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Introducing structured Nurses Record Format for saving Nurses Documentation Time: a Quality Initiative

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Abstract

Background: Nursing documentation is the record of nursing care that is planned & delivered to the patients, used to monitor the patient's progress and as a tool to communicate among healthcare providers for continuity of care. Due to lack of structured formats there is duplication of documents and nurses end up spending hours for preparing the nursing records, drawing lines, copying prescriptions etc. The nursing administrator of the study hospital was getting frequent complaints from the staff regarding long time spent on nursing documentation leading to inadequate time availability for direct patient care.

Aim: The study was aimed at reducing the time taken by the nurses in preparation of the nursing record.

Design: Action oriented research carried out in steps.

Methods: Direct observation, recording of time using stop watch for identifying the steps in preparing the records and quantifying the time taken. Collaborative approach, focused group discussions with nursing administrators and nursing staff for designing and introduction of the structured record format

Results: The study shows a significant reduction in time spent by nurses in preparing the nursing record per patient per admission from 26 minutes to 10 minutes through implementation of the structured format.

Conclusions: The structured formats for nursing documentation can reduce the documentation time; change in practices can be introduced through a collaborative approach.

Impact Statement: The study shows a significant reduction in documentation time with introduction of structured formats. The resistance to change was effectively managed using a collaborative approach.

Keywords: Nursing Record, Action Research, Documentation, Structured Format

Introduction

Nursing documentation is the integral part of nursing practice and professional care. The most important purpose of nursing documentation is to communicate to other members of healthcare team the condition and progress of patient for continuity of care. In addition, nursing documentation is important to define the nursing focus for the patient or group , differentiate the accountability of the nurse from that of other members of the health care team , provide the criteria for reviewing and evaluating care (quality improvement) , provide the criteria for patient classification, provide data for administrative and legal review , comply with legal, accreditation, and professional standard

requirements and to provide data for research and educational purposes [1].

Nursing Documentation is reported to take up to 50% of nurse's time per shift [2] The quality of the documentation can be effected by the workplace environment including heavy workloads, length of documentation forms and lack of resources. [3] Documentation can be maintained as hand-written as free text, hand written on a structured format; typed as free text (in a computer) or typed on a computer format. Documentation can take the form of a standard of care, a check marked on a form, or an initial on a flow record [1].

Action research was coined by Kurt Lewin in his 1946 paper "Action Research and Minority Problems". It characterizes as "a comparative research on the conditions and effects of various forms of social action and research leading to social action", using a process of "a spiral of steps, each of which is composed of a circle of planning, action, and fact-finding about the result of the action". [4]. Action research(AR) aims to contribute both to the practical concerns of people in an immediate problematic situation and to further the goals of social science simultaneously. Thus, there is a dual commitment in action research to study a system and concurrently to collaborate with members of the system in changing it in what is together regarded as a desirable direction. Accomplishing this twin goal requires the active collaboration of researcher and client, and thus it stresses the importance of co-learning as a primary aspect of the research process " [5]. AR has the potential of closing the research–practice gap, although, it has limitations, including the difficulty, in reality, of addressing the power relationship between 'experts' and practitioners. Its success, therefore, depends on the degree and type of collaboration between researchers and practitioners and the amount of key stakeholders' support [6].

Overview of the Study Hospital

The study was carried out at a Tertiary Care Premium Eye Hospital in New Delhi, India. Hospital has eight wards with 36 beds in each ward and two private wards with 11 rooms in each ward. Each ward has admission day twice a week, in any shift. Average number of admission per ward per admission day is 30.There are three shifts for the nursing staff: morning 8 AM to 2PM; evening 2PM to 8PM and night shift 8PM to 8 AM. Nurses per shift in each ward are: 03 in the morning shift, 02(on admission day) and 01(on non admission days) in the evening shift and 01 in the night shift.

Present Practice of Nursing Documentation

Nursing documentation is paper based. It is carried out at the time of admission of the patient and updated by the night shift nursing staff. The documentation comprises of advised medicine including eye drops; patient's vitals and general condition; pre-opt and post-opt instructions; temperature record and other parameters like blood sugar etc.

On admission of a patient, the nurse on duty joins together 3-4 sheets of existing blank nursing record, one temperature chart and one parameter monitoring chart. Stickers with Patient's details are pasted on all the sheets. Advised medicines are copied from the doctor's orders on the nursing record form with the time of medication (for one day).

Every time the medicine is dispensed to the patient the nurse on duty puts a tick mark on the timing written on the medicine list the previous night.

After the consultant's round in case any medication is added it is copied to the nursing record.

During the night shift fresh medication list for all the

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admitted patients is prepared (name of all the medicines along with the time it is to be given is re-written) by the staff.

The Problem

Repeated requests from the Nursing staff were made to the Nursing Superintendent for changing the time of documentation from night to evening shift as there is only one staff at night and a substantial amount of time in spent in documentation thus effecting the patient care. Changing the time of documentation would have disturbed the other routine activities of the ward and having an additional nurse in each ward for night shift would have added to the increase of operational cost to the hospital.

The Research

The situation demanded immediate action with change in practices without addition of resources. An action oriented, collaborative approach was the ideal solution for the situation. To find an amicable solution to the problem, we aimed at assessing and reducing the time taken by the nurses in preparation of the nursing record.

Study Methodology

Action research methodology was utilized by involving the stakeholders. The study was carried out in five steps with involvement of stakeholders in decision making at each step.

Step 1: Quantifying the time taken for preparing nursing record:

Discussions with nurses, nurse administrators and hospital administrators were held. Direct observations were made to quantify the time taken by the nursing staff for the nursing records in all the shifts. The activities involved and the time taken for each activity was noted using a stop watch.

Proportionate Stratified sampling was used. A sample size of 160 for each activity was taken.

Observations: The average observed time per patient was found to be 26.10 minutes for the documentation on admission day and 11.54 minutes per patient per day for the subsequent days till the patient is admitted. Out of the total time spent 543.87 sec (9.1 minutes) are spent during the night shift per patient. Thus with available 12 man hours during the night shift (one nurse and 12 hrs shift) and with 36 patients per ward, the time spent for nursing record documentation is 327.6 minutes, that is 5.46 hours, which is 45.5% of the available time for the documentation. [Ref:Table no 1]

Table 1: Activities And Time Taken For Nursing Documentation Pre Implementation Of Structured Format

Activity	Time/ Shift Of Activity	Average Observed Time In Seconds
Joining of blank nursing forms(3-4)& temperature chart	On admission day	122.45
Sticking patient's label on all the pages of the prepared record	On admission day	108.31
Drawing lines and tables	On admission day	197.43
Writing the advised medications & other orders	On admission day	445.29
Adding the orders after rounds	Atleast once/ day	148.72
Preparing medicine list for next day	Every Night	543.87
Total Time Spent On Nursing Documentation	In seconds	1566.07
	In minutes	26.10

Step 2: Planning the action:

The result (observed time) was discussed with the Medical Superintendent, nursing superintendent and ward in charges. Possible solution of reduction of time

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for documentation through introduction of structured format was planned.

Step 3: Developing & Designing the new structured format: The methodology adopted for this is as below:

1. The existing nursing records of all the wards were evaluated for the content; that is: number, type of medicines prescribed and frequency of prescription. The other patient details noted by the nurses in the record were also noted.
2. The National Inpatient Medication Chart by Australian Commission on Safety and Quality in Health Care, July 2013[7] was used as a basic guideline, a form was prepared specific to the requirement of a eye care hospital.
3. Focused group discussions(FGD) were held with the nursing staff doing shift duties for finalize the content of the form.
4. Five copies of the drafted form were given in each ward to be used for new patient in addition to the existing forms.
5. The nurses were asked to note down the difficulties faced in filling up the form separately.
6. The new forms were collected and assessed. Meetings(FGD) were held with the nurses to understand their difficulties with the proposed form. The form was modified based on suggestions.

Step 4: Changes In Practice: Implementation of new form

The challenges were faced in the implementation due to apprehensions from the nursing union, resistance due to fear of unforeseen from the staff. Separate meetings (FGD) were held to address the union. The fear of unforeseen and the resistance was addressed by providing continuous support in the form of daily visit to the wards to train the staff in filling the form and to address the difficulties. resistance. Two meetings were held with the nursing-in-charges' of all the wards to discuss the implementation difficulties.

Step 5: Evaluation Of Changes: Comparison of the time taken for preparing and updating nursing records:

The change in steps for documentation and time taken for each step was observed and noted.

Observations: In the new form three steps of the documentation were reduced that are:

1. Joining of blank nursing forms & temperature chart: As the form prepared incorporated all the sheets required.
2. Drawing lines and tables: The printed form had the required rows and columns.
3. Preparing medicine list for next day: The entries of medicine are made once at the time of admission and in case any addition of medicine on following days.

Time taken for 'Sticking patient label' was reduced to more than one third as the form was foldable single sheet, therefore affixing of sticker was at one place only.

Reduction of time was observed for step: adding the orders after rounds, however it was not statistically significant. The overall reduction in documentation time per patient was more than 50%. [Ref: Table no. 2]

Table 2: Activities and time taken Post Implementation of Structured Format

Activity	Time/ shift of Activity	Average observed Time (seconds)
Taking a new blank form from the stationary desk of nursing counter	On admission day	31.23
Sticking patient's label on the form	On admission day	28.12
Writing the advised medications & other orders	On admission day	447.18
Adding the orders after rounds	Atleast once/ day	135.11

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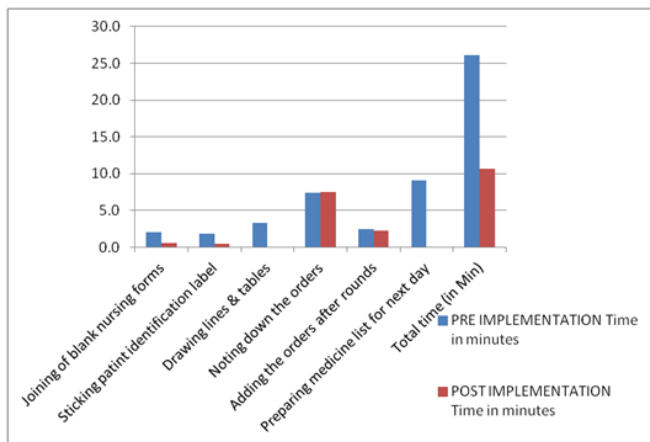
TOTAL TIME SPENT ON NURSING DOCUMENTATION	In seconds	641.64
	In minutes	10.694

Figure 1 below shows the comparisons in time taken for different activities pre and post implementation

Fig 1: Comparisons of time taken for nursing documentation: Pre and Post



Discussion and Conclusion

Until 1940s Prescription charts did not exist. Hospital doctors wrote their prescriptions in patients' notes, and a nurse, usually the ward sister, transcribed them on to a sheet called a medicine list. At that time few medicines were used, and nurses could be expected to know a great deal about their beneficial and harmful actions; changes in treatment were infrequent and it was simple to make out new medicine lists.

In 1950s, problems with the medicine list and inadequacies were highlighted.

In 1965 clinical pharmacologists in London and Aberdeen studied the rates of medication errors in their wards and latter described a new drug chart that they suggested would reduce the error rate. In 1967 the Aberdeen group reported on the use of their new chart, after 18 months of experience. Nursing time spent in administering medicines was nearly halved and the rate of errors was reduced from 12% to 4%. Similarly, In London, the introduction of a prescription chart reduced the error rate from 15% to 4%.

A national prescription chart for Australian hospitals, was adopted in 2004, the prescription errors fell by almost one-third. In Queensland, the introduction of a uniform chart reduced prescription errors from 20% of orders per patient before to 15.8% after.

In UK, a uniform chart was introduced into Welsh hospitals in 2004. [8]

Our study was focused on reduction of nurses' time through introduction of a structured nursing format. Literature search studies on saving time through implementation of standard nursing record are scanty.

Coombes et al. in their study concluded that implementation of standard national medication chart (NIMC) has addressed many factors associated with prescribing errors.[7]. Our study shows a significant reduction in time spent by nurses in preparing the nursing record through implementation of the structured format.

Elisha M. Okaisu et al in phase 2 and 3 of their study "Improving the quality of nursing documentation: An action research project", developed a new form to facilitate complete documentation of nursing assessments on admission and discharge. The form prompted documentation of a comprehensive nursing history and physical examination aligned with processes taught during orientation. The purpose of their project was to improve the documentation of nursing assessments in the patient record, initially through training. However, three cycles of action research revealed that training alone was insufficient. Sustainable practice change required multi-pronged efforts to change organizational culture and modify systems (including introduction of structured forms) to support change.

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In our study, the introduction of change in organizational (practice) culture was accepted due to the collaborative approach of action research methodology. The prompt onsite guidance by the researchers in filling up the form, helped in addressing the apprehensions and resistance to change. Initial assessment of introduction of structured format for nursing documentation in our study has shown results however cycles of action research with focus on further improvement and concerns of stakeholders in future will give substantial evidence on benefits. A further study on medication error can be included in future to bring out the benefits in patient care through structured forms of documentation.

Conclusion

Structured formats are useful and time saving measures. The designing of need based format is fruitful only if the right methodology of collaborative approach, the 'Action Research Methodology' is used for the success in implementation of any new changes in process or documentation. The study aimed to reduce the time taken for preparation and updating the nursing records. We achieved our aim through the new structured nursing record format. Thus we conclude that a need based and tailor made structured nursing record form designed and implemented in a collaborative manner can save the nurses time.

Impact Statement: In the study, we have quantified the time taken on maintaining unstructured records and by structured formats. The study compares the difference in time taken after the implementation of the structured forms.

Change in an organization is difficult to be introduced, however in our study the involvement of stakeholders (the nurses) was considered important from the first step onwards. Our study shows how collaborative approach of 'Action Research' can be applied to health care settings for introduction of change in practices.

We acknowledge all the nursing staff of the hospital for their useful inputs for preparing the structured formats and their cooperation in successful implementation of the nursing documentation forms.

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