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Nursing minimum data in maternal health forms: a comparative study

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ABSTRACT

Aim: To compare the International Nursing Minimum Data Set in a group of data sets used in nursing record forms in the area of maternal health. **Method:** This is a descriptive and correlational study, based on data present in nursing record forms used in public maternity units in the municipality of João Pessoa, Brazil. The data was organized, categorized and analyzed according to the International Nursing Minimum Data Set. **Results:** In the category regarding the nursing environment, from the six items present, five were considered. In the second category, all items were considered. The majority of the forms dealt with the elements of nursing care. **Conclusion:** the results can alert other investigators to the need to define a set of elements that must be documented in situations of nursing care, as a means of highlighting the contribution of nursing staff to assistance with regard to maternal health.

Descriptors: Nursing Processes; Data Collection; Nursing Records

INTRODUCTION

Documentation is the evidence of the carrying out of the ethical and legal responsibilities of the nurse while caring for the needs of the individual, the family and the society, and proof of the quality of the service provided. Florence Nightingale was the first nurse to emphasize the need for documentation as part of the nursing process, which since then has been recognized as an essential part of professional practice, and as an instrument for evaluating nursing care procedures.

The nursing process has been used as the main tool to register the impact of nursing practice, linking the clinical appraisal of the nurse and an evaluation of the state of the client, and thus arriving at an indication of the contribution of nursing practice.

It calls our attention to the increase in the complexity of health requirements, which highlights the need for an effective data collection process during anamnesis – a step in the nursing process. This step must reflect the needs of patients and their families, as well as facilitate nursing diagnoses and the definition of priorities, in order to guide and select the appropriate nursing interventions[1].

Within this context, researchers have developed studies aiming to construct and validate forms that can be used to register information and to generate documentation related to nursing assistance. However, it can be seen that there is an excessive amount of data present in these instruments, making them longer and more extensive, and more onerous to complete. The lack of agreement about which data must be collected by nursing professionals has contributed to this phenomenon[2].

The preoccupation with establishing a set of standard information that is capable of reflecting the real dimensions in nursing care in a range of health care scenarios started in 1998, in the form of the *Nursing Minimum Data Set* as proposed by Werley et al.[2]. This first attempt to standardize a minimum data set regarding nursing practices was derived from the concept of the Uniform Minimum Health Data Set, established in 1983 by the Health Information Policy Council of the U.S. Department of Health and Human Services[2].

Since then, the determination of essential data needed to guarantee nursing care and to describe nursing diagnoses, interventions and results, have being a focus of nursing

professionals. As reported in the literature, many studies have been developed in this field since the initial proposal by Werley et al.[3]: School Nursing Minimum Data Set; Nursing Minimum Report, to be used within a hospital context; Minimum Data Set to evaluate residents and evaluation instrument for residents (institutionalized seniors); Community Nursing Minimum Data Set (Australia); Nursing Minimum Data Set; Health Data: health components (Canada); Thailand Nursing Minimum Data Set; Holland Nursing Minimum Data Set; Telenurse and the International Classification for Nursing Practice (ICNP®)[4].

It is necessary to understand that one of the objectives of the proposal with regard to a minimum data set is to describe the nursing care provided in diverse situations including ifferent clinical settings, locations and possible time adjustments. In addition, it should contribute to the construction of an understanding regarding nursing practice, and should allow stakeholder to measure its contribution to the health of individuals, families and society [2,5].

To achieve such objectives, it is imperative to recognize of the importance of registering nursing assistance. It is through documentation of the referred data related to the care provided, that the information is generated; it can aid management, assist planning and support the decision-making processes regarding the needs of the assisted clientele, hence contributing to the consolidation of Nursing as a science[5].

Therefore, the importance of the documentation system used by nursing staff is emphasized, suggesting that it should be easy to manage, user-friendly and based on the most frequent problems found among the general population. Specific data regarding less common health problems and clinical specialties must be added according to the their specific requirements in a more comprehensive register[5]. Nursing associated with specific areas of action demand the creation of forms that require the location of specific data appropriate to each situation.

Brazilian studies have focused on the construction of models of systems in diverse acting contexts, with the aim of standardizing a minimum data set which can be used to determine, analyze and evaluate the health of specific groups, to help the documentation of professional practice and leading to advances in understanding through research[3, 6, 7].

Consequently, it is necessary to determine which data must be obtained and collected in the area of maternal healthcare that are essential to a characterization and description of nursing practice. Hence, this study aims to compare the International Nursing Minimum Data Set with the nursing data present in the nursing record forms in the area of maternal healthcare.

METHOD

This is descriptive and correlational research, developed from a set of seven nursing record forms used in public maternity units in the municipality of João Pessoa, Brazil. The forms were acquired in collaboration with the nursing management units of four public maternity hospitals.

This study is part of a sub-project, which was analyzed by the Ethics in Research Committee of the Health Sciences Center, from Paraíba Federal University, using the Plataforma Brasil, achieving a favorable recommendation, under registry CAAE 02294712.4.00005188.

Six forms were obtained from four maternity units as two of them (I and IV) use two different instruments for distinct stages of the puerperal gravid cycle. Maternity I used the form "History and diagnoses/Nursing prescription" with regard to parturients, while another instrument entitled "Nursing evolution and diagnoses/Nursing prescription" related to puerperal women. Maternity IV has an instrument for use in the obstetrics center and another for use in the wards. Both have the same title "Systematization of Nursing Assistance".

Maternity hospital II does not use nursing instruments to systematize assistance. However it does apply, on a daily basis, an instrument entitled "Nursing report" in the maternity wards. In maternity hospital III, there is an available form that is still under construction, which is intended to be an instrument to collect data to be applied with regard to both parturients and puerperals.

To collect the information, the forms were coded following an alphanumeric system (F-Ia, F-Ib, F-II, F-III, F-IVa and F-IVb), in order to prevent the identification of the health institutions, thereby guaranteeing their anonymity. With the assistance of an electronic

spreadsheet, the data was categorized and analyzed according to the International Nursing Minimum Data Set.

RESULTS

The data were separated into three different categories according to the International Nursing Minimum Data Set and compared in terms of the presence or otherwise of certain data in each category as is shown in Image 1.

Image 1 – Comparison of the nursing minimum data found in nursing forms of public maternity hospitals. João Pessoa, Brazil,2012.

	LOCATION/ENVIRONMENT WHERE THE NURSING CARE IS PROVIDED	DEMOGRAPHIC DATA OF THE CLIENT	DATA REGARDING NURSING CARE
F-Ia	Location of institution Type of organization Payment type Type of clinic Human resources that provide the healthcare service	Beginning of the caring service Type of clinic service provided	Nursing diagnoses Nursing interventions
F-Ib	Location of institution Type of organization Payment type Type of clinic Human resources that provide the healthcare service	Beginning of the caring service; Type of clinic service provided	Nursing diagnoses Nursing interventions
F-II	Location of institution Type of organization Payment type Type of clinic Human resources that provide the healthcare service	Beginning of the caring service Type of clinic service provided	-
F-III	Location of institution Type of organization Payment type Type of clinic Human resources that provide the healthcare service	Beginning of the caring service Type of clinic service provided Year of birth Reason for admission	-
F-IVa	Location of institution Type of organization Payment type Type of clinic Human resources that provide the healthcare service	Beginning of the caring service Type of clinic service provided Reason for admission	Nursing diagnoses Nursing interventions
F-IVb	Location of institution Type of organization Payment type Type of clinic Human resources that provide the healthcare service	Beginning of the caring service Type of clinic service provided	Nursing diagnoses Nursing interventions

Source: Empirical research

The first category embraces six items related to the location/environment in which the nursing care is provided. These are: location of the institution; type of organization (public or private); payment type; type of clinic; human resources that provide the healthcare service (number, gender, training type, education, work hours per type of professional) and; patient/professional ratio.

In this category, it was observed that only three forms allowed an exact identification of the hospital concerned. Regarding the type of organization and payment system, in all six forms there was a space to enter this information. Despite this, all the forms analyzed had available slots in which to enter details of the type of service provided. Spaces to distinguish the items "caring personnel" and "patient/professional ratio" were not present in any of the forms studied.

The second category of data relates to seven items associated with the patient: beginning and ending of the caring episode; discharge situation; country of residence; gender; type of clinical service provided; reason for admission; and year of birth.

In terms of the items "beginning and ending of the caring episode" and "discharge situation", it was seen that all forms had slots to be filled with regard to the beginning of the care provided. However, none of them had any space for registering the end of the period of care and for information regarding discharge. With the exception of one form in which it was possible to state the "origin" of the patient, no other allowed details of the country of residence of the patient to be entered, nor the gender. Despite this, the item "gender" was understood as obvious information to be placed in forms directed to women caring services during the gravid-puerperal cycle.

In terms of the "type of clinical service", all forms had slots to register this information, which could be either Obstetric Center or Maternity Wards. In the category "reason for admission", only two forms permitted some input with regard to this element. The field "year of birth" was observed in only one instrument. However, there was a slot for age in all six forms.

The third category of information embraces the nursing care: nursing diagnoses; nursing interventions; patient results and; caring intensity. In terms of these items, spaces to describe nursing diagnoses and interventions were present in four out of the six forms analyzed. None of the instruments evaluated offered space to describe nursing results and the intensity care required.

DISCUSSION

With regard to the item "location of the institution", it as observed that on three of the forms, information that permitted the inclusion of the exact location of the institution in the State and/or in the Municipality, permitted a comparison of standards of care. On the other hand, all forms offered the possibility of allowing staff to identify the type of service provided. As all the forms belonged to the healthcare service network of the Brazilian Unified Healthcare System (SUS, in Portuguese), the type of organization, even if not expressly declared, can be identified. Besides this, as the forms used were for assistance purposes and not managerial ones, it was expected that the inability to identify data related to the human resources associated with the healthcare providers. However, it was noted that in all the forms there were fields destined to be signed and to have the professional identification of the healthcare provider, according to the demands of the Nursing Code of Professional Ethics[8].

According to the Resolution of the Brazilian Federal Council of Nursing (COFEN, in Portuguese) 191/1996, nursing professionals must make available their professional category and the acronym "COREN" (which stands for Brazilian Regional Council of Nursing, in Portuguese), followed by the abbreviation of the State in which they operate, followed by their registration number, with all elements being separated by a hyphen[9].

Considering that only women who experience the gravid-puerperal cycle demand specialized care, it is important to acquire as much information as possible regarding the type of professional who provides direct assistance to the patient, as well as information about their professional experience that qualifies the nurse to perform deliver such care.

The requirement is based on the Professional Exercise Bill, especially when it mentions the professional background and attributions of the obstetrics nurse. Therefore, the attendance profile should be characterized, thus leading to standards which allow stakeholders to analyze the quality of the service provided and the influence of the professional background of nursing staff on the result of the care process[7].

The data regarding the ending of the care process and the discharge, while they were not expressly identified in the majority of the forms observed, does not mean that this information was not registered, in that the admission date and the discharge date will be present in the attendance protocols used by the institutions' management. The final care service until the patient's discharge must be registered in appropriate medical records, with as many details as possible, in a logical and chronological order. The item "country of origin" was not present in the forms, despite the fact that it is important to have such information, considering the rise in immigration to Brazil from people all over South America, both because of the incidence of endemic diseases in some of these countries and in order to ensure the correct use of terms and language, thereby respecting each culture[7].

The third category that includes the data related to the steps of the nursing process, denominated diagnoses, results and nursing interventions, were present in the majority of the forms observed. These steps associated with the nursing process are seen in the scientific literature as elements that represent the full mastery of professional practice. However, these elements were not found in the forms analyzed by this study.

The documentation of professional practice is an inherent part of the process of caring, contributing not only to the continuity of assistance, but also generating data that influences research, teaching, management and policy making. Besides that, the registry of the nursing process is legally mandatory according to Resolution COFEN 358/2009[10].

The use of the nursing process as a base method for registering professional practice permits us to visualize the decision-making process of the nurse with regard to the needs of the client (diagnoses), on the results they wish to achieve (results) and on what are

the best caring practices in order to meet the needs related to the desired results (interventions)[11].

Nursing diagnoses refer to the clinic analyses the nurse undertakes regarding the patient's response to the health-disease process. They are understood as an indispensable element, as it is possible to clarify the risks that need to be avoided so that the results can be achieved. The conclusions drawn during this phase can affect the whole care plan, and this step is essential to the decision-making process regarding nursing care[1].

Nursing intervention represent actions that must be performed with regard to the patient (individual, family or society), with the aim of achieving the outcomes for which the nurse is responsible. Through interventions, it is possible to quantify the nurse's work. The outcomes of nursing include the aspects linked to the state of the client that are amenable to nursing intervention. The element of intensity deals with the total nursing care hours and the team involved, as well as the material resources used by the patient during the care process. The elements of service relate to the information that connects the professional with the place of providing the healthcare. This highlights the specific information provided throughout the treatment process[2].

Regarding the item "nursing results", which was not listed in any of the forms observed, it is important to note that evaluating a result in terms of a nursing intervention means evaluating also the data collection that was performed, in an adequate and sufficient manner - if the diagnoses were properly arrived at; if the care plan was carried out according to the real and prioritized needs of the patient; and if the interventions performed were the most appropriate to answer the needs identified, and if they were performed to the highest standards possible[7]. Based on the item that analyzes the intensity of care, it was noted it was only of interest to the head nurses.

The registry of data related to caring must be considered with a high degree of rigor and precision. This is because such a registery permits stakeholders to evaluate the proceedings under consideration, to determine the quality of the care provided, and to

work as facilitating instruments with regard to the (re)planning and coordination of care actions[12]. From this perspective, future studies intend to build Nursing Minimum Data Sets in many divisions of nursing, aiming to improve the documentation used and to shed light on nursing care[2,7].

CONCLUSION

It is understood that the construction of a Nursing Minimum Data Set related to many scenarios based on areas or work is fundamental to building knowledge of clinical practice, as well to measuring its contribution to healthcare. However, the nurse is responsible for determining which data is essential with regard to his/her area of work, as well as the terminologies to be used to encode such data, in order to generate information that will represent and evaluate nursing practice.

It is important to emphasize that the definition of nursing minimum data, together with the use of standardized systems of communication and IT, has been focused on strategies to improve the quality of nursing documentation.

In this present study, some limitations were found regarding local forms as a result of the analysis. However, the results can contribute to a rise in interest on the part of other investigators with regard to defining a set of elements that must be documented in situations of nursing care, to demonstrate the contribution of nursing staff to maternal healthcare.

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