

Nursing documentation for communicating and evaluating care

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Aims. To investigate the utility of electronic nursing documentation by exploring to what extent and for what purpose general practitioners use nursing documentation and to what extent and in which cases care unit managers use nursing documentation for quality development of care.

Background. As health care includes multidisciplinary activities, communication about the care given is essential. To assure delivery of good and safe care, quality development is necessary. The main tool available for communication and quality development is the patient record. In many studies, nursing documentation has been found to be inadequate for this purpose.

Design. This study had a cross-sectional descriptive design.

Methods. Data were collected by postal questionnaires, one to the general practitioners ($n = 544$) and one to care unit managers ($n = 82$) in primary health care. Data were analysed by descriptive statistical and qualitative content analysis.

Results. The general practitioners usually used the nursing record as the foremost source of information for treatment follow-up. The results, however, point out weaknesses and shortcomings in the nursing records, such as difficulties in finding important information because of a huge amount of routine notes. The care unit managers generally (74%) used the record for statistical purposes, while only half of them used it to evaluate care.

Conclusion. Nursing records need more clarity and need to be more prominent regarding specific nursing information to fulfil their purpose of transferring information and to constitute a base for quality development of care.

Relevance to clinical practice. The results of this study can provide a part of a basis upon which a multi-professional patient record could be developed and which could also function as an alarm to managers at different levels to prioritise the development of nursing documentation.

Key words: communication, documentation, nurses, nursing, primary care, quality

Introduction

As health care includes multidisciplinary activities, information and communication about the care is essential for the safety and comfort of the patient (Ruland 2000, Simpson 2003). One of the main tools available to health care personnel for communication is the patient record (Iakovidis 1998, Ruland 2000). The patient record is also important for quality development of care, which assures a delivery of good and safe care (Ball *et al.* 2003, Simpson 2003). Nursing documentation represents one essential part of the patient record (SOSFS 1993, Ruland 2000). In Sweden, all registered health-care professionals are obliged to document the care they perform, in addition to the background and their judgement of the patients' need of care (SFS 1985).

This study was performed in primary health care (PHC) in Sweden. Sweden is divided into 21 county councils that are responsible for organising health care that is suitable according to the needs of the inhabitants of the county. In most county councils, the PHC is organised through PHC centres that provide multi-professional first line health care, including general practitioners (GP), registered nurses with graduate diploma in PHC, physiotherapists and occupational therapists. The hallmark of PHC is comprehensiveness, continuity and accessibility of care. The registered nurses with graduate diploma in PHC work both in their own surgery and with home calls. The work implies independent judgements about the patients' need of care and initiating and carrying out the care.

The management of the PHC centre often includes a medically responsible manager, a GP and an administrative manager [care unit (CU) manager] – in most cases, a nurse. The CU manager is responsible for staffing, competence development of the staff, and in many cases, the budget of the PHC centre. According to Swedish law, the CU manager also has the responsibility of performing and supporting care quality development (SOSFS 2005).

In Sweden, as in other European countries, the electronic patient record (EPR) was first introduced in PHC (Iakovidis 1998). The EPR was introduced to facilitate communication of care, to determine the effects of interventions and to make evidence of the quality of care (Rigby 1999). All the county council PHC in this study had introduced EPR 5–10 years earlier. The county councils had chosen different EPR systems, commonly used in Sweden (BMS[®], Swedestar[®] and Medidoc[®]). All these EPR systems allowed a multi-professional use, meaning that several professionals can read and/or write in the same patient record or easily gain access to each other's parts of the patient record. These EPR systems

are search-word based, which means that each professional is presented a list of search words suitable for their profession when documenting care in the EPR. These search words also constitute the structure for reading the patient record and facilitate the search for information. The search words used for nursing documentation in the PHC centres in this study were those of the Nordic countries' accepted VIPS[©] model (Ehrenberg *et al.* 1996, Hellesö & Ruland 2001, Rosendal Darmer *et al.* 2004), although with minor local differences. In the VIPS model, the search word is called key word. The VIPS[©] model consists of key words on two levels, systematically organised from the nursing process perspective (Yura & Walsh 1988, Ehrenberg *et al.* 1996).

Through the EPR, nursing documentation in PHC became more accessible to other caregivers and to managers in their endeavours to promote good patient care (Johnson & Ventura 2004, Swan *et al.* 2004). For nurses, EPR also involved a more structured documentation than the paper-based nursing record and a revival of the nursing process (Ammenwerth *et al.* 2001b). Studies on electronic nursing documentation revealed more complete nursing documentation than that which was paper based (Ammenwerth *et al.* 2001a) but with a lack of documentation of nurse's judgements, goals and the results of nursing care (Tornvall *et al.* 2004, Smith *et al.* 2005). There was also a difficulty in combining the standardised structure of EPR with the holistic care identified by nursing staff (Martin *et al.* 1999). For nurses, the computer-based documentation could constitute a learning tool to increase their knowledge and change care strategies (Lee 2006). Patel *et al.* (2000) pointed out that computer-based documentation of care influences physician's information collection and reasoning strategy.

Patient record for communication of care and for care quality development

The importance of using the patient record for communication and information transfer of care was pointed out as vital in several studies (Martin *et al.* 1999, Brown 2006). However, studies that investigated how the communication of care through patient record works have mostly had an intra-professional perspective, mainly physician to physician (van der Kam *et al.* 2000), or nurse to nurse (Martin *et al.* 1999). These studies described a desirable development of more data sharing and knowledge translation through information and communication technology and reduced the risk of losing patient information.

Only one previous study has been found that explores the inter-professional communication between physician and nurse through the patient record. A small number of

physicians participated in the study ($n = 3$) (Ammenwerth *et al.* 2001a). That study demonstrates that physicians read electronic nursing documentation more often than paper-based journals and that shift handovers had become more efficient. Street and Blackford (2001) noticed the difficulty in communication between GP and nurses in palliative teams when common and standardised documentation was not available.

The implementation of EPR was not just a new way of documenting care, it brought along a new way of organising and carrying out care (Patel *et al.* 2000, Lee 2006), which could be a starting point for the work of care quality improvement (Rigby 1999). The improvement of the quality of care by the use of EPR was influenced by factors, such as the personnel's computer experience, the compliance between different EPR systems and a non-standardised language (van der Kam *et al.* 2000, Likourezos *et al.* 2004).

Several studies presented findings regarding how the nursing documentation is used for care quality development. Allen and Englebright (2000) described a redesign of EPR with more standardised language, a standard of care and patient-centred documentation, which improved the opportunity to evaluate the results of care. Johnson and Ventura (2004) found similar results regarding the use of data from the EPR. In these studies, the results of care were evaluated and the possibility of evaluation was dependent on structured documentation. As earlier studies of nursing documentation had shown incomplete nursing documentation and with the hallmark of PHC in mind, it was important to investigate whether the nursing documentation in PHC was sufficient for use in the communication and quality development of care.

Aim of the study

Our objective was to investigate the utility of electronic nursing documentation with respect to the communication and quality development of care. We aimed to explore:

- To what extent and for what purpose GP use nursing documentation as a source of information;
- To what extent and in which cases CU managers use nursing documentation for quality development of care.

Method

This was a descriptive, cross-sectional study, which was performed in 2004 in PHC in three county councils in the south of Sweden. Data were collected using two different self-constructed, semi-structured postal questionnaires – one for GP and one for CU managers.

Sample

All GP ($N = 544$) and all CU managers ($N = 82$, could be a manager for more than one PHC centre) from 111 PHC centres in the three county councils were included. The response rate after one reminder was 79% ($n = 430$) for GP and 90% ($n = 74$) for CU managers.

Questionnaires

General practitioners

The GPs' questionnaire consisted of 10 questions. The first four covered demographic data, followed by four questions dealing with: (i) the presence of common EPR for several professions; (ii) how often the GP read the nursing record (with response alternatives: always, often, sometimes, seldom and never); (iii) what they read; and (iv) did they find the information they were looking for. In the question on what the GP read in the nursing records, the response alternatives were: patient history, status, treatment follow-up, patient's experience of illness, the nurse's contact with the patient and the latest contact with the patient. It was possible to choose several response alternatives and to give own response alternatives. The questionnaire concluded with two open-ended questions, one about why the GP had not found the information they were searching for and one about the GP's point of view on nursing documentation.

CU managers

The questionnaire for the CU managers consisted of 15 questions. The first four dealt with basic information about the number of nurses at the workplace, if the nurses were responsible for the EPR system, if not which professionals had the responsibility and which EPR system they utilised. The next five questions dealt with whether there was an introductory programme and in-service training regarding nursing documentation. The final six questions covered the use of nursing documentation for evaluating resources, evaluating care and reasons for not using nursing documentation for evaluation. The questions were mainly open ended.

Validity

As the questionnaires consisted of general questions, without the aim of evaluating, e.g. attitudes, they were tested for content and face validity (Polit & Beck 2004) by two independent expert groups of senior researchers with different professional backgrounds. The questionnaires were also discussed at a seminar for PhD students. Based on the results of these tests, some of the wordings of the questionnaires were

revised to improve readability, and one question about access to nursing records was added to the GPs' questionnaire.

Data analysis

The data from closed-ended and open-ended questions, which were answered with figures, were analysed by descriptive statistics, obtaining frequencies and means. The answers from open-ended questions were analysed using qualitative content analysis to focus on GPs' views of nursing documentation and on the CU managers' use of nursing documentation for evaluating resources, evaluating care and reasons for not using nursing documentation.

Content analysis implies dimensions of interpretation from manifest/describing to latent/interpreting, depending on purpose, quality and extent of the analysed data (Burnard 1995, Graneheim & Lundman 2004). In this study, the answers from the GP were more comprehensive and were suitable for more latent analysis, while the CU managers' answers principally involved the main points and therefore a manifest analysis was performed. The answers from the GP proceeded from two open-ended questions: 'What was the reason for not finding the information you were searching for?' and 'Do you have any further points of view on nursing documentation in PHC?' These questions were analysed together as the answers were synonymous. The answers from the CU managers, on the other hand, are the result of three different questions concerning: evolution of resources, evaluation of care and the reason for not using the nursing documentation. These answers were analysed separately.

The stage in analysis was the same but the grade of interpretation varied (Burnard 1995, Patton 2002, Graneheim & Lundman 2004, Krippendorff 2004). The analysis started by reading the text to acquire an overall picture and to identify the essential features. Then the text was re-read several times, and the words and sentences describing demand matters were marked. Those words and sentences were used for coding. Codes with a similar content were grouped together and subcategories formulated. The authors analysed the text independently of each other. A process of discussion and reflection took place to reach consensus, and categories were created. The resulting categories were validated through corresponding quotations (Patton 2002, Graneheim & Lundman 2004). Throughout the analysis, the codes, subcategories and categories were linked to the data to verify their relevance.

Ethical considerations

Before the data were collected, all the CU managers at the included PHC centres received verbal or written information

about the study. Together with the postal questionnaire, the GP and the CU managers received information about the study and that participation was voluntary. The Research Ethics Committee of the Faculty of Health Sciences, Linköping University, approved this study (03-240).

Results

GP – descriptive data

At least one GP from each PHC centre responded. The demographical data are presented in Table 1.

A total of 85% ($n = 367$) of GP stated that they shared a common patient record with the nurses. Fifty-eight per cent ($n = 244$) answered that they always or often read the nursing documentation, 33% sometimes and 9% seldom or never. Most frequently, the GP read notes about treatment follow-up (80%, $n = 344$) and notes about the patient's experience of illness least often (31%, $n = 130$) (Fig. 1). Eighty-three per cent ($n = 359$) of the GP stated that they found the information they were looking for (8%, $n = 34$, did not answer).

GP – content analysis

Through the content analysis of the answers from the GP, seven subcategories arose, and from these three major categories were created 'shortcomings in content' (A), 'useful tool' (B) and 'allocation of resources' (C) (Table 2). Half of the GP ($n = 215$) expressed their views. The major categories are presented in size order.

Table 1 Demographic data of the general practitioners (GP)

Variable	Total $n = 430$
Age	
Mean	49
Range	27–69
Number of GP employed/centre	
Mean	6
Range	1–13
Years spent in PHC n^*	
< 1 year	22
1–5 years	89
> 5 years	318
Distribution of sex	
Male/female	257/173
(%)	(60/40)

*One answer missing.

PHC, primary health care.

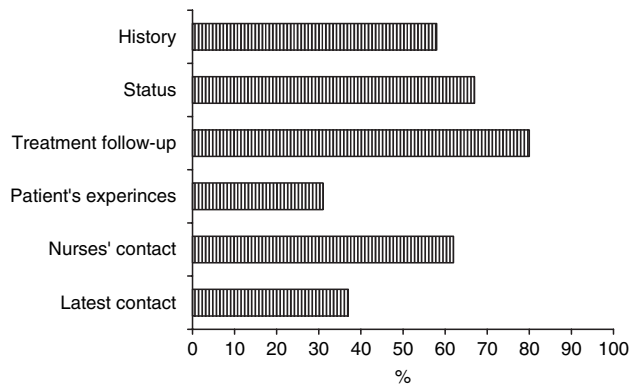


Figure 1 Distribution of the kinds of information the general practitioners searched for in the nursing documentation.

Table 2 Subcategories and categories from the qualitative content analysis of the general practitioners' views about nursing documentation

Major categories	Subcategories
Shortcomings in content (A)	Lack of structure (A:1)
	Search words model (A:2)
	Lack of information (A:3)
Useful tool (B)	Important (B:1)
	Comprehensive view (B:2)
Allocation of resources (C)	Use resources differently (C:1)
	EPR system (C:2)

EPR, electronic patient record.

Shortcomings in content – major category A

Major category A, 'shortcomings in content', includes the subcategories 'lack of structure' (A:1), 'search word model' (A:2) and 'lack of information' (A:3) (Table 2).

The subcategory 'lack of structure' (A:1) was largely attributed to the view that the nursing documentation was too wordy, jumbled and contained too much 'noise'. The large quantity of notes regarding routine activities, e.g. insulin injection, resulted in documentation that was difficult to grasp and to find information in. Some of the notes made by nurses were also considered to be too long and not concise enough:

Too much documentation can obscure the picture, e.g. daily notes on insulin administration ... it's impossible to sit and search among hundreds of notes. (A:1)

Through the subcategory 'search word model' (A:2), the GP pointed out the search words as being one reason for the deficient content. There were too many search words and the nurses used them differently. It was also stated that the search words were used as the only information, i.e. without

elucidative text. The search words also differed from those the GP used:

The VIPS model (the search word model) seems too wordy and extensive to be really manageable in practice. (A:2)

In the subcategory 'lack of information' (A:3), GP emphasised that the nursing records lacked details of patients' status, assessments and patients' reactions to their illnesses. Documentation was, according to the GP, descriptive, superficial and vague. The GP thought that the nurses were afraid to write down their assessments although they delivered care in accordance with these assessments. Reporting to the GP, important information was lost in the enormous number of routine notes, without further essential information than treatments performed, thereby making the nursing records a meaningless collection of recurrences:

The nurses write carefully about how the wound was dressed without describing how it looked! (A:3)

Useful tool – major category B

The subcategories 'important' (B:1) and 'comprehensive view' (B:2) composed the major category B, 'useful tool' (Table 2). 'Important' (B:1) included the views that nursing documentation was valuable and necessary for the care of the patient, and it was, therefore, important to have access to it. 'Good' was the only comment from some of the GP. The documentation was also described as being carefully executed:

Nurses contacts are always well documented! Very valuable. (B:1)

'Comprehensive view' (B:2) of the patient was received through useful information about treatment follow-ups and about the patient's whole life situation. This also supports the teamwork around the patient. Some GP described the nursing documentation as a complement to their own knowledge of the patient:

Useful in teamwork ... gives the true picture. (B:2)

Allocation of resources – major category C

'Allocation of resources' was major category C, which consists of the subcategories 'use resources differently' (C:1) and 'EPR system' (C:2) (Table 2).

In the subcategory 'use resources differently' (C:1), the GP expressed that nursing documentation consumed too much time in relation to its benefits. These resources could be better spent on patient care. It was thought by the GP that good documentation could not totally replace a face-to-face meeting between professionals:

Important not to put too much time into documentation since it is not used so much, better to spend more time with the patient and be available. (C:1)

In the other subcategory 'EPR system' (C:2), GP questioned the gains with the EPR system, e.g. they experienced that the EPR system was not adjusted to health care and that the nurses' notes overloaded it. On the other hand, the EPR made the nursing documentation more accessible. To be able to use the EPR better, the GP made suggestions, such as separating routine notes from other nursing notes and creating a common structure for the EPR, with search words common to several professional groups. The GP also reported that improved knowledge in documentation could lead to increased medical knowledge for the nurses:

It demands far too much space ... the quantity of notes for several patients has meant that the patient record has 'collapsed' in an irritating way. (C:2)

CU manager – descriptive data

Each PHC centre employed an average of 10 nurses. It was predominantly medical secretaries (60%, $n = 51$) who were responsible locally for the EPR system, while nurses had this role in 22% ($n = 16$) of the PHC centres. Fifty per cent ($n = 37$) of the CU managers stated that they had an introductory programme and 64% ($n = 47$) had in-service training for nursing documentation at their PHC centres. Three-quarters of the CU managers ($n = 55$) stated that they used the nursing documentation for evaluating resources, and half of them (51%, $n = 38$) expressed that they used nursing documentation for evaluating care.

CU manager – content analysis

The three questions concerned with using the nursing documentation for evaluating resources, evaluating care and the reasons for not using the nursing documentation for these matters, were analysed and presented individually.

Evaluation of resources

The major category 'patient-based administration' (D) (Table 3), included three subcategories. 'Visit frequency' (D:1), which included visits both in person and in telephone contacts, to or by, the nurses. 'Demographic basis' (D:2) dealt with, e.g. the burden of care of the care-providing unit. The last subcategories 'diagnosis and intervention' (D:3) involved computing these items from what was noted in the nursing record:

Number of visits and patients in need of palliative care. (D:1–3)

Evaluation of care

Three major categories were created from this question: 'care performed' (E); 'content of work' (F); and 'management of the patient' (G) (Table 3). 'Care performed' (E) includes the subcategories 'follow-up of advice and treatment' (E:1) and 'specific nurse clinics' (E:2). The subcategory 'follow-up advices and treatment' contains the nurses in PHC common task:

Follow up of indicators of quality for wound care, pharmaceuticals, BP. (E:1)

The other subcategory 'specific nurse clinics' (E:2) included, e.g. the evaluation of nursing care for patients with diabetes at the PHC centre and reporting of national recommendations:

By way of example, specialist clinics for leg ulcers and diabetes. (E:2)

Table 3 Care unit managers' usage of nursing documentation for evaluating nursing care. Result of qualitative content analysis of three open-ended questions

Question	Major category	Subcategories
Evaluation of resources	Patient-based administration (D)	Visit frequency (D:1) Demographic basis (D:2) Diagnosis and intervention (D:3)
Evaluation of care	Care performed (E)	Follow-up of advice and treatment (E:1) Specific nurse clinics (E:2)
	Content of work (F)	Intervention content (F:1) Nurses' responsibilities (F:2)
	Management of the patient (G)	Stream of activities around specific diagnosis (G:1)
Reason for not using the nursing documentation for evaluation of care	Prioritisation (H)	Time constraints (H:1) Matter depending on organisation (H:2)
	Inadequate nursing records (I)	Use of keywords (I:1) Completion of nursing documentation (I:2)
	Lack of interest (J)	Dependent on individual staff members (J:1) Dependent on the management (J:2)

The next major category 'content of work' (F) (Table 3), comprises the subcategories 'intervention content' (F:1) and 'nurses' responsibilities' (F:2). The 'intervention content' (F:1) aimed at evaluating what was really done and not just that it was done:

How we actually do it. (F:1)

The nursing documentation was also used to check the 'nurses' responsibilities' (F:2), i.e. to find out if the nurses do what they are obliged to, no more no less:

What is our assignment? (F:2)

The major category 'management of the patient' (G) (Table 3), consists of the subcategory 'stream of activities around specific diagnosis' (G:1) relating to the care process and the documentation of those activities:

Compare what the patient has consulted for and how she is taken care of, in order to develop the flow. (G:1)

Reason for not using the nursing documentation for evaluation

The reasons CU managers gave for not using the nursing documentation for evaluation formed three major categories: 'prioritisation' (H); 'inadequate nursing records' (I); and 'lack of interest' (J) (Table 3).

The major category 'prioritisation' (H) with the subcategories 'time constraints' (H:1), where the CU managers stated that they lacked time, and 'matter depending on organisation' (H:2), where other tasks took over as being more important. One of the other major categories, 'inadequate nursing records' (I), included the subcategories 'use of search word' (I:1) that described a different use of the search words by the nurses and 'completion of nursing documentation' (I:2) that pointed out the lack of information in the nursing records. These observations constituted an obstacle to the evaluation of care through nursing documentation:

Lack of time and documentation that is not entirely homogeneous. (H:1)

Finally, the major category 'lack of interest' (J), expressed by the subcategories, 'dependent on individual staff members' (J:1) and 'dependent on the management' (J:2), that evaluation of care through nursing documentation was dependent on interest on the part of individual staff members and had not been asked for by their managers:

Awareness of and interest in the value of documentation has not been prioritised earlier. Work with quality development has earlier been restricted to individual members of staff. (J:1-2)

None of the CU manager mentions the EPR system as an obstacle for not using the nursing documentation to evaluate care.

Discussion

According to the results, the GP wanted to use and did use nursing documentation as a source of information about care. The information in the nursing record was pointed out as being important by Owen (2005), as the nurses in PHC were the professional category frequently performing home calls, thus observing the patients in their own context. However, this communication was achieved at the cost of some inconvenience. The lack of essential nursing facts in nursing documentation that was commented on by both GP and CU managers is confirmed by the findings of earlier studies (Allen & Englebright 2000, Ammenwerth *et al.* 2001a, Tornvall *et al.* 2004, Smith *et al.* 2005). Another obstacle was the huge amount of notes without essence in the nursing documentation, e.g. notes to fulfil legal obligations, which made searching for information hard and sometimes fruitless work. The GP preferably wanted information about follow-up of treatment. The GP also pointed out the nursing documentation as a valuable and necessary complement to their own knowledge of the patient. It therefore seems remarkable that they did not search more frequently for information about the patient's perceptions of his or her illness, to obtain a comprehensive view.

In PHC, the success of care is dependent on the cooperation and trust between the patient and the professionals. Therefore, individualised care is important for reaching the goal of the care. Without the knowledge of the patient's perception of health and illness, it would be harder to tailor the care (Kennedy 2002, Tarrant *et al.* 2003). There must be a fruitful discussion concerning what information and documentation benefits the patient. This discussion could take place in the face-to-face meeting that some GP wanted. According to Martin *et al.* (1999) and Allen and Englebright (2000), there is a need to develop more streamlined documentation based on the standards of care and standards of practice. Suggestions concerning common multi-professional structure of the documentation and clearer descriptions of the rationale of care were also found in this study. There could be a risk with more standardised and systematic documentation that is used only to confirm performed care (Ehrenberg 2001), which does not describe the holistic nature of nursing (Martin *et al.* 1999). This makes the multi-professional discussion about content and shaping of the documentation even more important.

There could be a limitation to this study concerning the contradiction between the large number of GP that found the information they were looking for and the dominance of views of shortcomings in the content of the nursing record. This could be derived from the question: 'Do you find the information you are looking for?' This question had an internal dropout of 8% ($n = 34$), and could have been formulated using several response alternatives rather than only the dichotomous yes or no, to give a more modulated picture that perhaps harmonises more with the views of the GP.

Criticism, from both GP and CU managers, of the search words used by nurses was illuminated in this study. One reason was that the search words differ from those the GP use. Another reason was that the search words were interpreted and used differently among the nurses. Nevertheless, the criticism could also be understood as a need for a common language understood by several professional groups (Rigby 1999), which was confirmed by the GP in this study. Research is in progress to find a multi-professional language, and nurses are in the forefront (Allen & Englebright 2000, Florin *et al.* 2005), which can be seen as an evidence that nursing remains visible. If nurses could focus on the nursing part of care and manage to communicate in a multi-professional language, their contribution would be fully recognised and valued (Martin *et al.* 1999). The GP asked for the nurses' opinion and perceptions of the care, which should give the nurses the confidence to write it down clearly.

The function of the EPR system is important for the documentation of care (Swan *et al.* 2004), and clinically integrated systems with sharing of data prevent errors in, e.g. medication administration (Ball *et al.* 2003). However, the GP in this study questioned the benefit of EPR, as it did not correspond with their expectations. Some GP pointed out several possibilities for improvement, as verified by Rigby (1999), who stated that EPR systems must be developed to suit a patient-focused record and to facilitate information searching, in addition to recording information about the care given to the patient. The GP in this study suggested an EPR system that is reminiscent of the one described by Allen and Englebright (2000), with a comprehensive initial assessment, standard-based charting for routine notes and a concise method for documenting exceptions.

When the EPR system was introduced, only a few GP had enough knowledge and interest to take part in its development (Rigby 1999, Ruland 2000). Now, after 10 years, all professionals in primary care use the EPR. The possibility of all professionals contributing their knowledge and experience to the future development of EPR has thus increased.

The CU manager did not comment upon the EPR system; hence, we do not know if this was usable for quality

development, i.e. if it was easy to collect desirable data from the EPR system. The deficient documentation played a part even in the CU managers' stated use of nursing documentation, but prioritisation is a factor of equal importance. The main reasons for this were, according to our results, lack of time and low level of requests for information about nursing activities from the heads of the CU managers.

According to Lorenz *et al.* (2005), changes that are adopted by managers had a larger chance of being implemented; hence, the responsibility of the CU managers is more than one of simply a legal character. As there are, however, barriers to using evidence in practice in PHC, this could influence the attitude toward quality development work. This may obstruct the possibility of seeing the value of careful and comprehensive documentation of care as a source for knowledge and possibility to map the quality of care.

The CU managers in this study seemed to be 'willing but not able' and this, as well as the not obvious occurrence of introduction and in-service training, did not strengthen the importance of careful documentation. The incapacity to perform quality development could be explained by the demand of efficiency, which forced the CU manager to prioritise something else rather than quality development (Firth-Cozenz & Mowbray 2001). However, the managers in Allen and Englebright's (2000) study obtained reports from EPR and used it both for process improvement and for evaluating care. This illuminates the importance of involving the CU managers in the development of the EPR.

Another, for CU-managers, important point of view is that structured and clear documentation with standardised terms could be an instrument for competence development. According to Patel *et al.* (2000) and Lee (2006), both physicians and nurses thought that the way they document influenced their way of collecting data and increased their knowledge. In this study, some GP had the hope that improvements in documentation would lead to increased medical knowledge among the nurses.

As a large number of the GP stated that the nurses' documentation was useful for communicating care, and half of the CU managers used it for evaluating care; this group would be relevant for further scrutiny with the aim of identifying factors leading to more effective nursing documentation.

Conclusion

Nursing records need more clarity and need to be more comprehensive regarding specific nursing information to fulfil their purpose of communicating care and to constitute a basis for quality development in care. There are also indications

that the time could be ripe for an integrated multi-professional terminology to be introduced into the patient record. The EPR systems need to be developed in parallel, to become more useful and to support both documentation and quality assurances. All professionals in health care must make a contribution to the development of the EPR, starting from their work-specific roles and with the safety of the patient as their common goal.

Contributions

Study design: ET, SW; data collection: ET; data analysis: ET, SW and manuscript preparation: ET, SW.

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