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Narrative Text in Structured Documentation of Medication Risks and Side Effects

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Abstract. Electronic patient records enable the use of patient data for clinical, administrative and research purposes. However, utilising electronic data requires a structured documentation model in which standardised nursing classifications are used. Finnish Care Classification (FinCC) is based on the Clinical Care Classification. FinCC version 1.1 used in this study contains Finnish Classification of Nursing Diagnosis and Interventions. This study aims to analyse how nurses have used narrative text to complement the documentation of medication risks and side effects when the Finnish Care Classification is used. The results of this study show that content of narrative text does not always correspond with the FinCC codes used. The content of narrative text does not follow the nursing process. Especially the use of nursing diagnosis seems to be difficult. This study indicates a need for continuing education about structured documentation. Further research is needed to analyse the relationship between nursing diagnosis and interventions as well as how other components are complemented with narrative text.

Keywords: Nursing process, Documentation, Classification, Narration

1. Introduction

Electronic patient records (EPRs) have been widely introduced in health care. Patient data documented in EPRs is available for health professionals for clinical purposes when needed, but electronic documentation also enables the use of data for administrative and research purposes if the data is stored in a structured form using a standardised nursing classification system [1].

Nursing documentation can be structured by means of the nursing process model, which consists of five phases: assessment, diagnosis, planning, implementation and evaluation [2]. Content of documentation can be also standardised using classification systems to document patient care and to describe nursing practises. In addition, narrative text can be used to complement used classifications [3]. Even though there is little evidence that a structured nursing documentation leads to improved nursing outcomes, using classification system seems to improve the quality of documentation and coherent use of nursing diagnosis, interventions and outcomes [4-5].

When nursing diagnoses, interventions and outcomes are documented consistently, the documentation provides descriptive information about the patient's problems/needs and about nursing interventions, allowing more precise decisions to be made at clinical, administrative and policy levels [6]. Electronic documentation also enhances patient safety and the continuity of care improving the flow of information inside and between organisations. In addition, structured documentation using classifications enhances nursing visibility and makes the contribution of nursing quantifiable [3-5].

It is known that the nursing process model can structure nursing documentation, but the content of structured documentation was evaluated as being inadequate and unreliable and confusion between the terms "nursing status" and "nursing intervention" were

identified [7]. In addition, patient records do not include nursing diagnosis or goals for care, although most nurses stated that their documentation followed current guidelines [8].

Although the need for structured nursing documentation is identified and nursing classifications are widely implemented in practise, it is unclear how such classifications describe current practises and how they are used. When evaluating the correspondence of documentation and how classifications are used to describe nursing practises the content of narrative documentation plays a major role.

This study aims to analyse how nurses have used narrative text to complement the documentation of medication risks and side effects when the Finnish Care Classification is used. In addition, the purpose is to develop a tool for analysis of narrative documentation. The research questions were as follows: 1) What kind of medication risks were documented as patient needs? 2) What kind of medication side effects and interventions related to them were documented?

2. Finnish Care Classification

Finnish Care Classification (FinCC) is based on the Clinical Care Classification developed in the USA [3]. The classification is implemented in the EPRs and is used for describing nursing diagnoses, interventions and outcomes. FinCC version 1.0 used in this study contains Finnish Classification of Nursing Diagnosis and Interventions [9]. Nursing diagnosis is "a clinical judgment about individual, family, or community responses to actual or potential health problems/life processes" [3]. And nursing intervention is defined as the following: "a single nursing action designed to achieve an outcome for a nursing or medical diagnosis and for which the nurse is accountable". Selection of nursing interventions should be based on nursing diagnoses which defines patients' needs and goals for care [3].

FinCC (v1.1) contains 17 main components, and these are divided into a number of main categories and further into subcategories. In FinCC medication care is documented using the medication component, which is defined as "a cluster of elements that involve medicinal substances"[3]. The medication component is divided into three main categories and further into subcategories.

In this study special attention is paid to the main categories Medication Risk and Medication Side Effects. Medication Risk is defined as increased chance of negative response to medicinal substances [saba.com] and Medication Side Effects are actions performed to control untoward reactions or conditions to prescribed drugs [3].

Previous studies have shown that the medication component is one of the most documented interventions when FinCC is used [10]. When documenting medication care, nursing diagnoses are mainly documented by using narrative text and without the medication component, whereas nursing interventions are documented with the medication component. This indicates that nursing interventions are easy to use, but nursing diagnoses are much more difficult to define [11].

3. Materials and Methods

In this study, the data were extracted from the EPRs of one central hospital in Finland during 2005. The permission to carry out the research was given by the hospital research council. The data included structured documented patient data from one medical ward. Each data item i.e. patient record included the patient’s number, the title

of the user, the heading, the date and time, narrative text and the FinCC codes. To ensure privacy the patient's identification numbers were written in an anonymous form in the hospital before the data were delivered to the researches. The data were stored in SQL format and MS Access was used to classify it. All patient records in which Medication Risk (G.1) were used to describe nursing diagnosis (29 out of 106 records) and in which Medication Side Effects (G.2) were used to determinate nursing interventions (84 out of 6056 records) in clinical care were included in this study. Narrative text was analysed by using qualitative content analysis. Analysis was conducted in three phases [12]. In the first phase, the data were coded according to unit of analysis, which was a descriptive word or a sentence in this study. Secondly, the data display was created by organizing the data into themes according to similarities. Finally, the data were verified and conclusions were drawn [12]. Based on this framework a tool for analysis of narrative documentation was constructed. In this study this tool was tested and it will be used in the future when research of nursing narratives is undertaken in larger settings.

4. Results

A total of 29 nursing diagnoses were analysed. Medication risks were documented mainly by using the main category of FinCC complemented by narrative text (25 out of 29). Narrative text consisted of short sentences or individual words. Of the 4 records without narrative, one had the title of the main category, but the other three contained nothing related to medication. Six of the 25 records included both need for care and expected outcomes as nursing diagnoses should include. The rest (n=19) included either one or the other. In these narratives the nursing diagnosis was not stated clearly as patients' needs or goals of care, but as a list of interventions or patients' background information.

A total of 84 nursing interventions were analysed. Medication side effects were documented by using the main category of FinCC complemented by narrative text (37 out of 84). However, 37 records were documented without narrative text, and in 35 of these the title of component or category was written. In general, interventions related to medication side effects were described briefly by using whole sentences.

Five main themes were identified as a result of content analysis. One narrative text in nursing diagnosis (n=25) and nursing intervention (N=37) may include more than one theme.

Table 1. Frequencies of quantified themes

Theme	Nursing Diagnosis (n=25)	Nursing Intervention (n=37)
Medication Safety	9	27
Compliance	4	-
Medication Management	10	28
Patient Teaching	4	8
Continuity of Care	-	7

In nursing diagnoses "Medication Management" was the most used theme. It indicates the patient's current medication list or the need for premedication before an operation. "Medication Safety" refers to previous side effects of medication, laboratory tests and results needed to guarantee safe medication use and allergy information. "Patient Teaching" contains knowledge deficit of the patient or relatives. "Compliance" describes the patient's understanding of the importance of medication or their negative attitude toward medication.
The most used interventions documented in narrative text were related to "Medication Management", which refers to administered medications and changes in medication protocol. "Medication safety" which indicates side effects of medication (n=14)) and medication errors (n=1). Side effects were documented by describing symptoms and the results of laboratory tests if needed. In addition, in 11 records interventions used to control untoward side effects were mentioned: medication was interrupted (n=9) or medications were administered (n=2). In 12 records the absence of side effects was in particular mentioned. "Patient Teaching" includes interventions related to patients' education and continuity of care indicates for example the timing for the next x-ray or doctors visit.

5. Discussion

This study was conducted to demonstrate how nurses document medication risks as a nursing diagnosis and medication side effects as a nursing intervention. In addition, the purpose was to test an analysis tool developed for this study. The content of narrative documentation of medication risks included the following themes: "Medication Safety", "Compliance", "Medication Management" and "Patient Teaching". The narratives of medication side effects can be classified partly by the same themes: "Medication Safety", "Medication Management", "Patient Teaching" and "Continuity of Care".
The results of this study showed that the content of narrative text does not always correspond with the used FinCC main/sub categories. "Medication Safety" and "Compliance" themes are closely related to categories of "Medication Risk" and "Medication Side Effects" and therefore the use seems to be correct, but also themes related to other FinCC categories were present in narrative texts regarding medication. For example, teaching and administered medications were documented using "Medication Risk", the same main category as used for nursing diagnosis, and "Medication Side Effects" used the same main category as nursing intervention, although FinCC includes its own main categories of "Medication Counselling" and "Medication Administration", which should be used for these purposes. In addition, themes related to the main category of FinCC "Continued Treatment" were present when documenting medication side effects.
Based on this analysis the structure of narrative text does not completely follow the nursing process. Especially use of nursing diagnosis seems to be difficult and inaccurate. When medication risks were documented, nursing diagnoses were challenging and accuracy of their documentation needs further improvement. Earlier studies confirm this result [7-8]. This indicates that adoption of nursing diagnosis to practise is still an ongoing process and needs to be developed. A result of this study indicates the need for continuing education about structured documentation and use of nursing classifications.

Many records concerning medication side effects included no narratives and this leads to the following question: What kind of side effects have occurred and how are they controlled? It is not possible to answer this question in the present study, but it needs to be researched in the future. Further research is needed also to analyse the relationship between nursing diagnosis and interventions as well as how other components are complemented with narrative text.

The content analysis of narratives included only patient records from a medical ward hence this has a bearing on the results of the study. In future the analysis tool developed in this study will bee utilised further and analysis of patient records from other wards will be conducted to see if results were similar to those found in this study.

As a conclusion, it can be stated that the structured documentation enables the utilisation of electronic data and this is the reason why the accuracy and correspondence of documentation is prerequisite, when clinical and administrative decisions are based on electronic data.

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