80.77%) were females. Nearly three fourth of the nurse administrators (69.23%) had higher senior secondary as their general education. Most of the nurse administrators (84.61%) had GNM as their highest level of professional qualification. Almost all the nurse administrators (92.31%) had more than five years of nursing experience. A little more than half of the nurse administrators (57.69%) did not own a computer. More than half of the nurse administrators (57.69%) reported using a computer at some point. Out of the 11 nurse administrators that used a computer; 36.4% used the computer once a month; 54.54% used the computer to

play games and 36.4% of the nurse administrators learnt computer from an expert in school/institution. More than half of the nurse administrators (57.69%) rated their computer skills as novice. Even though all the nurse administrators (100%) were aware of electronic nursing documentation, none of them reported exposure to electronic nursing documentation.

Section II describes the findings related to perception of nurse administrators regarding electronic nursing documentation. The perception scores were described and analysed using descriptive. The findings are presented in Table 2.

Data presented in Table 2 reveals that the mean and standard deviation of the perception scores of nurse administrators was 56.62 and 7.37 respectively. The nurse administrators' obtained perception scores ranged from 46 to 72. The minimum and maximum scores were 27 and 135 respectively.

The frequency and percentage of perception of nurse administrators was also computed. The findings are given below in table 3.

Data presented in table 3 shows that nearly one fourth of nurse administrators (23.1%) expressed highly favourable perception towards as compared to 46.2% and 30.7% that expressed moderately favourable and favourable perception regarding electronic nursing documentation.

Item wise frequency and percentage of items on the assessment scale was also computed. The findings are given in Table 4 and 5.

Data presented in table 4 showed the item wise and overall percentage distribution of perception scores of nurse administrators regarding electronic nursing documentation.

The three positive strongly agreed upon statements by nurse administrators included;

1. Close to two third of the nurse administrators (57.8%) strongly agreed that electronic nursing documentation "provides more complete records and hence lowers risk of legal issues".
2. More than half of the nurse administrators (53.9%) strongly agreed that electronic nursing documentation "promotes objectivity for performance appraisal".
3. More than half of the nurse administrators (53.9%) strongly agreed that electronic nursing documentation "improves patient safety and ultimately patient satisfaction.

Table 1: Percentage and frequency of nurse administrators in terms of age, gender, general education, professional qualification, years of nursing experience, own a computer, frequency and purpose of computer use, computer skills, awareness and documentation of electronic nursing documentation.

1	Age in years	Frequency	%
1.1	20- 25	6	23.08
1.2	> 25	20	76.92
2	Gender		
2.1	Male	5	19.23
2.2	Female	21	80.77
3	General education		
3.1	Higher senior secondary	18	69.23
3.2	Bachelor degree	8	30.77
4	Professional qualification		
4.1	GNM	22	84.61
4.2	P.B. B. Sc./B.Sc Nursing	4	15.39
5	Total years of nursing experience		
5.1	> 1 year - < 5 years	2	7.69
5.2	5 years or more	24	92.31
6	Do you own a computer?		
6.1	Yes	11	42.31
6.2	No	15	57.69
7	Have you ever used a computer?		
7.1	Yes	11	42.31
7.2	No	15	57.69
7.1.1	If yes, how frequently? N=11		
7.1.1.1	Rarely	4	36.4
7.1.1.2	Less frequently than a month	3	27.2
7.1.1.3	Monthly	2	18.18
7.1.1.4	Weekly	1	9.09
7.1.1.5	Daily	1	9.09
8.1.2	For what purpose do you use computer? (you may select more than one option) N=11		
8.1.2.1	Learning	4	36.36
8.1.2.2	Play games	6	54.54
8.1.2.3	Personal Communication	1	9.09
8.1.3	How did you learn to use a computer? (you may select more than one option) N=11		
8.1.3.1	From an expert in school/institution	4	36.4
8.1.3.2	By observing others	4	36.4
8.1.3.3	By trial and error	3	27.2
8.1.4	How would you rate your computer skills? N=11		
8.1.4.1	Novice (beginner with very limited skill)	15	57.69
8.1.4.2	Average (well rounded, knowledgeable, need guidance sometimes)	11	42.31
9	Are you aware of electronic nursing documentation?		
9.1	Yes	26	100
9.1.1	If yes, have you ever documented electronically		
9.1.1.2	No	26	100

Data presented in table 5 showed percentage distribution of perception scores of nurse administrators on the negatively stated items regarding electronic nursing documentation. The three negative strongly disagreed upon statements by nurse administrators included.

1. Little more than one fifth of the nurse administrators (26.9%) strongly disagreed that electronic nursing documentation “poses challenges in implementation due to different computer literacy level of nurses”.
2. Nearly one fifth of the nurse administrators (23.1%) strongly disagreed that electronic nursing

documentation “increases need of in person supervision”.

3. More than one tenth of the nurse administrators (11.5%) strongly disagreed that electronic nursing documentation “promotes objectivity for performance appraisal”.

Table 2: Mean, standard deviation and range of perception scores obtained by nurse administrators (N=26).

Variable	Mean±SD	Range of obtained scores
Perception	56.62±7.37	46-72

Minimum score: 15; Maximum score: 75

Table 3: Frequency and percentage of perception of nurse administrators regarding electronic nursing documentation program (N=26).

Perception	Perception scores	Frequency	Percentage
Highly favourable	>80%	06	23.1%
Moderately favourable	71%-80%	12	46.2%
Favourable	61%-70%	08	30.7%

Table 4: Percentage distribution of perception scores of nurse administrators on the positively stated items regarding electronic nursing documentation (N=26).

No.	Items	SA		A		U		D		SD	
		f	%	f	%	f	%	f	%	f	%
1	Electronic nursing documentation; Saves time by providing immediate access to desired information	10	38.5	16	61.5	00	00	00	00	00	00
2	Is easier to audit for quality assurance	10	38.5	14	53.8	02	7.7	00	00	00	00
3	Improves coordination of activities	13	50	11	42.3	00	00	02	7.7	00	00
4	Enables cost saving	05	19.2	10	38.6	03	11.5	05	19.2	03	11.5
5	Promotes objectivity for performance appraisal	14	53.9	09	34.6	03	11.5	00	00	00	00
6	Provides more complete records and hence lowers risk of legal issues	15	57.8	09	34.6	01	3.8	01	3.8	00	00
7	Improves patient safety and ultimately patient satisfaction	14	53.9	09	34.6	00	00	03	11.5	00	00

Key: SA: Strongly agree (5); A: Agree (4); U: Undecided (3); DA: Disagree (2); SD: Strongly disagree (1)

Table 5: Percentage distribution of perception scores of nurse administrators on the negatively stated items regarding electronic nursing documentation (N=26).

No.	Items	SA		A		U		D		SD	
		f	%	f	%	f	%	f	%	f	%
1	Increases tendency to lose contact with the outside world	01	3.9	16	61.5	01	3.9	05	19.2	03	11.5
2	Increases need of in person supervision	00	00	10	38.5	02	7.7	08	30.7	06	23.1
3	Does not provide integrated patient information about a whole unit/area	10	38.4	12	46.2	02	7.7	02	7.7	00	00
4	Decreases human interaction	07	26.9	11	42.4	01	3.8	06	23.1	01	3.8
5	Poses challenges in implementation due to different computer literacy level of nurses	02	7.7	03	11.5	03	11.5	11	42.4	07	26.9
6	Makes data compilation difficult and inaccurate	07	26.9	12	46.2	04	15.4	03	11.5	00	0
7	Is more at risk for loss of patient data	06	23.1	12	46.2	05	19.2	01	3.8	02	7.7
8	Is more challenging due to computer operational problems	06	23.1	08	30.8	06	23.1	04	15.3	02	7.7

Key: SA: Strongly agree (5); A: Agree (4); U: Undecided (3); DA: Disagree (2); SD: Strongly disagree (1)

DISCUSSION

Demographic profile

The present study showed that 76.92% of nurse administrators were more than 25 years in age, similar findings were also reported by L. W. Kivuti where 98 % of nurse administrators were more than 25 years in age.⁷

Majority of the nurse administrators (80.77%) were females in the present study, similar findings were also reported by L. W. Kivuti.⁷

Most of the nurse administrators (84.61%) had GNM as their highest level of professional qualification; L.W Kivuti⁷ also had similar findings that 79.2% of nurse administrators had GNM as their highest level of professional qualification

The study conducted by L.W Kivuti also reported that majority of the nurse administrators had more than five years of work experience which is in congruence to the findings of the present study.⁷

With regards to owning a computer only 42.31% nurse administrators had a computer in the present study, whereas 57.9% of nurse administrators had a computer in a study conducted by L.W Kivuti.⁷

Positive perception

The findings of the present study revealed that nearly one fourth of nurse administrators (23.1%) expressed highly favourable perception towards as compared to 46.2% and 30.7% that expressed moderately favourable and favourable perception regarding electronic nursing documentation. The finding are in consonance with the study conducted by Robert which also showed that most state nurses would not revert to paper records if given the choice as the paper based documentation results in difficult access of the patient information which makes it difficult for the nurses to make patient care decisions.⁸

The present study revealed that nearly more than one third that is 38.5% of the nurse administrators believed that electronic nursing documentation saves times by providing immediate access to desired information. Similar findings were also reported by Ash JS et al and Axford RL et al.^{9,10}

The findings of the present study are in conformity with the study done by Chow SK et al as the present study showed that more than 50% of nurse administrators found hospital information system to improve patient safety and satisfaction.¹¹ The study findings by Chow SK also showed similar results where the nurses have also pointed that hospital system was useful and enhanced patient safety.

Negative perception

The present study revealed that 23.1% of nurse administrators felt that electronic nursing documentation is more challenging because of operation problems; these findings are in congruence with the finding of Ivory C et al which also sites that fear of new technology often presents as resistance to use or adoption of electronic nursing documentation.¹²

The findings of the present study revealed that little more than one fourth of the nurse administrators (26.9%) strongly disagreed that electronic nursing documentation “poses challenges in implementation due to different computer literacy level of nurses”. These findings are in non -congruence with the study conducted by Mahony DO et al where it showed that more than three fourth of the nurse leaders believed that nurses computer literacy knowledge posed a significant challenge in implementing hospital information system.¹³

CONCLUSION

Findings revealed that nearly half of the nurse administrators reported a moderately favourable perception towards electronic nursing documentation. It was concluded that overall nurse administrators have a positive perception of electronic nursing documentation which would be beneficial in promoting a positive organization climate towards the acceptance of electronic health records.

The hospitals need to put more effort in training of the nurses in computer skills to keep in trend with the global development where there will be an increase in demand for individuals trained in informatics and the need to educate patients in the use of Electronic Health Records and health information resources.

The nursing schools need to be challenged to include computer studies as part of their training in Basic Nursing programs. The results of this study will be used for training nurse managers.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Hendrich A, Chow MP, Skierczynski BA, Lu Z. A 36-Hospital Time and Motion Study: How Do Medical-Surgical Nurses Spend Their Time? The Permanente Journal. 2008;12(3):25-34.
2. Wood C. The importance of good record keeping for nurses. Nursing Times. 2003;99(2):26-7.
3. Setz VG, D’Innocenzo M. Evaluation of the quality of the nursing documentation through the review of

- patient medical records. *Acta Paulista Enfermagem*. 2009;22(3):313-7.
4. Kossman SP, Scheidenhelm SL. Nurses' perception of the impact of electronic health records on work and patient outcome. *Computers, Informatics, Nursing*. 2008;26(2):69-77.
 5. Edwards C. Nursing leaders serving as a foundation for the electronic medical record. *J Trauma Nurs*. 2012;19(2):111-4.
 6. Gephart S, Carrington JM, Finley B. A systematic review of nurses' experiences with unintended consequences when using the electronic health record. *Nurs Adm Q*. 2015;39(4):345-56.
 7. Kivuti L, Chepchirchir A. Computerization readiness. *Online Journal of Nursing Informatics*. 2011;15(1).
 8. Robert Wood Johnson Foundation, Princeton, New Jersey (Dr Gephart); and The University of Arizona College of Nursing, Tucson (Drs Gephart and Carrington and Ms Finley).
 9. Ash JS, Bates DW. Factors and forces affecting EHR system adoption: report of a 2004 ACMI discussion. *Journal of the American Medical Informatics Association*. 2005;12(1):8-12.
 10. Axford RL, Carter BE. Impact of clinical information systems on nursing practice. Nurses' perspectives. *Computers in Nursing*. 1995;14(3):156-63.
 11. Chow SK, Chin WY, Lee HY, Leung HC, Tang FH. Nurses' perceptions and attitudes towards computerization in a private hospital. *Journal of Clinical Nursing*. 2012;21:1685-96.
 12. Ivory C. Informatics competencies for perinatal nurses; empowering nurses to understand and use technology. *Nurse Women's Health*. 2008;12(1):62-5.
 13. O'Mahony D, Wright G, Yogeswaran P, Govere F. Knowledge and attitudes of nurses in community health centres about electronic medical records no. *Curationis*. 2014;37(1):6.

Cite this article as: Chand S, Sarin J. Perception of nurse administrators regarding electronic nursing documentation *Int J Res Med Sci* 2015;3:3503-9.