Developing an electronic nursing record based on a philosophy of care and management tool: the EOC experience

Yvonne Willems

Summary
In recent years, the Nursing Area of the Ente Ospedaliero Cantonale (EOC) has reached a consensus on unification of nursing language and patient-oriented documentation. This step was taken before defining future electronically based nursing documentation. In view of the increasing importance of economic aspects (e.g. DRG), a combination between nursing documentation and standardised classification for workload assessment was found in the LEP3 system. This paper discusses the principal goals and design elements of the planned solution within an electronic patient record. In the last few years the Nursing Area of EOC has embarked on a long journey as regards management, registration, planning, assessment and communication of information and nursing activities related to patient care. In this context a working document called DCOP (Patient Oriented Care Document, Documento di Cura Orientato al Paziente) has been created which is based on the principle of focus charting. This has led to unification of nursing language within EOC, including the development of specific documents for the general area, for paediatrics, the neonatal-maternal area, dialysis, intensive care and the emergency unit.

The increasing use of this working instrument, concomitantly with the spread of the philosophy of care based relations, will result in a better orientation in the definition of the care processes. Today the DCOP language is used within the whole EOC and represents a solid basis on which to build the future introduction of information technology.

Different studies have demonstrated that therapeutic results are influenced by the number of nurses, their mix of competences, their workload and the models applied to nursing care. It is therefore important to have an efficacious tool to measure the nurses’ workload. The current political situation and the next revision of the health insurance system (LaMal, KVG) will increase competition between the public and the private sectors. Showing the actual needs of the personnel, with a direct link to the quality of care, will become of utmost importance in dealing with the missions assigned to EOC. Within EOC there is no homogeneous instrument for this purpose, but we feel that it is absolutely necessary to have a unified system to assess workload. For all these reasons we have decided to adopt the LEP 3 system, which will have to be integrated into the electronic nursing document.

Patient Oriented Care Document (DCOP)
The DCOP is a tool developed by nurses for nurses which embraces two subjects: the patient, who is in fact the owner of the document, and the nurse, who is the principal user.

Thanks to this document, the patient is “cared for” within a process of personalised care which is provided by the totality of health professionals continuously engaged in implementing this process throughout the period of hospitalisation. As regards the nurses, we believe that this document entails the following advantages:

– it allows them to acquire sufficient information to improve the quality of care, even in the current situation, where the elevated turnover of patients shortens and intensifies the time available for care;
– it ensures a methodical build-up: after initial data collection comes the definition of the real or potential health problem and of the need for possible significant resources for the action which has been decided by the nurse and the other health professionals in conjunction with the patient and the family;
– it reproposes, in a structured way, the same mental process which the nurse engages every time she cares for the patient. This is a mental process which is based on diagnostic/therapeutic/ethical reasoning and which is called clinical judgement;
– it reinforces the fact that the pertinent document represents a relevant part of the care process and should not be viewed simply as bureaucracy. It should also be borne in mind that a document which has been correctly filled in represents a legal protection for the nurse;
– it contributes to ensuring a multidisciplinary approach to the patient;
the future electronic version will allow rapid access to nursing diagnosis and care standards, thus helping us to improve our professional status.

Principal goals of the electronic dossier

The following goals are considered to be the most important in the development of the EOC electronic dossier:

1. Develop an ergonomic tool geared to the practical needs of the nurses who work in close contact with the patient

The content must be optimally organised so as to permit, if necessary, further elaboration and guarantee an adequate level of quality. The dossier must be well structured. To be accepted by the users, the system must guarantee an easy and rapid input as well as reading of the data, and the tool must be compatible with working processes. Throughout the preparation of reports and documentation, the aspects concerned with communication to other health professionals must also be considered. Security of the data must always be guaranteed. Moreover, everything which is related to innovation in clinical practice must be considered, which means that a logic must be applied which supports change.

2. To maintain a close link with the philosophy and the logic of the DCOP based on the EOC care concept

The design and use of the electronic patient record must follow and not replace reflection on the nature of nursing activity as such. In order to underline the most relevant functions of the dossier, it is therefore useful to refer to the contribution, which the nursing sector is able to offer based on the results of research on theories, methods of clinical practice and conceptual models. This has been possible within EOC, thanks to the introduction of the concept of relation-based care (CBR) and re-elaboration of the focus charting method. Today we know that conceptual models are essential elements in rationally situating nurses’ activities. The dossier must therefore guarantee complete documentation of the entire nursing process, including not only the activity which supports diagnosis and medical treatment, but also, and mainly, the assistance activities carried out in relation to specific health problems, which are within the nurses’ sphere of competence. It must therefore permit and facilitate the gathering of information and its organisation for diagnostic purposes, but also planning in registration of the services, which are provided and assessment of results.

3. To favour an interdisciplinary logic in the integration with other health professions also involved in the development of GECO

Management of clinical histories must ensure optimal connections with other health professionals involved in the exchange of orders, results and observations or in fixing appointments (radiology, laboratory, etc). It must also guarantee electronic management of the administrative documents as well as easy consultation of data banks.

4. To integrate an electronic system for continuous workload assessment

EOC has decided to adopt the most recent version of LEP (LEP 3), which enables direct integration of the assessment in the registration of nursing activities.

5. To calculate the cost of nursing care within the DRG

The rapid advances in health care (DRG, ever shorter hospitalisation periods, high specialisation) render the relationship between health structures and patients somewhat more problematic. A stronger relationship between nurse and patient could, in this situation, lead to improvement in the patient’s well-being and his degree of satisfaction with the structure. To revalue and personalise assistance, thus, takes on ever more important aspects, when improvement of the quality of diagnostic and treatment services becomes a strategic choice. When talking about costs we must consider the different weights assigned within DRGs. One of the main problems is related to the sometimes wide differences in the value assigned to a certain service, depending on its geographical location. This problem then has implications with regard to the costs, which have to be financed by the Cantons. It will therefore be important to classify, update and validate the nursing workload in relation to DRGs. It must also be realised that the advances in medicine and services also entail constant modification of all the elements of the system adopted.

6. To develop a methodology which permits benchmarking

The comparison, sharing and dissemination of best management practises, if done with a scientific background, involve systems in a search for
absolute quality. The best results in the comparison represent the benchmark and therefore the reference parameter.

The need to improve the use of resources in healthcare therefore requires assessment of health enterprises in economic, productive and qualitative terms. The benchmark method, which serves to measure and compare the level of performance reached by the different structures analysed, will enable the different decision levels of the system to assess the use of resources, and, if necessary, to look for changes in the health policy.

7. To link the tool with the planning and management of hospitalisations

We intend to prepare and put online an electronic register which will be available for those involved in planning hospitalisations. This register will need to have selective accesses depending on different competences: management of the waiting list, transparency checking, financial management. This should already be allowed at the moment of booking the hospitalisation, anticipating retrieval of all the information concerning the patient, so to have just one point of contact for all data necessary for acceptance and hospitalisation. This system would also permit regular assessment of waiting times.

Steps for development

Development of the electronic document requires that different steps be defined and strictly followed. The most important are:

- creation of logical links which permit the registration of a real care process
- optimisation of the methodological processes thanks to the elaboration of a rapid and user-friendly conceptual system
- identification and introduction of assessment scales validated on the international level
- implementation of an outcome logic
- analysis of the paper documents related to the general area, paediatrics, maternity, dialysis, intensive care and emergency room
- mapping with the specific catalogue of the LEP system
- preparation of a user-friendly vision
- informatics development
- test phase
- phase with correction of informatics bugs and/or problems in the logic of the care process
- briefing and training of health personnel
- support in the implementation phase

Conclusions

The process of informatisation is characterised by a frame of activities and logics which must be understood day by day. However, the focus of any discussion must be related to the most important user of the dossier: the nurse, who is taking care of the patient. Therefore, a preliminary analysis of the work and communication processes, which exist in the different working areas, is absolutely necessary.

The introduction of a shared logic through the paper document has made it possible to accompany nurses in accepting such a radical change, also thanks to a good mix of theory and praxis. Based on this experience, it has been decided to follow the route of condivision in future also, in order to maintain what has been built up together in the meantime.

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