Nursing Informatics 2016
W. Sermeus et al. (Eds.)

doi:10.3233/978-1-61499-658-3-466

Standardized Nursing Documentation Supports Evidence-Based Nursing Management

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Abstract. Nursing documentation is crucial to high quality, effective and safe nursing care. According to earlier studies nursing documentation practices vary and nursing classifications used in electronic patient records (EPR) are not yet standardized internationally nor nationally. A unified national model for documenting patient care improves information flow in nursing practice, management, research and development toward evidence-based nursing care. Nursing documentation quality, accuracy and development requires follow-up and evaluation. An audit instrument is used in the Kuopio University Hospital (KUH) when evaluating nursing documentation. The results of the auditing process suggest that the national nursing documentation model fulfills nurses' expectations of electronic tools, facilitating their important documentation duty. This paper discusses the importance of using information about nursing documentation and how we can take advantage of structural information in evidence-based nursing management.

Keywords. Nursing documentation, Finnish Care Classification system (FinCC), evidence based nursing care, evaluation, nursing management

1. Introduction

Nursing documentation constitutes an integral part of the nurse's daily work (1). The use of an electronic patient record (EPR) and nursing documentation have been shown to lead to higher quality, more comprehensive and more patient-oriented documentation than paper-based nursing documentation (2). In standardized electronic nursing documentation, the structure of the documentation follows the nursing process and also uses standardized terminologies in describing the various phases of the nursing process (3).

The nursing process model has been used as a framework for nursing and nursing documentation. The nursing process model involves assessing, planning, implementing and evaluating patient situations with the ultimate goal of preventing or resolving problematic situations (4). The American Nurses Association describes the nursing process according to six steps: assessment, diagnosis, outcomes identification, planning, implementation and evaluation (5). Earlier studies have reported that nursing documentation has conformed to the nursing process (6), and the use of the nursing process has been shown to improve legislative compliance and the completeness of

nursing documentation (7). In conforming to the nursing process, classifications are still required to standardize nursing documentation (8). Standardization of nursing diagnoses and nursing interventions for documentation purposes has been shown to make the contribution of nursing visible and quantifiable (9).

In Finland, a national model for documenting nursing care was developed between 2005 and 2009 (10). The model incorporates the WHO nursing process model as well as nursing classifications developed in the Clinical Care Classification by Dr. Virginia Saba (11). The Finnish Care Classification (FinCC) includes the categories of Nursing Care Components, Nursing Diagnoses, Nursing Intervention and Nursing Outcomes. The national model has been implemented in various EPR systems in hospitals and health centers in Finland.

Nursing documentation is written evidence of nursing implementation and should show the information used for nursing decisions, as well as the outcomes achieved (4). Saranto & Kinnunen (2009) concluded that the use of structured nursing terminology promotes the standardization of nursing documentation.

Structured nursing documentation produces data from nursing practice. Utilizing other statistical information, we can also show nursing outcomes. Nursing's mission, vision, values, and strategic plan must align with the organization's priorities to improve the organization's performance. Nursing managers are in a lead role in the development of the nursing process in work communities. They must develop structures, process and expectations for clinical nursing, as well as enable input and involvement throughout the organization. Structured statistical information from nursing can be utilized in the development of evidence-based nursing at the unit, service unit, and organizational level (12).

The purpose of this paper is to discuss the importance of utilizing nursing documentation and especially how we can take advantage of structural information in evidence-based nursing management. Crucial aspects include the advantages gained from obtaining nursing process information and improve nursing documentation.

2. Methods

The gradual introduction of the EPR at Kuopio University Hospital (KUH) took place between 1998 and 2007. KUH was involved in several national EPR development projects. The model for systematic documentation was introduced in stages between 2005 and 2010.

A nursing reporting system has been incorporated into the EPR in KUH. Nurses record nursing-related information to the patients' EPR on a daily basis. With the help of the EPR this structured information on nursing care can be compiled into statistical information on nursing performance. Information can also be produced at the unit, service unit and organization level in real time. Statistical reports on the care delivered can be retrieved directly from the EPR databases.

One aspect of the EPR reporting system is the provision of nursing documentation reports. These reports include reports on nursing documentation, structured according to the nursing process, at the care component level, using the main classes and subclasses of the FinCC. In addition, information on the effectiveness of patient care can be compiled into reports, detailing for example changes in patient conditions. Nurses evaluate the patient's condition as either better, worse or unchanged.

This system produces information on the number of patients, nursing care components, and the main FinCC classes and subclasses, as well as how frequently the different stages of the nursing process were used. Reports can be produced according to the organization structure and according to specified time periods.

The following searches were carried out as examples of the possibilities for using the FinCC data:

1. ***Search rules:***
   Nursing Diagnosis: the proportion of care components and patients
   Start date: 1 January
   End date: 31 May
   Organization level is KUH (Figure 1)
2. ***Search rules:***
   Nursing Diagnosis: the proportion of care components and patients
   Start date: 1 January
   End date: 31 May
   Service unit is the surgery unit, and the unit is Department of Gastroenterologic Surgery ward (Figure 2)
3. ***Search rules:***
   Nursing documentation: Nursing interventions: the degree of main class and subclass and patients
   Start date: 1 January
   End date: 31 May
   Service unit is the surgery unit, and the unit is Department of Gastroenterologic Surgery ward (Table 1)

The results are presented via graphics (Figures 1 and 2) showing the results at the University Hospital level, service unit and unit level for comparison.

3. Results

Figures 1 and 2 indicate the situation in 60 units (hospital level) and describe the nursing diagnoses defined in nursing on the Gastroenterologic Surgery Ward over a five-month period (Figure 1 and 2).

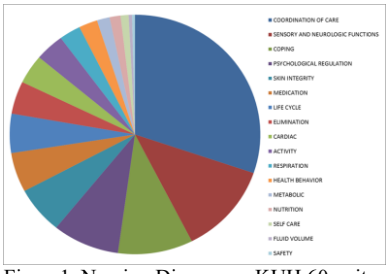

Figure1. Nursing Diagnoses. KUH 60 units.

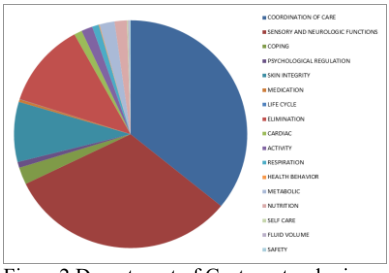

Figure2.Department of Gastroenterologic Surgery Ward Nursing Diagnosis

Infographics can be created from the information in the databases and the proportions of the used nursing care components can be observed. By comparing the

information from the whole hospital or a single unit, differences in care provision can be observed (Figure 1 and 2).

Table 1 indicates the situation at the Department of Gastroenterologic Surgery Ward according to Nursing Interventions over a five-month period. In total, 30 of the most used main FinCC classes and subclasses for care components are presented (Table 1).

Component	Main- and subclass	Amount used	Patients
Sensory and neurologic functions	Pain follow-up	9524	937
Activity	Sleep and awake follow-up	6608	975
Activity	Activity follow-up	5435	855
Elimination	Diuresis follow-up	5404	888
Coping	Patient's coping evaluation	4561	1111
Medication	Administration of injection	4507	574
Medication	Administration of medication	4157	658
Nutrition	Dietary follow-up	3912	737
Medication	Medication per os	3861	743
Elimination	Follow-up of bowel movement	2923	558
Nutrition	Nutrition follow-up	2917	664
Coordination of Care	Preparation and guidance to research and operation	2738	957
Self Care	Assistance in washing and dressing	2612	643
Skin Integrity	Follow-up of wound and elimination	2262	443
Elimination	Follow-up of diuresis and its quality	1867	427
Elimination	Carry out of drain treatment	1626	145
Fluid Volume	Intravenous condense	1566	494
Coordination of Care	Postoperative follow-up	1550	744
Respiration	Follow-up of respiration	1530	276
Skin Integrity	Wound care	1241	320
Cardiac	Follow-up of blood pressure, heart rate and rhythm	1167	381
Elimination	Treatment of stoma	1133	92
Elimination	Prevention and treatment of nausea and vomiting	1071	262
Coordination of Care	Guidance of coordination of care	980	615
Cardiac	Temperature follow-up	974	380

Table 1. Nursing interventions, 30 most used main and subclasses at the Department of Gastroenterologic Surgery Ward.

From our data we can see that on the Gastroenterologic Surgery Ward, patient treatment is focused on the content of the Sensory and Neurologic Functions care component. Patients frequently require follow-up related to pain. Data on the pain needs of patients on the Gastroenterologic Surgery Ward can be utilized to support the development of nursing management. The information allows us to also monitor how the pain is treated. We can also observe if there is any correspondence between the pain treatment and pain evaluation and what kinds of areas for nursing development are identified. Are the nursing interventions the same on different wards?

4. Discussion

Electronic documentation requires that information is stored according to standardized principles in a structured form. This enables information to be searched from patient files and speeds up information retrieval. Structured information also allows for the further processing of information and its utilization in nursing management.

Infographics can be created from database information that show the proportions of care components used. By comparing the information of the whole hospital or a single unit, it is possible to establish differences in the care provision (Figure 1 and 2). This information gives substantive and quantitative information on the content of nursing. This information could be utilized to develop more patient-centered, evidence-

based, and higher quality nursing. The care unit profiles become more visible, which can aid in the allocation of nursing resources, education, research and teaching.

The use of FinCC classification has a different emphasis in different wards. Different classes describe patient's treatment from the nursing point of view and they produce information on the content of nursing care (Table 1). By linking these statistics with other structured information, they can also be used to describe the allocation of resources used, as well as the quality and results of treatment. Nursing outcomes are observable in the nursing documentation, for example, outcomes on pain levels, wound recovery and patient's rehabilitation. By linking nursing interventions (e.g., treatments) to treatment results, one can demonstrate the effectiveness of nursing practice and the effect of the patient nursing process on patient outcomes. Systematic documentation supports a more rigorous evaluation of nursing care and nursing as a function based on expertise, as well as showing its effectiveness.

Nursing statistics support standardized nursing management. The produced data also help to support decision-making. The aim is to utilize statistics in nursing development founded on evidence-based care. Utilization of structured information on nursing care supports the development of nursing practice and the will to utilize nursing information in nursing management to ensure best patient care.

5. Acknowledgments

I am grateful to Doctor Virginia K. Saba and Patricia Dykes PhD for tutoring this paper. I also thank Administrative Secretary Eija Hassinen for revising the language.

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