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## Nursing records in pediatric intensive care units: a descriptive study

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### ABSTRACT

Continuity of care depends on the sharing of information between professionals, which occurs mainly through completion of patient records. Failure to transmit or receive messages may result in risks to patient safety and reflect on the quality of care provided. **Aim:** To verify whether the nursing records in the medical records of patients hospitalized in *Unidades de Terapia Intensiva Pediátrica* (UTI-P – Units of Pediatric Intensive Care) correspond to the safety needs recommended in the literature. **Method:** This is a descriptive and quantitative study, through documentary research in the nursing records of 92 medical records, in three UTI-P. **Results:** It was found that in 21.8% of the records there were erasures and in 26.1% there was no complete identification of the care professional. **Discussion:** Records should not present erasures, as they make it difficult to plan care. In addition, professionals must include their name and registration number at the end of the information noted. **Conclusion:** Records were adequate according to the safety recommendations, although some aspects are still lacking in relation to nursing standards.

**Descriptors:** Communication; Nursing Records; Patient Safety; Critical Care; Pediatric Nursing.

## INTRODUCTION

The complexity of resources available in health services and the diversity of professional categories that interact synergistically with each other to ensure the best patient care and patients' rapid recovery, make effective communication a necessary and key component for transparency in the delivery of care services<sup>(1,2)</sup>.

Continuity of patient care in the hospital environment depends on adequate sharing of clinical information amongst health professionals, ineffective communication, resulting from flaws in the process of information sharing, may lead to unsafe actions involving patients and, in some cases, to the caregivers themselves<sup>(2)</sup>.

In this context, information recorded in patients' records by health professionals - especially those whose role is to integrate the nursing teams - means that communication is vital in the care process, and essential to assertive therapeutic decision-making<sup>(3,4)</sup>.

Particularly in relation to intensive care units, the severity and instability of patients' health conditions indicate the requirement for measures that improve decision-making aimed at promoting safe care<sup>(5)</sup>, and for records to function as an essential tool to achieve this goal.

Absence of reports, or even inadequate or incomplete reports may, among other effects, result in duplication or non-performance of certain procedures and in the difficulty or impossibility of evaluating the chosen treatment, thus potentially compromising or reducing levels of patient and professional safety<sup>(3)</sup>.

In addition to their function as a means of maintaining effective communication, and the responsibility delegated to nursing professionals through the Professional Code of Ethics<sup>(6)</sup>, which contains all the nursing conducts, medical records also provide evidence to defend professionals involved, since they are formal

documents that legally support actions developed with patients in receipt of care. For these reasons, such records must always be 'imbued with authenticity'<sup>(7)</sup>, preserving the truth of the events.

In view of the above, the recognition and valuation of the records by nursing professionals who implement the care program is paramount, given their permanent indispensability in the legal and care context<sup>(3)</sup>.

Therefore, the concrete need to transpose the barriers that impede adequate completion of nursing records, such as neglect, especially in care units for vulnerable and seriously ill patients, such as the UTI-P, is reiterated.

It is also observed that there is a lack of scientific visibility of this resource, evidenced by the lack of studies in the Medline and LILACS databases, from 2005 to 2015, regarding communication and nursing records associated with pediatric patient safety.

The above considerations raise the question: 'How are the nursing records performed in medical records of children hospitalized in the UTI-P?' To answer this question, the present study had, as its objective, to verify whether the nursing records in the medical records of patients hospitalized in the UTI-P correspond to the safety needs recommended in the literature.

## METHOD

This is a descriptive and quantitative study, with documentary analysis, developed between May and December 2015, in three UTI-P hospitals in Paraná.

UTI-P I has 6 beds and is composed of a nursing team of 11 nurses and 10 nursing technicians. UTI-P II is composed of 5 beds and has 6 nurses, 7 nursing technicians and 9 nursing

assistants. Finally, UTI-P III has 10 beds and a team composed of 6 nurses, 9 nursing technicians and 14 nursing assistants.

Data were collected through documentary research in medical records of patients admitted to the referred units, using a form entitled, "Documentary Research Form in Nursing Records", prepared by the author, based on the measures for effective communication suggested by the Brazilian Network of Nursing and Patient Safety, in partnership with the Regional Council of Nursing of São Paulo<sup>(8)</sup> and also by the literature relating to the themes of communication and patient safety.

This instrument was submitted to a pilot test and, in the end, it consisted of seven closed questions and one open question, referring to the characteristics of the information registered by nursing professionals in the medical records and to the extensive description of the acronyms and abbreviations identified in the records.

The information contained in the medical records of patients admitted to the UTI-P was documented exclusively by nursing professionals over seven consecutive days in each institution. This period was determined based on the professional experience of the researchers, who also have carried out assistance activities themselves, and who considered this time sufficient for the purpose of the study.

Regarding the treatment and analysis of the data, it was compiled into databases in Microsoft Office Excel 2010 software, and then analyzed using descriptive statistics.

This research is part of the project entitled "Management in Health/Nursing: Quality and Patient Safety in University Hospitals", approved by the Standing Committee on Ethics in Research Involving Humans / Universidade Estadual de Maringá (COPEP/UEM - State University of Maringá) under CAAE nº 32206414.6.1001.0104 and Opinion No. 866.802, dated 2014.

## RESULTS

92 (100%) of the medical records were analyzed. Of these, 28 (30.4%) came from UTI-P I, 28 (30.4%) from UTI-P II and 36 (39.2%) from UTI-P III.

Table 1 shows information referring to the characteristics of the nursing records present in the medical records of the investigated units.

Among the nursing records present in the medical records investigated, there were 174 types of acronyms or standardized abbreviations, which were observed 286 times in the registries analyzed in UTI-P I, 485 times in UTI-P II, and 453 times in UTI-P III.

## DISCUSSION

Table 1 showed that UTI-P I and III had a manual medical record, in contrast to the reality evidenced in ICU-P II, which had this document in electronic format.

In recent years, it is observed that information technology has gained a prominent position in the health field, and has become an integral part of patient care, contributing to the efficiency of communication, and thus reinforcing patient safety<sup>(9)</sup>.

A study carried out in an adult ICU (Intensive Care Unit) in Minas Gerais, Brazil, aimed at investigating how manual nursing records were developed, after comparing them with the electronic records currently in use in that sector, found that the electronic system offered more advantages. Electronic records are more precise, since the system contains warnings that prevent the registration of data considered to be invalid and facilitates the obtaining of data for service evaluations<sup>(10)</sup>.

Nursing professionals who work in ICUs and record health information in medical records, regardless of whether they are manual or not, should focus on the quality of the data reported. Thus, the records need to be written in a complete and tho-

**Table 1:** Characteristics of nursing records in medical records of Pediatric Intensive Care Units, Paraná, Brazil, 2015.

Characteristics of the last NR*	UTI-P I		UTI-P II		UTI-P III		Total	
	no	%	no	%	no	%	no	%
<b>Type of medical record</b>								
Manual	28	100	-	-	36	100	64	69,6
Electronic	-	-	28	100	-	-	28	30,4
<b>At least one nursing evolution in the last 24 hours</b>								
No	-	-	02	7,1	-	-	02	2,2
Yes	28	100	26	92,9	36	100	90	97,8
<b>Date and time before the last NR</b>								
No	-	-	02	7,1	-	-	02	2,2
Yes	28	100	26	92,9	36	100	90	97,8
<b>Legible letter in the last NR</b>								
No	-	-	-	-	-	-	-	-
Yes	25	89,3	-	-	36	100	61	66,3
Partially	03	10,7	-	-	-	-	03	3,3
Not applicable	-	-	28	100	-	-	28	30,4
<b>Erasures in the last NR</b>								
No	23	82,1	-	-	21	58,3	44	47,8
Yes	05	17,9	-	-	15	41,7	20	21,8
Not applicable	-	-	28	100	-	-	28	30,4
<b>Identification of the professional at the end of the last NR</b>								
Without identification	-	-	-	-	-	-	-	-
Full identification **	05	17,9	28	100	35	97,2	68	73,9
Signature only	23	82,1	-	-	01	2,8	24	26,1
<b>NR with standard acronyms or abbreviations</b>								
No	-	-	02	7,1	-	-	02	2,2
Yes	28	100	26	92,9	36	100	90	97,8

Source: Medical records of patients admitted to the UTI-P investigated.

\*NR: Nursing Record

\*\* At least name and professional registration number

rough way, so they can contribute adequately to improvements in decision-making and the quality and safety of the activities performed<sup>(5)</sup>.

Regarding Nursing Evolution, it was observed that, with the exception of only two moments in the UTI-P II, this evolution was evident in patient records of the investigated units, which demonstrates compliance and documentation of this important stage of the *Sistematização da Assistência de Enfermagem* (SAE - Systematization of Nursing Care)<sup>(11)</sup>.

It should be emphasized that Nursing Evolution, when clearly described and interconnected to the other stages of SAE, such as the History, Physical Exam, Diagnosis and Prescription

of nursing, propitiates organization, evaluation and continuity of the care provided, thus contributing to the quality of care and patient safety<sup>(11)</sup>.

In this study, it was verified that only 2 (7.1%) of the last nursing records performed at the UTI-P II did not include date and time. This data contrasts with the reality of a hospitalization unit of a hospital in Rio de Janeiro, in which 43.6% and 56.7% of the nursing records did not specify hour or date<sup>(12)</sup>.

The literature<sup>(7,8)</sup> recommends that, in order to make adequate records that contribute to the safety of the actions performed, it is essential to insert the date and time before all other records when the information is being reported.

Regarding the readability of the information, in the UTI-P I and III, 89.3% and 100% of the reports, respectively, presented legible handwriting; while in the UTI-P II, 17.9% of the records presented erasures, and in UTI III this number was even more significant (41.7%), according to the results described in Table 1.

When analyzing the records of the UTI-P II in isolation, which has, as previously mentioned, 100% electronic medical records, it is perceived that this type of resource provides greater patient safety since it minimizes difficulties reading and understanding the records caused by issues such as illegible handwriting and erasures (which are eliminated in computerized reality).

The information contained in nursing records, in addition to being coherent, complete, organized and real, must also be legible and contain no erasures - since these can indicate alterations in the recorded data and, consequently, invalidate the legality of the records, and may hinder possible analysis due to legal proceedings, as well as the proper planning of care<sup>(12,13)</sup>. Therefore, in case of possible legal evaluations, adherence to the electronic medical record, as observed in one of the researched institutions, can facilitate and legitimize the process.

Another inconsistency observed was the lack of identification of the nursing staff in the records since it was observed that UTI-P I (82.1%) and UTI-P III (2.8%) contained, among the last records investigated, only the signature of the professional, which is not according to the procedure recommended in the literature.

In this sense, it should be clarified that all nursing caregivers must identify themselves at the end of all the documentation made in the patient's medical record, with at least the name and the registry number of the professional involved<sup>(7,8)</sup>, since this information is of extre-

me importance for patient safety, as well as for worker safety and protection<sup>(13)</sup>.

It was also observed that the adoption of technological resources, such as electronic medical records, does not rule out the use of abbreviations and acronyms, since these were present in more than 90% of records in the medical records of the UTI-P II. In addition, the occurrence of 1,224 acronyms and standardized abbreviations was seen in 90 records investigated in the three units. It should, however, be argued that the indiscriminate use of acronyms and abbreviations, if not standardized, can generate different interpretations of the information recorded, thus hindering effective communication and, consequently, impacting on patient safety.

It has been identified in the registers, that numerous symbols, such as vol, +, ↑, ↓, c/, p/, certainly reflecting the widespread application of the language used on the internet, especially in social networks, and in in everyday social life.

This fact makes it necessary to pay attention to and standardize acronyms and abbreviations in health institutions, since they can speed up the procedure for recording medical records, standardizing them and preventing misinterpretations<sup>(12)</sup>.

Although the results have generally shown that most of the items checked on nursing records in the UTI-P are adequate in relation to safety aspects, it is believed that improvements can still be made through continuing education programs made available to nursing professionals<sup>(14,15)</sup>. It has been noted that in health care institutions, especially in critical sectors, any tool aimed at promoting continuity of care should be valued and improved upon whenever possible.

Consideration of nursing records as indispensable tools for the multi-professional team in providing a comprehensive report of the relevant information on patient care<sup>(16)</sup> is imperative to

the (re)valuing of the practice of these registries in the records, particularly for pediatric patients.

## CONCLUSION

It was observed, with some exceptions, that the nursing records met the recommendations of safety and adequacy suggested in the literature. However, some points still lack attention on the part of those who execute them, such as the date and time description and the complete identification of the professional who carried out the registrations. In addition, the presence of erasures, identified in manual records, in contrast to electronic records (which do not contain erasures), should be banned, since, in addition to compromising the quality of communication among caregivers, they may result in harm to patients, health workers, and the health institution.

In order to minimize the effects presented here, it is suggested that permanent educational training should be provided for all the professionals, in order to sensitize them to the importance and necessity of nursing records. It is also suggested that, as far as possible, use of electronic records should be adopted, in order to eliminate the occurrence of erasures and facilitate analysis of the data. In addition, we propose studies that directly estimate the assistance errors arising from nursing record failures.

As a limitation of this study, the use of descriptive statistical analysis, which does not allow for inferences or generalizations, is pointed out for further interpretation.

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