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Applying Nursing Minimum Data Set for Creating Archetypes - A Contribution to the Future of Health Records

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The role of the nurse uses nursing knowledge based on the nursing process as a tool to support and guide professional practice and clinical documentation [1].

This process is a systematic and dynamic way to provide nursing care, promoting a humanized care, driving nurses to have a critical thinking and seek scientifically the best in nursing care. Methodological tool directs an organized care and documentation of professional practice of nurses making possible its operationalization [1].

For this, it is important to the use of a tool to guide the data records of the current health situation of patients, emphasizing the implementation of a set of essential data for nursing [2,3].

The Nursing Minimum Data Set (NMDS) is composed to a set of data essential elements that are needed to describe the clinical nursing practice [4].

For there to be a mechanism that facilitates the use of nursing data in different contexts, providing essential information to nursing care, defined the meaning of the Nursing Minimum Data Set, established in 1983 by the Health Information Policy Council as "a set of information item with uniform definitions and categories on specific aspects or dimensions of the health care systemthat attend the essential needs of multiple data users" [5].

Currently known as International Nursing Minimum Data Set (NMDS-i) provides a comparison of nursing data across clinical populations, geographical areas and time, showing trends with reference to nursing care in accordance with their health problems and nursing diagnoses, therefore, facilitating decision-making in health policies [4,5].

First, we identified the main health problems and define the epidemiological profile of the patient, therefore form a set of information that facilitates the planning of nursing care, enabling a collection of statistical data that feed the health system information [6].

So the important aspects are to identify the essential data with information about variables, set variables accurately and determine the possible universe for each variable, documenting and standardizing the current patient data recorded in the database for different purposes as needed [7].

The NMDS are computerized databases, important for the work of health professional and the records and retrieving basic information systematization of practice, in addition to providing improved patients quality of life [8].

There is not so much NMDS in use around the world. The reason is the difficulty in creating and use, it must involve several nurses, managers and other health professionals, in addition to being difficult to build consensus among them about the purpose, rules, variables and procedure development for data collection, so that attend the needs of all stakeholders [9].

To make this possible, the nurses and other health professionals need to provide that essential data are important for electronic health records, as well as the terminology adopted for use of these data [10].

At the same time, you should think on the information that is representative for the nursing knowledge, and therefore clinical data to share among all health professionals in information systems.

Currently, there are several organizations working in the institutional setting and data architecture of electronic health records, and the main one is the open EHR Foundation (http://www.openehr.org), which defines and specifies a modeling framework known as archetype, used for formal representation of clinical concepts, built on a reference model, enriched with mapping information and data sources that define how to extract and transform existing data [11,12].

The data exchange of electronic health records across systems is a major challenge, and modeling based on archetypes can realize the communication between those records, creating chips for clinical and semantics in an interoperable way [13,14].

The methodology to be used in the modeling of systems of electronic health records and the need of semantic interoperability between different information systems have been topics of relevance in the international scientific community of health informatics. The archetypes are a way to develop and interoperalizar, which are currently being set as default for the integration of electronic health record [15].

The establishment and definition of a Minimum Data Set Nursing may favor the creation of archetypes; it contains essential information for the service, and thus facilitates the use of information systems in nursing.

For this, it is essential to have in mind the importance ofstandardize in the development of Information Systems in Healthcare for the effective realization of the records in the electronic patient record.

These systems can help the professionals management of services and resources facilitators of care and evaluation of standards of patient information. With the computerization of data collection, we can ensure the quality of care, the administration and the grounds of patient care. Access to information facilitates nurses to plan and manage nursing care, favoring changes in the health status of patients [2].

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So, the question is: what information is essential to describe the diagnoses, interventions and outcomes of nursing and how to represent in the electronic health record?

The elements of the on set nursing data need to be better identified, defined and determined within the database for different proposals for health care management, research and policies [16].

Therefore, the formalization of the clinical knowledge and of its representation through archetypes is, without a doubt, the great challenge that is faced by semantic interoperability [17].

Therefore, the NMDS is important, providing data for the development and service planning and enabling a basis for the future development of research methods and evaluation related to nursing practice, contributing greatly to define the role of nurses in different contexts [18].

Considering that there are diverse clinical diagnoses that suffer with lack of systematized information, it is fundamental that data set referring to tha t treatment be structured, including the nursing approach.

In literature, were presented challenges during the process of data definition, development and, especially, structuring and implementation of archetypes in electronic health record [19].

Despite this, it is believed that the major contribution to the future of electronic health record is the standardization of information systems in nursing, reflecting positively on the service through a well-defined set of data is represented by archetypes.

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