

## Patient identification in the records of health professionals

Identificação do paciente nos registros dos profissionais de saúde

Identificación del paciente en los registros profesionales de salud

Kisna Yasmin Andrade Alves<sup>1</sup>

Pêtała Tuani Candido de Oliveira<sup>1</sup>

Flávia Barreto Tavares Chiavone<sup>1</sup>

Mayara Lima Barbosa<sup>1</sup>

Cecília Olívia Paraguai de Oliveira Saraiva<sup>1</sup>

Claudia Cristiane Filgueira Martins<sup>1</sup>

Viviane Euzébia Pereira dos Santos<sup>1</sup>

### Keywords

Patient safety; Health personnel; Communication; Hospital

### Descritores

Segurança do paciente; Profissional da saúde; Comunicação; Hospital

### Descriptorios

Seguridad del paciente; Personal de salud; Comunicación; Hospital

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### Abstract

**Objective:** Identify the conformity of patient identification data in the records of health professionals from three public hospitals in Rio Grande do Norte.

**Methods:** A cross-sectional study was carried out at the medical and surgical clinical nursing wards of three public hospitals in Rio Grande do Norte, Brazil. The sample consisted of patients hospitalized in these wards for at least ten days, between October and November 2016. The data were analyzed descriptively, using absolute frequencies and the Pareto Diagram.

**Results:** Non-conformity was found in the header data birth date and affiliation, which was responsible for 61% of inadequacies in the medical evolutions, 65% in the nursing team notes and 62% in the opinions of doctors and the other categories.

**Conclusion:** The study revealed that the headers of the health professionals' records in the hospitals analyzed do not guarantee correct patient identification and patient safety.

### Resumo

**Objetivo:** Identificar a conformidade dos dados de identificação do paciente nos registros dos profissionais de saúde de três hospitais públicos do Rio Grande do Norte.

**Métodos:** Trata-se de um estudo transversal realizado em três hospitais públicos do Rio Grande do Norte, nas enfermarias de clínica médica e cirúrgica. A amostra constituiu-se de pacientes internados há pelo menos dez dias nesses espaços, no período de outubro a novembro de 2016. A análise de dados ocorreu de forma descritiva, mediante frequências absolutas e Diagrama de Pareto.

**Resultados:** Obteve-se não conformidade nos dados dos cabeçalhos data de nascimento e filiação, sendo responsáveis por 61% das inadequações nas evoluções médicas, 65% nas anotações da equipe de enfermagem e 62% nos pareceres médicos e das demais categorias.

**Conclusão:** O estudo revelou que os cabeçalhos dos registros dos profissionais de saúde dos hospitais analisados não garantem a identificação correta do paciente e a segurança do paciente.

### Resumen

**Objetivo:** Identificar la conformidad de los datos de identificación del paciente en registros de los profesionales de salud de tres hospitales públicos de Rio Grande do Norte.

**Métodos:** Estudio transversal realizado en tres hospitales públicos de Rio Grande do Norte, en las enfermerías de clínica médica y quirúrgica. Muestra constituida por pacientes internados durante al menos diez días en tales servicios, entre octubre y noviembre de 2016. Datos analizados de forma descriptiva, mediante frecuencias absolutas y Diagrama de Pareto.

**Resultados:** Se hallaron errores en los datos de los encabezados fecha de nacimiento y filiación, siendo responsables del 61% de los errores en la evolución médica, 65% en las notas del equipo de enfermería y 62% en las opiniones médicas y del resto de las categorías.

**Conclusión:** Se reveló que los encabezados de registros de profesionales de salud en los hospitales analizados no garantizan la correcta identificación y seguridad del paciente.

### Corresponding author

Kisna Yasmin Andrade Alves  
http://orcid.org/0000-0001-7900-0262  
E-mail: kisnayasmin@hotmail.com

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<sup>1</sup>Universidade Federal do Rio Grande do Norte, Rio Grande do Norte, RN, Brazil.

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## Introduction

Correct patient identification is an action that guarantees care and minimizes the occurrence of errors and damage. It is, therefore, the first activity that advocates in favor of patient safety (SP).<sup>(1)</sup>

Errors in the patient identification process occur from admission to discharge from the health service and stem from factors related to the patient (level of consciousness, for example), the work process (changes in the sector, beds and professionals), among other situations.<sup>(2)</sup>

Studies show that errors in patient identification lead to potentially fatal consequences and that approximately 9% of them cause temporary or permanent damage. In addition, it is important to note that this problem encompasses multiple situations, ranging from hospitalization to care by the multiprofessional team.<sup>(3)</sup> In the United States, about 850 patients undergo blood transfusion each year that is not part of their treatment, and 3% of them die.<sup>(4)</sup>

It should be noted that the occurrence of patient identification errors affects at least two individuals: the patient who received the wrong therapy and the other whose treatment was omitted.<sup>(3)</sup>

To overcome this problem, several initiatives have been promoted. Among them, in the international context, the project “Solutions for Patient Safety” is highlighted, which sets priorities for the implementation of patient safety, such as: correct identification of the patient; effective communication among health professionals; safety during medication prescription, use and administration; safe surgery; hand hygiene; and reduced risk of falls and pressure ulcers.<sup>(5)</sup>

In the Brazilian reality, the National Patient Safety Program (PNSP) was established through Administrative Rule 529, on April 1, 2013, which proposes that health services construct protocols, guides and manuals focused on the different areas of patient safety, such as patient identification processes.<sup>(6)</sup>

In that context, initiatives such as the use of standardized white wristbands are used to put in practice the correct identification of the patient.<sup>(2)</sup>

It should be noted, however, that this process involves several modalities beyond the use of a bracelet. The main modality and archetype for others are the headers of the health professionals' records in the clinical history.

Therefore, we found it necessary to investigate the level of conformity of the headers of the health professionals' records at three hospitals in Rio Grande do Norte, revealing the following research questions: do the headers of health professionals' records ensure the correct identification of the patient? Which data do or do not conform with the correct identification of the patient? In this perspective, this study aims to identify the conformity of patient identification data in the records of health professionals from three public hospitals in Rio Grande do Norte.

## Methods

This cross-sectional and descriptive study is based on the project “Monitoring of patient safety indicators in public hospitals in Rio Grande do Norte, Brazil”, approved by Consolidated Opinion of the Research Ethics Committee at the Federal University of Rio Grande do Norte 1.662.417, CAAE: 57947716.5.0000.5537, on August 4, 2016.

The study was based on the recommendations adapted from the World Health Organization (WHO) regarding the construction of the “Record review of current in-patients” - a strategy that makes it possible to investigate patient safety in hospital settings in all countries, especially in developing countries.<sup>(7)</sup>

The review of medical records occurred in three public hospitals in Rio Grande do Norte, in medical and surgical clinical wards, from October to November 2016. The choice of these sites is justified by the fact that they comprise public state-owned hospitals, are large, have a Patient Safety Center (NSP) and have a clientele with similar clinical profiles. Regarding the wards, they were considered as spaces that would permit the inclusion of larger samples, enhancing the external validity of the study.

A non-probabilistic sample was used, consisting of records of patients hospitalized for at least 10 days in the hospitals mentioned above, from October to November 2016, and who agreed to participate in the study, through the signing of the Free and Informed Consent Form (TCLE) - conditions that were applied as the eligibility criteria.

Data collection was performed using an instrument built from a scoping review and validated by a patient safety expert group. Its structure consists of six thematic areas (patient identification; professional records; safety in medication prescription, use and administration; prevention of pressure injuries; prevention of falls; and safe surgery), ten subtopics, 89 items and spaces to check the alternatives “do not have”, “have” and the specifications “appropriate” and “inappropriate”, as well as to write comments.

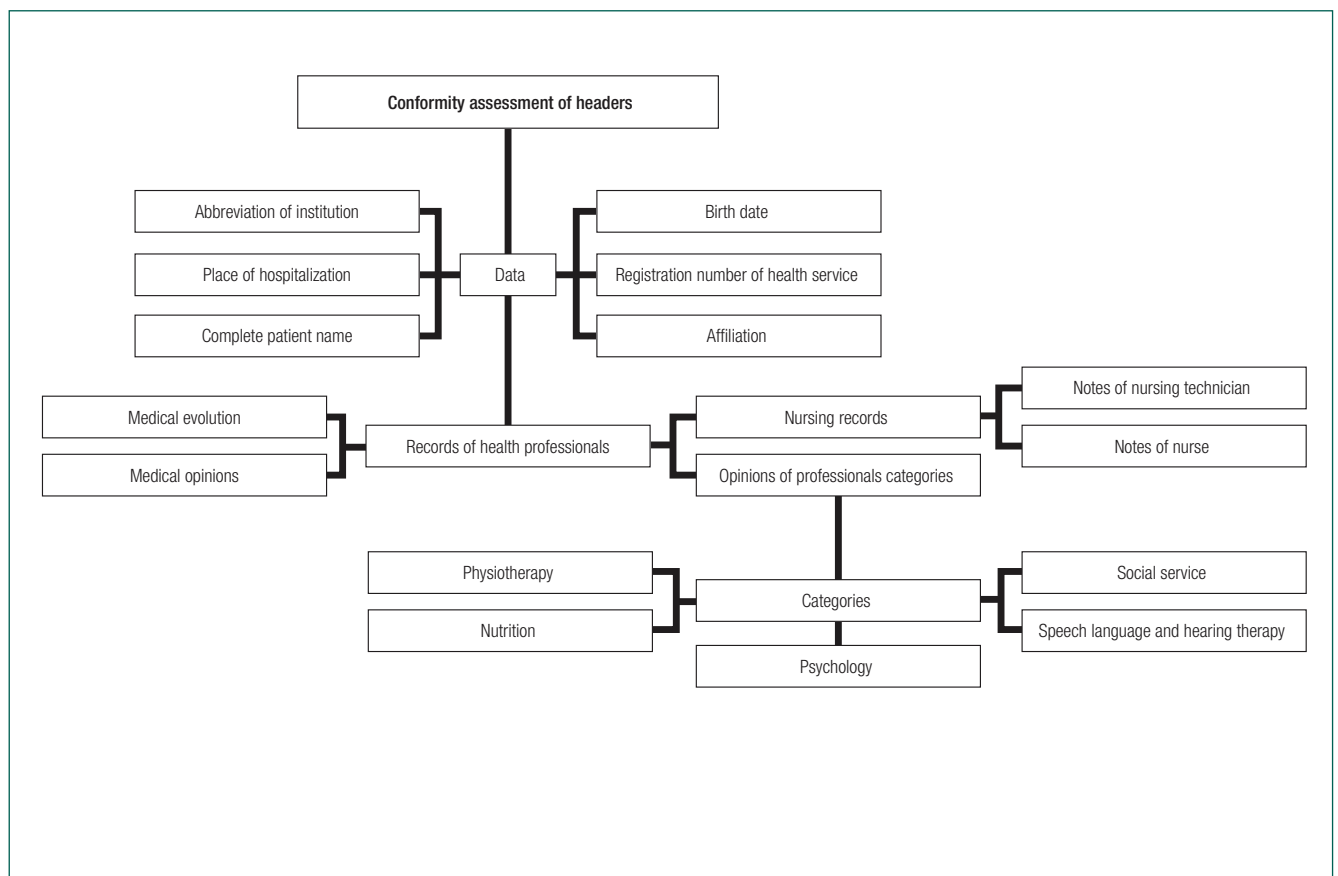
To answer the study objective, the patient’s identification data in the records of health professionals

were surveyed, which include: medical evolution, medical opinions, opinions of various professional categories and nursing records (Figure 1).

It is highlighted that the medical evolutions and nursing records were evaluated from the first to the tenth day of hospitalization. Regarding the opinions of the doctors and other categories, the first opinion requested / answered in the aforementioned period was used.

Ten reviewers of clinical histories executed the review of the medical records, all of whom were nurses enrolled in graduate nursing program courses.

The collected data were organized in the Statistical Package for Social Sciences for Windows (SPSS), version 22, and analyzed descriptively, using absolute frequencies and the Pareto Diagram, which makes it possible to identify the level of compliance of the headers in the health professionals’ records.



**Figure 1.** Compliance assessment flowchart of patient identification data in the professional records

## Results

In total, 234 clinical histories were evaluated, being 92 from hospital A (39.3%), 120 from hospital B (51.3%) and 22 from hospital C (9.4%). This number was not a constant for the health professionals' records, as there were variations during the ten days, due to the professionals' absence.

Thus, the number of evaluations of health professionals' records varied from 189 to 199 medical evolutions, between 195 and 227 notes from nursing technicians and between two and 19 notes from nurses (Figure 2).

Unlike the health professionals' records, the number of opinions was accurate, as the evaluation occurred only once during the ten days. Thus, 78 (42.4%) medical opinions, 52 (28.3%) from the social service, 28 (15.1%) from physiotherapy, 18 (9.8%) nutrition, 4 (2.2%) psychology and 4 (2.2%) speech therapy.

Figure 3 displays the Pareto Diagrams for patient identification data in medical evolutions, nursing team notes, and opinions of doctors and other categories.

Regarding the patient identification data in the medical evolutions, a frequency of 6,165 non-conformities was found. The absence of the date of birth and affiliation accounted for more than 61% of the inadequacies.

Similar results are verified in the nursing team notes, where the date of birth and affiliation made up 65% of the incomplete records in the identification of the patient. The total frequency of non-conformity was 12,628. In the opinions, the joint evaluation demonstrated 332 cases of inconsistency, in which the date of birth and affiliation were responsible for 62% of the missing data.

In view of the above, the records of the health professionals at the three hospitals analyzed are fragile, mainly regarding the completion of the date

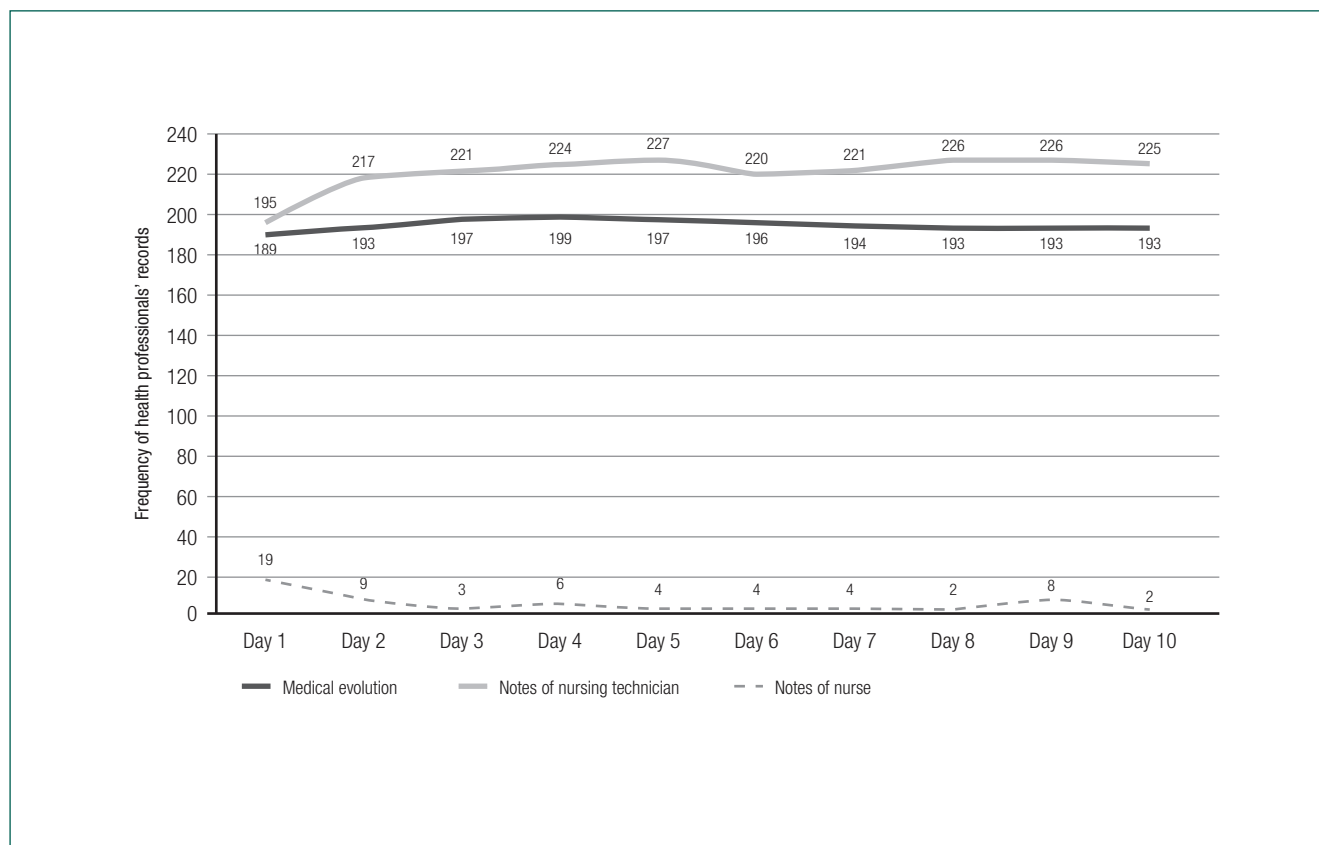
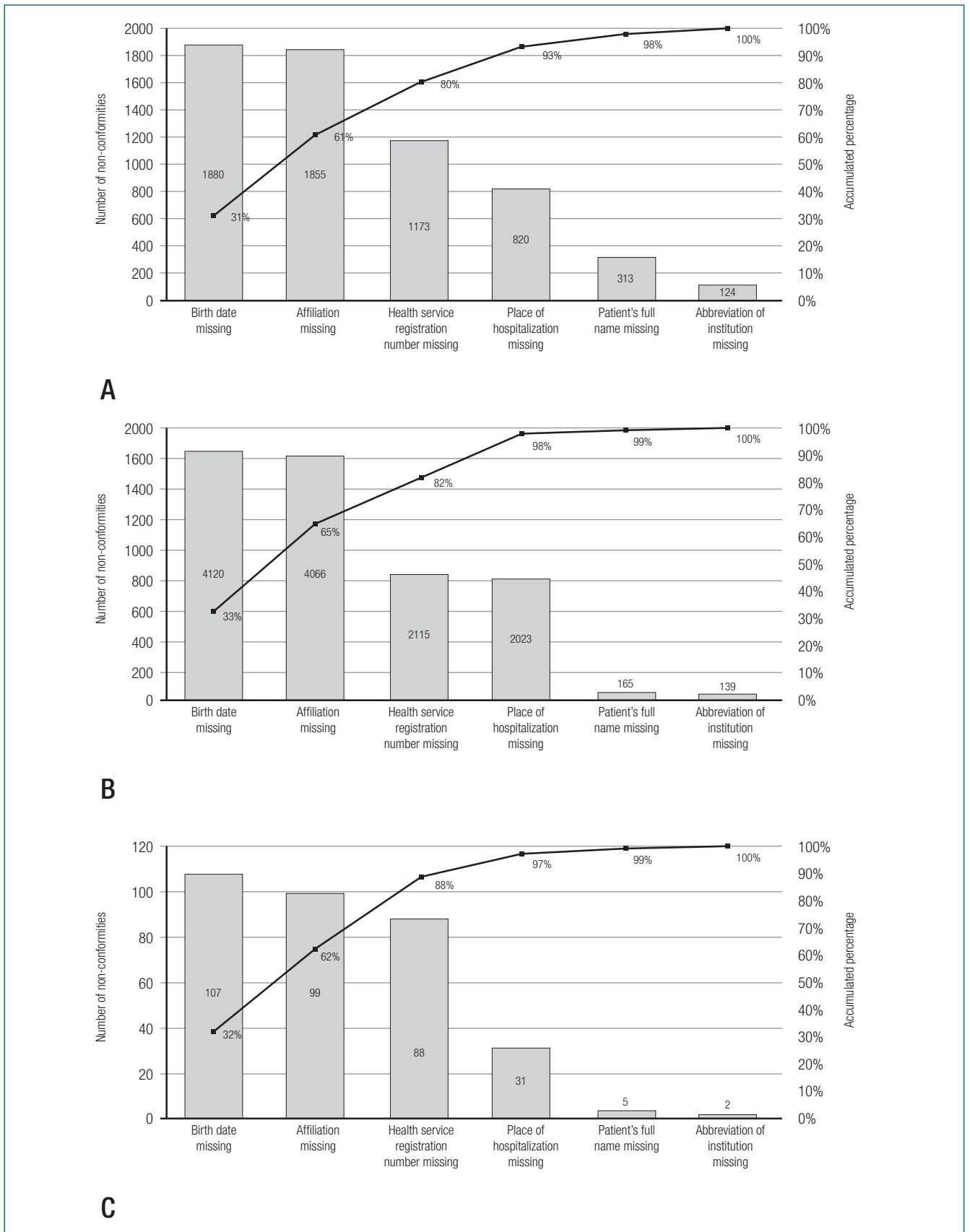


Figure 2. Distribution of health professionals' records during ten-day period



**Figure 3.** Pareto Diagram of patient identification data in health professionals' records: (A) medical evolutions; (B) notes of nursing team; and (C) opinions of doctors and other categories

of birth and affiliation, aspects that negatively affect the correct identification of the patient.

## Discussion

The results indicated several errors in completing the headers and, consequently, in the correct identification of the patient in the medical records.

The first issue to be discussed is the lack of records of professionals. This reality is worrisome as communication among team members was incomplete and omission of information may have triggered harm to the patient's clinical evolution. It should be noted that records are not only a legal instrument, but also one of the sides of care.<sup>(8)</sup>

Regarding this scenario, some suspicions arise that may be related to weaknesses in the professionals' records or their absence, such as the lack of time and the high demand for activities in hospital settings.

In line with this assertion, researchers<sup>(9)</sup> revealed that 78% of incidents in the hospital environment were motivated by work overload and one of the determinant for this finding, in turn, is the weakness in human resources.<sup>(10)</sup>

In this context, it is essential to foster actions that increase the number of professionals and improve their skills and abilities. This will boost their performance.<sup>(11)</sup>

In addition, it is essential to intervene in loco in the training institutions, concerning the elaboration of strategies that contribute to the preparation of individuals beyond the traditional and boost the ethical, critical, collaborative, transformative, reflexive and social responsibility dimensions.<sup>(12)</sup> These characteristics contribute to a posture that converges to the patient safety culture - individuals with attitudes and behaviors focused on health management and learning from mistakes.<sup>(13)</sup>

Regarding the nonconformities in completing patient identification data in the medical and nursing team records and in the opinions of physicians and other categories, the absence of the "date of birth" and the "affiliation" were verified, aspects that lead to a lack of patient safety.

The identification of the patient occurs throughout care and, when incorrect, it generates severe consequences, such as: wrong procedures, wrong patient exchange, wrong medication administration, among others.<sup>(4)</sup>

Usually, for the sake of patient identification, the use of a bracelet is recommended, indicating two identifiers that enable the professional to confirm the data on the bracelet with those contained in the clinical history. These are: full name of the patient and/or date of birth and/or health service registration number and/or full name of the mother.<sup>(2)</sup>

Thus, the information in the clinical histories is one of the main steps for correct patient identification, an aspect that requires the conformity of the headers present in the professional records - a premise not attested in this study, as the two main identifiers ("date of birth" and "affiliation") were absent 12,133 times in the revised records.

Although this fact is worrisome, the disclosure of research aimed at a broader and specific understanding of the professionals' practices regarding the theme of correct patient identification - such as the completion of headers in the clinical history forms - is incipient.<sup>(14)</sup>

Nevertheless, it has been evidenced that this reality of insecurity for the patient is not restricted to the region investigated, as other Brazilian and international studies<sup>(15-18)</sup> have identified it.

In Australia, for example, where written and spoken communication was evaluated in the light of information transfer tools - The Nursing Handover Minimum Dataset (NH-MDS) and Identification of the patient and clinical risks, clinical history/presentation, clinical status, care plan and outcomes/goals of care (ICCCO) - demonstrated that, only 3.3% of the nursing records contained the correct identification. The main non-conformities were the patient's name and age.<sup>(15)</sup>

Regarding this aspect, it is highlighted that the non-conformity of patient identification data in nursing notes increases the chances of incidents, a reality that is inconsistent with the assumptions of the International Council of Nurses' international code of ethics for nurses, which states that one of

the functions of nursing is to adopt “(...) appropriate measures to safeguard individuals, families and communities”.<sup>(19)</sup>

In Brazil, a cross-sectional study on the improvement of the patient identification process revealed that, among the inadequacies, the incompleteness of the headers in the professional records stand out, which should contain, as a minimum, the patient’s full name, date of birth and health service registration.<sup>(16)</sup>

It was also observed during the investigation of medication-related incidents at a Brazilian university hospital that 8.1% of the errors in drug therapy presented the patient’s inadequate identification as the root cause.<sup>(18)</sup>

In a Brazilian obstetric health unit, researchers<sup>(17)</sup> reported that 81.9% of the hospitalized women had the first names with identical spelling and/or phonetic similarities, a situation that poses a patient safety risk if no actions are implemented for the sake of correct patient identification.

Regarding the analysis of the Pareto Diagrams of this study, it is evident that the actions to improve the quality of patient identification in the three hospitals investigated should prioritize the appropriate completion of the date of birth and affiliation in the specific fields of the professional records, which will enhance patient safety.

Thus, these two identifiers need to be legibly recorded and the following recommendations need to be adopted: 1) date of birth in DD / MM / YYYY format (example: 07/06/2005); and (2) affiliation shall preferably contain the full name of the patient’s mother.<sup>(2)</sup>

Among the tools to encourage the use of the aforementioned recommendations, educational processes<sup>(20,21)</sup> that cover content related to patient safety and written communication are mentioned.

In view of the above, the findings of this and the aforementioned studies attest a worrying reality for patient safety, an assertion that lacks initiatives that can improve patient identification in health contexts, especially the hospital.

Because this study was based on the analysis of clinical histories, the main limitations are related to these records’ illegibility and disorganization. In addition, the complexity of the data collection

instrument may have caused a tedious completion process and, consequently, subject to errors - it is important to point out that, in order to overcome this situation, the research team carried out systematic evaluations to identify possible inconsistencies in the collection stage, as well as meetings, from the beginning of the research, to verify the experiences and difficulties the reviewers experienced. These activities were essential to equalize the data collection stages and mitigate information bias.

Regarding the findings, the fact that the review of clinical histories was limited to a single region makes it impossible to carry out an extended evaluation of the results, an aspect that demands the need for multicenter studies.

## Conclusion

The study highlights that the records of the health professionals at the hospitals analyzed do not guarantee the correct identification and, consequently, the safety of the patient. Thus, non-compliance in the “date of birth” and “affiliation” data was verified in all categories of records: medical evolution, nursing notes, opinions of medicine, physiotherapy, occupational therapy, nutrition, psychology, speech therapy and social service. These findings arouse concerns that go beyond the field of the patient’s correct identification and reach the other aspects of care - diagnosis, treatment, procedures, among others - as the clinical history is one of the means for team communication. In other words, the question is raised whether the other elements of the professionals’ records are in line with those obtained in this study. Thus, we believe that one of the ways to anticipate fragilities in patient identification and in the other structuring axes of patient safety is professional training, from undergraduation to permanent education. In this sense, this study contributes to the discussions/reflections about the written communication, specifically the patient identification in the records of health professionals, which can collaborate with the promotion of strategies that anticipate the fragilities identified and strengthen patient safety.

## Collaborations

Alves KYA, Salvador PTCO, Martins CCF, Santos VEP participated in the conception of the project. Alves KYA, Chiavone FBT, Barbosa ML and Saraiva COPO collected the data. Alves KYA and Santos VEP contributed to the interpretation of the data, writing and critical review of the article. Santos VEP approved the final version for publication.

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