



Analysis of documentation errors related to medication administration in a large hospital

Análise dos erros de registro relacionados à administração de medicamentos em um hospital de grande porte

Análisis de los errores de registro de medicamentos en un hospital de gran escala

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ABSTRACT

Objective: to analyze documentation errors related to medication administration in a large hospital. **Methods:** this was an observational, descriptive study with a quantitative approach and a cross-sectional design, using the database of the Patient Safety Center of a hospital in Belo Horizonte (MG), covering the period from July 2023 to July 2024. **Results:** data from 1,094 prescriptions were assessed; 477 (43.60%) had at least one documentation error. Dermatological medications (62.63%) and those acting on the alimentary tract and metabolism (8.42%) were the medications most frequently associated with errors. The routes of administration most associated with errors were topical (63.68%) and intravenous (17.89%). The absence of checks and initials was more prevalent during the daytime shift in the Intensive Care Unit (31.68% and 35.35%, respectively), whereas the highest rate of missing signatures occurred in the emergency department during both shifts (46.75% and 46.96%, respectively). **Conclusions:** this study demonstrated a significant weakness in the medication administration documentation process, highlighting the need to optimize institutional processes to achieve the objectives of the World Health Organization's "Medication Without Harm" challenge.

DESCRIPTORS:

Patient Safety; Hospital Records; Medication Errors; Drug Prescriptions

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RESUMO

Objetivo: Analisar os erros de registro de administração de medicamentos em um hospital de grande porte. **Métodos:** Estudo observacional, descritivo, de abordagem quantitativa e delineamento transversal, utilizando o banco de dados do Núcleo de Segurança do Paciente de um hospital em Belo Horizonte/MG, abrangendo o período de julho de 2023 a julho de 2024. **Resultados:** foram avaliados dados de 1.094 prescrições; 477 (43,60%) apresentavam pelo menos um erro de registro. Medicamentos dermatológicos (62,63%) e aqueles que atuam no trato alimentar e metabolismo (8,42%) foram os mais frequentemente associados a erros. As vias de administração mais associadas a erros foram a tópica (63,68%) e a intravenosa (17,89%). A ausência de conferências e rubricas foi mais prevalente durante o turno diurno na Unidade de Terapia Intensiva (31,68% e 35,35%, respectivamente), enquanto a maior taxa de ausência de assinaturas ocorreu no serviço de emergência em ambos os turnos (46,75% e 46,96%, respectivamente). **Conclusões:** este estudo demonstrou uma fragilidade significativa no processo de registro da administração de medicamentos, evidenciando a necessidade de otimização dos processos institucionais para alcançar os objetivos da Organização Mundial da Saúde no desafio “Medicação sem Danos”.

DESCRIPTORIOS:

Segurança do Paciente; Registros Hospitalares; Erros de medicação; Prescrições de Medicamentos.

RESUMEN

Objetivo: analizar los errores en el registro de la administración de medicamentos en un hospital de gran porte. **Métodos:** estudio observacional, descriptivo, de enfoque cuantitativo y diseño transversal, utilizando la base de datos del Núcleo de Seguridad del Paciente de un hospital en Belo Horizonte (MG), correspondiente al período de julio de 2023 a julio de 2024. **Resultados:** se evaluaron datos de 1,094 prescripciones; 477 (43.60%) presentaron al menos un error de registro. Los medicamentos dermatológicos (62.63%) y los que actúan sobre el tracto digestivo y el metabolismo (8.42%) fueron los más frecuentemente asociados con errores. Las vías de administración más asociadas con errores fueron la tópica (63.68%) y la intravenosa (17.89%). La ausencia de verificaciones e iniciales fue más prevalente durante el turno diurno en la Unidad de Cuidados Intensivos (31.68% y 35.35%, respectivamente), mientras que la tasa más alta de ausencia de firmas ocurrió en el servicio de urgencias en ambos turnos (46.75% y 46.96%, respectivamente). **Conclusiones:** este estudio demostró una deficiencia significativa en el proceso de registro de la administración de medicamentos, lo que subraya la necesidad de optimizar los procesos institucionales para alcanzar los objetivos de la Organización Mundial de la Salud en el desafío “Medicamentos sin Daño”.

DESCRIPTORES:

Seguridad del Paciente; Registros de hospitales; Errores de Medicación; Prescripciones de Medicamentos

INTRODUCTION

Healthcare delivery, due to its complexity and high degree of unpredictability, is subject to incidents that may result in serious consequences, affecting both patients and healthcare professionals⁽¹⁾. The challenge faced by all healthcare systems is to provide high-quality care while maintaining effective surveillance to identify potential safety risks and address all possible sources of harm⁽¹⁻²⁾.

The World Health Organization (WHO) defines an “incident” as an event or circumstance that could have resulted, or did result, in unnecessary harm to a patient⁽³⁾. An “error”, in turn, may occur through

performing an incorrect action (commission) or failing to perform the correct action (omission), and may result in an adverse event (AE) if harm to the patient occurs⁽³⁾.

Among healthcare-related incidents, medication errors are considered the most frequent in healthcare systems and the second leading cause of incidents worldwide. They may occur at any stage of the process, from storage to administration, involving various professionals⁽⁴⁻⁵⁾.

In view of this, in 2004, the World Alliance for Patient Safety introduced the concept of the “Global Patient Safety Challenge”. In 2017, it designated the third challenge as “Medication Without Harm”⁽⁶⁾. This challenge aims to optimize processes with the goal of reducing preventable serious events by 50%, saving lives, and reducing harm caused by unsafe medication practices, in addition to strengthening healthcare systems⁽⁶⁾.

Medical prescriptions, notes, nursing progress notes, and other records related to a patient's hospitalization are part of this process and should be documented in the medical record in a standardized and organized manner⁽⁷⁾. In addition to providing legal protection, such documentation is essential to ensuring patient safety, effective communication among healthcare professionals, and continuity of care⁽⁷⁾.

Documentation of prescriptions in the medical record requires individual verification of administered medications, including the professional's initials, the check mark above the scheduled time, and the signature, together with the professional council registration number and the full name of the person responsible⁽⁷⁻⁸⁾. The absence of any of these items constitutes a documentation error, making it difficult to identify the responsible professional⁽⁷⁻⁸⁾. In addition, it may compromise patient safety, resulting, for example, in duplicate administration of the same medication if it was administered but not checked⁽⁸⁾.

The National Patient Safety Program, established by MoH/MO Ordinance 529 of 2013, aims to reduce errors and AEs in healthcare through the implementation of safety protocols and manuals⁽⁹⁻¹¹⁾. In addition, it requires healthcare institutions in Brazil to implement Patient Safety Centers (PSCs), which are responsible for collecting data, analyzing indicators, and reporting incidents to the National Health Surveillance System using the NOTIVISA and VigiMed systems⁽⁹⁻¹²⁾.

One of the main indicators monitored by PSCs is the “Medication Administration Error Rate”. This indicator is established by the Protocol for the Safe Prescription, Use, and Administration of Medications, coordinated by the Ministry of Health and the Brazilian Health Regulatory Agency, in partnership with *Fundação Oswaldo Cruz* and *Fundação Hospitalar do Estado de Minas Gerais*, with the aim of ensuring safe medication-use practices in all healthcare institutions⁽¹³⁾.

Studies conducted in Brazil have highlighted the poor quality of medical record documentation, including errors such as failures to check medications on prescriptions, the absence of justification when

medication is not administered, and failure to identify professionals, either due to the absence of a professional stamp or illegible handwriting^(7,14). Thus, documentation errors in medical records represent a recurring problem in healthcare, affecting communication among the team, the quality of care provided, and patient safety^(7,14). Studies that identify and analyze the main documentation errors related to medication administration in healthcare institutions, as well as the context in which they occur, are crucial for directing attention to critical areas requiring intervention, adapting internal processes, and training professionals, with the aim of providing safe, high-quality patient care.

OBJECTIVE

To analyze documentation errors related to medication administration in a large hospital.

METHODOLOGY

Design

This was an observational, descriptive study with a quantitative approach and a cross-sectional, retrospective design.

Study site

The study was conducted in a large hospital in Belo Horizonte, Minas Gerais. The institution has a PSC responsible for the monthly collection of data related to the “Medication Administration Error Rate” indicator. Data are extracted through the random selection of printed medical prescriptions attached to physical medical records. The sample consists of at least 75 prescriptions per month, with this number established by convenience by the institution’s care safety coordination.

Data collection

Data were collected from July to August 2024. Data from July 2023 to July 2024 from the PSC database were used for this study. The data are distributed in Microsoft Office Excel® spreadsheets and classified into sectors including the emergency department, ward, Semi-Intensive Care Unit (SIU), Intensive Care Unit (ICU), and surgical unit, the latter referring to prescriptions from the post-anesthesia care unit (PACU). Data regarding the checking of prescribed medications are also included, except for those that were not dispensed due to lack of availability or treatment discontinuation, as well as doses not administered according to medical instructions.

The findings were divided into the following categories: Prescribed medication with a documentation error; Classification of the medication with a documentation error; Route of administration; Sector; Check symbol (by daytime and nighttime shift); Initials (by daytime and nighttime shift); and Signature (by daytime and nighttime shift).

For the assessment of documentation compliance, it was considered that medication checks should be performed individually for all prescribed items and times, using the symbol (✓) to indicate that administration took place and (O) to indicate that it did not⁽⁷⁾. The initials correspond to the abbreviated identification of the professional responsible for administering the medication and should be positioned above the scheduled time⁽⁷⁾. The signature was considered the complete name-based identification of the professional responsible for documenting the care and/or the professional stamp accompanied by the initials⁽⁷⁾.

The variables in the category “Classification of the medication with a documentation error” are in accordance with the “Guidelines for ATC classification and DDD assignment 2026”⁽¹⁵⁾. For the analysis, the data were generated and stored in a Microsoft Office Excel® version 365 database and analyzed using IBM SPSS Statistics version 24 software.

Analysis of results and statistics

Continuous variables were analyzed descriptively using observed frequency, percentage, median, mean, and standard deviation. Pearson’s chi-square test was used to assess the association between outcomes and their possible risk factors. When its assumptions were not met, Fisher’s exact test was used. Bonferroni correction was also performed to avoid an increase in type I error (rejecting a true null hypothesis). The significance level used in all analyses was 5%.

Ethical aspects

This study was approved by the Research Ethics Committee under Certificate of Presentation for Ethical Consideration 81238324.1.0000.5119. A waiver of the Informed Consent Form was granted due to the nature of the study.

RESULTS

Data from 1,094 prescriptions were assessed, of which 32.64% were from the ICU, 27.24% from the ward, 22.76% from the emergency department, 16.91% from the SIU, and 0.45% from the surgical unit. Among these prescriptions, 43.60% (477) had at least one documentation error.

Dermatological medications had the highest frequency of documentation errors (62.63%), followed by medications acting on the alimentary tract and metabolism (8.42%), the nervous system (6.84%), the musculoskeletal system (5.79%), systemic hormonal preparations (5.79%), blood and blood-forming organs (4.74%), the respiratory system (1.58%), the cardiovascular system (1.58%), sensory organs (1.58%), and anti-infectives for systemic use (1.05%). Regarding the route of administration, the most prevalent was topical (63.68%), followed by intravenous (17.89%), oral (12.63%), subcutaneous (4.21%), and inhaled (1.58%).

A significant association was found between the absence of medication checks, the sector, and the daytime work shift, with the highest absence occurring in the ICU (31.68%) and the lowest in the emergency department (6.93%). In contrast, the surgical unit had no missing medication checks during either shift, as shown in Table 1.

Table 1. Association between missing medication checks and hospital units according to work shift. Brazil, 2025. Brazil, 2025

Sector	Check: Daytime		p-value*	Check: Nighttime		p-value*
	Absent n (%)	Present n (%)		Absent n (%)	Present n (%)	
Emergency department	7 ^a (6.93)	241 ^b (24.27)	< 0,001	14 ^a (15.56)	234 ^a (23.31)	0,098
Surgical unit	0 ^a (0.00)	5 ^a (0.50)		0 ^a (0.00)	5 ^a (0.50)	
Ward	27 ^a (26.73)	271 ^a (27.29)		20 ^a (22.22)	278 ^a (27.69)	
SIU	32 ^b (31.68)	154 ^a (15.51)		23 ^b (25.56)	163 ^a (16.24)	
ICU	35 ^a (34.65)	322 ^a (32.43)		33 ^a (36.67)	324 ^a (32.27)	
Total	101(100.0)	993 (100.0)		90 (100.0)	1004 (100.0)	

*Pearson's chi-square test or Fisher's exact test; ab – different letters indicate differences between prevalences (Bonferroni correction); significant if $p \leq 0.050$.

A significant association was found between the absence of initials, the sector, and the daytime work shift, with the highest absence occurring in the ICU (35.35%) and the lowest in the emergency department (7.07%). In contrast, the surgical unit had no missing initials during either shift, as shown in Table 2.

Table 2. Association between missing initials and hospital units according to work shift. Brazil, 2025

Sector	Initials: Daytime		p-value*	Initials: nighttime		p-value*
	Absent n (%)	Absent n (%)		Absent n (%)	Present n (%)	
Emergency department	7 ^a (7.07)	241 ^b (24.22)	< 0,001	14 ^a (16.28)	234 ^a (23.21)	0,087
Surgical unit	0 ^a (0.00)	5 ^a (0.50)		0 ^a (0.00)	5 ^a (0.50)	
Ward	26 ^a (26.26)	272 ^a (27.34)		17 ^a (19.77)	281 ^a (27.88)	
SIU	31 ^b (31.31)	155 ^a (15.58)		21 ^a (24.42)	165 ^a (16.37)	
ICU	35 ^a (35.35)	322 ^a (32.36)		34 ^a (39.53)	323 ^a (32.04)	
Total	99(100,0)	995(100.0)		86(100,0)	1008(100.0)	

*Pearson's chi-square test or Fisher's exact test; ab – different letters indicate differences between prevalences (Bonferroni correction); significant if $p \leq 0.050$.

A significant association was found between the absence of signatures and the sector during both work shifts. The highest frequency of missing signatures occurred in the emergency department during both shifts (46.75% and 46.96%, respectively). The lowest frequency of missing signatures occurred in the surgical unit during both shifts (1.30% and 1.21%, respectively), as described in Table 3.

Table 3. Association between missing signatures and hospital units according to work shift. Brazil, 2025.

Sector	Signature: Daytime		p-value*	Signature: Nighttime		p-value*
	Absent	Present		Absent	Present	
	n (%)	n (%)		n (%)	n (%)	
Emergency department	108 ^b (46.75)	140 ^a (16.22)		116 ^b (46.96)	132 ^a (15.58)	
Surgical unit	3 ^b (1.30)	2 ^a (0.23)	< 0,001	3 ^b (1.21)	2 ^a (0.24)	< 0,001
Ward	40 ^a (17.32)	258 ^b (29.90)		48 ^a (19.43)	250 ^b (29.52)	
SIU	38 ^a (16.45)	148 ^a (17.15)		21 ^a (8.50)	165 ^b (19.48)	
ICU	42 ^a (18.18)	315 ^b (36.50)		59 ^a (23.89)	298 ^b (35.18)	
Total	231(100.0)	863(100.0)		247(100.0)	847(100.0)	

*Pearson's chi-square test or Fisher's exact test; ab – different letters indicate differences between prevalences (Bonferroni correction); significant if $p \leq 0.050$.

A significant association was observed between the sector, route of administration, and classification of the medication with a documentation error. The emergency department had the highest prevalence of documentation errors involving the intravenous route of administration (50%) and medications affecting the musculoskeletal system (33.33%). The SIU, ICU, and ward had the highest prevalence of errors involving the topical route (80%, 72.31%, and 44.68%, respectively) and dermatological medications (78.33%, 72.31%, and 44.68%, respectively), according to Tables 4 and 5.

Table 4. Association between the route of administration of medications involved in documentation errors and the department. Brazil, 2025.

Route of administration	Sector				p-value*
	Emergency department	Ward	SIU	ICU	
	n (%)	n (%)	n (%)	n (%)	
Intravenous	9 ^b (50.00)	10 ^a (21.28)	4 ^a (6.67)	11 ^a (16.92)	< 0,001
Inhalation	0 ^a (0.00)	1 ^a (2.13)	1 ^a (1.67)	1 ^a (1.54)	
Oral	2 ^{ab} (11.11)	13 ^b (27.66)	6 ^a (10.00)	3 ^a (4.62)	
Subcutaneous	2 ^a (11.11)	2 ^a (4.26)	1 ^a (1.67)	3 ^a (4.62)	
Topical	5 ^a (27.78)	21 ^a (44.68)	48 ^b (80.0)	47 ^b (72.31)	
Total	18(100.0)	47(100.0)	60(100.0)	65(100.0)	

*Pearson's chi-square test or Fisher's exact test; ab – different letters indicate differences between prevalences (Bonferroni correction); significant if $p \leq 0.050$.

Table 5. Association between the classification of medications associated with documentation errors and the department. Brazil, 2025.

Medication classification	Sector				p-value*
	Emergency department	Ward	SIU	ICU	
	n (%)	n (%)	n (%)	n (%)	
Anti-infectives for systemic use	0 ^a (0.00)	0 ^a (0.00)	0 ^a (0.00)	2 ^b (3.08)	< 0.001
Dermatologicals	4 ^a (22.22)	21 ^a (44.68)	47 ^b (78.33)	47 ^b (72.31)	
Sensory organs	1 ^a (5.56)	0 ^a (0.00)	1 ^a (1.67)	1 ^a (1.54)	
Systemic hormonal preparations	2 ^a (11.11)	3 ^a (6.38)	4 ^a (6.67)	2 ^a (3.08)	
Blood and hematopoietic organs	1 ^a (5.56)	2 ^a (4.26)	3 ^a (5.00)	3 ^a (4.62)	
Cardiovascular system	0 ^a (0.00)	2 ^a (4.26)	0 ^a (0.00)	1 ^a (1.54)	
Musculoskeletal system	6 ^b (33.33)	5 ^a (10.64)	0 ^a (0.00)	0 ^a (0.00)	
Nervous system	0 ^a (0.00)	8 ^a (17.02)	2 ^a (3.33)	3 ^a (4.62)	
Respiratory system	0 ^a (0.00)	1 ^a (2.12)	1 ^a (1.67)	1 ^a (1.54)	
Alimentary tract and metabolism	4 ^a (22.22)	5 ^a (10.64)	2 ^a (3.33)	5 ^a (7.69)	
Total	18(100.0)	47(100.0)	60(100.0)	65(100.0)	

* Pearson's chi-square test or Fisher's exact test; ab – different letters indicate differences between prevalences (Bonferroni correction); significant if $p \leq 0.050$.

DISCUSSION

The “Medication Without Harm” challenge established by the WHO seeks to develop safer and more efficient healthcare systems at each stage of the medication-use process, aiming to reduce medication-related harm⁽⁶⁾. In the present study, documentation errors were identified in 43.60% of the prescriptions analyzed, demonstrating a significant weakness in the medication administration process and highlighting the need to review, adjust, and optimize institutional processes to achieve the objectives of this challenge.

A study conducted at a hospital in Northeastern Brazil that assessed the quality of nursing documentation in medical records found that 10% of medical prescriptions were not adequately checked; 6% of the documents assessed did not contain the signature of the professional responsible for the documentation; and 32% did not contain the Regional Nursing Council registration number next to the signature⁽¹⁶⁾. In this context, the authors argue that COFEN Resolution 545/2017, which addresses the mandatory use of professional stamps, may contribute to better identification of professionals⁽¹⁶⁾.

Regarding medication classification, a high incidence of documentation errors associated with dermatological medications was observed, which are administered mainly by the topical route. At the hospital where the study was conducted, oral hygiene antiseptics and medications used for skin hydration and the prevention and treatment of skin lesions are among the most commonly prescribed topical dermatological medications.

A study conducted at a medium-sized hospital in São Paulo revealed that, although most of the nursing staff recognized the importance of patients’ oral hygiene, 75.4% of professionals reported not performing this care⁽¹⁷⁾. It should be noted that the cited study assessed the performance of oral hygiene based on professionals’ reports, whereas the present study analyzed documentation errors related to the administration of prescribed medications. Although the absence of a check on the prescription does not, by itself, allow one to conclude that the medication was not administered, the high frequency of documentation errors involving oral antiseptics, together with evidence of low adherence to oral hygiene described in the literature, may suggest that some of these records may reflect failure to perform the care.

Medications for the treatment of skin lesions are also included in medical prescriptions, as hospitalized patients, particularly those in wards and ICUs, are known to have a high incidence of pressure injuries and therefore constantly require preventive and therapeutic measures⁽¹⁸⁾.

Topical medication administration has several advantages, including a lower risk to the patient compared with oral or intravenous routes⁽¹⁹⁾. In this context, it is hypothesized that healthcare professionals’ perception that these medications are less associated with risks may result in lower priority being given to documenting their administration. Although the risk involved is low, it is not nonexistent and

represents a potential hazard to the patient⁽¹⁹⁾. In addition, practices such as sharing these medications among patients may contribute to failure to document their administration appropriately, since the medication is already available at the bedside and does not require dispensing by the pharmacy.

Anti-infective medications and those acting on the nervous and cardiovascular systems are widely used in the hospital setting and are frequently classified as high-alert medications (HAMs)^(20,21). In this context, a lower incidence of related documentation errors was observed, suggesting greater vigilance by professionals in correctly documenting these medications, considering the associated risks and implications for patient safety.

The emergency department is a critical and dynamic setting focused on the care of urgent and emergency conditions, with high patient turnover⁽²²⁾. In this setting, the intravenous route is the preferred route for medication administration, providing an immediate drug effect⁽²³⁾. Due to the dynamic nature of the setting and the complexity of care, it is suggested that professionals tend to prioritize medication administration over proper documentation. Additionally, documentation errors may occur due to a lack of attention to changes in medical prescriptions, such as changing medications previously indicated “as needed” to fixed administration times.

The PACU aims to provide immediate care to patients who are still under the effects of anesthesia following a surgical procedure⁽²⁴⁾. However, due to the high demand for ICU beds, the PACU has increasingly been used as a support setting for critically ill patients after surgery who require intensive care and close monitoring⁽²⁴⁾. The absence of errors in medication checks and initials observed in this study may indicate concern about documenting the administration of these medications in critically ill patients. However, this same level of attention is not reflected in prescription signatures, which may be attributed to professionals forgetting to sign, since the check, considered a priority in critical cases, has already been performed.

Thus, despite significant failures in the medication administration documentation process, it is hypothesized that the team prioritizes proper documentation of medications that pose a greater risk to patients, such as HAMs and those administered intravenously, compared with dermatological medications or those administered topically. In this context, the question arises as to whether these medications are considered less important to document by the nursing team, since they are less associated with incidents and AEs. Factors such as the sharing of topical medications and failure to document patients’ oral hygiene may also be related to these incorrect records.

Errors involving initials and the check symbol within the same work shift showed similar values. This may be attributed to the need for both elements to be present at each time the medication was administered, making the simultaneous absence of both more likely than the presence of one without the

other⁽⁸⁾. In turn, missing signatures were the most prevalent documentation errors. Given the high patient turnover and the severity of patients in sectors such as the emergency department, and the fact that a signature is required only at the end of the medical prescription rather than for each administration, it is hypothesized that professionals may omit signatures more frequently.

In addition, daytime and nighttime work shifts have distinct routines and specific challenges. The daytime shift generally has a higher patient flow and a greater number of procedures and medication administrations⁽²⁵⁾. In contrast, the nighttime shift is frequently associated with physical and mental fatigue among professionals, mainly due to disruption of the natural sleep cycle⁽²⁶⁾. In this context, the higher incidence of checking and initials errors during the daytime shift may be attributed to the high workload during this period. Signature errors during the nighttime shift may be related to fatigue resulting from sleep deprivation and alternating rest schedules. In this case, professionals may end up neglecting to complete documentation in patients' prescriptions when they assume responsibility for other patients.

The results demonstrate that documentation errors, such as missing checks and inadequate identification of professionals both on medical prescriptions and in other medical record documents, are present at different levels of complexity. These errors may directly affect the quality of patient care, since missing or incomplete documentation may lead to duplication of procedures, compromising patient recovery⁽²⁷⁾.

Although documentation is essential for safety and efficiency in care, a culture still persists in nursing in which documentation is considered a lower priority, with the focus restricted to patient care, particularly due to workload⁽²⁵⁾. Organizational factors, such as stress and prolonged working hours, affect productivity, directly impacting both the quality of care and the quality of documentation^(28,29). In addition, high patient turnover, high demand, and the complexity of care, particularly in large hospitals, may also contribute to an increase in errors related to medication therapy.

It is hypothesized that healthcare professionals tend to prioritize patient care over bureaucratic activities, placing greater emphasis on "doing" than on "documenting". This practice poses a risk to patient safety and a challenge for nursing management, which needs to adopt measures to monitor and improve this process⁽²⁹⁾. In addition, it is inconsistent with the regulations governing nursing practice in Brazil and may have legal repercussions and entail legal consequences for those responsible⁽⁷⁾.

Study limitations

This study has some limitations. Because the sample was defined by convenience and randomly selected, there may be gaps in the representativeness of the data and errors in the completion of the data collection instrument. A scarcity of studies analyzing documentation errors related to medication administration was identified in the literature, limiting comparisons with other findings. In addition, the

protocol for the safe prescription, use, and administration of medications defines omission as “prescribed items that were not administered (checked)”. Considering that the data collected concern documentation errors on medical prescriptions, it was not possible to state that the identified error referred to an omission of administration, since the medication may have been administered but not checked. The correlation between omission of administration and failure to check requires in-person observation, which requires time, methodology, and a trained team and is impractical in the routine audits conducted by the PSC.

Contributions to Nursing, Health, or Public Policy

The study enables a deeper understanding of the issue of documentation errors related to medication administration in a large hospital, considering sectors with different levels of complexity. Understanding the main weaknesses of this activity contributes to assessing the nature and extent of preventable harm and strengthening monitoring systems to detect and track such harm, thereby fulfilling one of the objectives of the “Medication Without Harm” challenge⁽⁷⁾. In addition, it enables the development of strategies aimed at reducing the identified errors, improving staff performance, reducing costs, and increasing the safety and quality of care provided.

CONCLUSIONS

This study demonstrated a significant weakness in medication administration documentation, evidenced by the high frequency of errors identified in the prescription data analyzed. The most frequent errors involved the absence of the signature of the professional responsible, which compromises the traceability of care, communication among the team, and safety in the medication administration process. These findings reinforce the need to optimize institutional processes and contribute to two objectives of the WHO global “Medication Without Harm” challenge: (1) assess the scope and nature of preventable harm, strengthening monitoring systems to detect and track such harm; and (4) engage key stakeholders to raise awareness of the problem and actively seek efforts to improve the safety of medication use.

Nearly half of the medical records analyzed presented documentation errors, with missing signatures being the most common errors, particularly during the nighttime period and in the emergency department. Dermatological medications, predominantly administered by the topical route in the ICU, SIU, and ward, were the medications most associated with checking and initials errors.

Further studies on documentation errors in medical prescriptions in medical records are needed to clarify whether these occurrences result from documentation inadequacies or also reflect omission of medication administration, as well as to investigate their implications for patient safety. The results may contribute to the development of strategies aimed at improving the quality of documentation and nursing care. It is essential that training and awareness campaigns for healthcare teams be implemented to

prevent AEs and emphasize the importance of properly documenting medication administration based on the legal responsibilities of the profession. These measures are essential for improving work processes, promoting the prevention of AEs, enhancing the quality of care, optimizing resources, and strengthening patient safety.

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