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Factors associated with medication dispensing errors: contribution to improve medication systems

Fatores associados a erros de dispensação de medicamentos: contribuição à melhoria de sistemas de medicação

Factores asociados a errores de dispensación de medicamentos: contribución para mejorar los sistemas de medicación

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ABSTRACT
Objective: to analyze the associated factors and identify the types of drug dispensing errors (DE). **Method:** a cross-sectional study was developed with 5604 drugs dispensed in a Brazilian teaching hospital, in 2016 e 2017. Once data were obtained, by applying a checklist and opening dispensing kits, adjusted hierarchical regression was applied to identify factors associated with DE. **Results:** DE occurred in 236 medications and several calculation methods led to the following rates: 4.2%, 7.3%. and 24.9%. The main dispensing errors were regarding content, due to quality deviation, and omission. In the final regression model, the following variables remained associated with an increased chance of DE: overnight shift and the presence of interruption/distraction sources. **Conclusion:** the frequency of DE was low when using the calculation method of the Brazilian Ministry of Health. Factors related to the night shift and the use of interruption/distraction sources can be associated with DE, especially those regarding omission.
Descriptors: Dispensing error; medication errors; patient safety; medication systems.

RESUMO
Objetivo: analisar os fatores associados e identificar os tipos de erros de dispensação (ED) de medicamentos. **Método:** estudo transversal realizado com 5.604 medicamentos dispensados em hospital universitário brasileiro, em 2016 e 2017. Após obtenção dos dados, pela aplicação de *checklist* e abertura dos *kits* de dispensação, utilizou-se regressão hierarquizada ajustada para identificação dos fatores associados ao ED. **Resultados:** os ED ocorreram em 236 medicamentos e os vários métodos de cálculo permitiram as taxas: 4,2%, 7,3% e 24,9%. Os principais erros foram de conteúdo por desvio de qualidade e de omissão. No modelo final da regressão, permaneceram associadas ao aumento da chance de ED as variáveis: turno da noite e presença de fonte de interrupção/distração. **Conclusão:** a frequência de ED foi mais baixa quando se utilizou o método de cálculo do Ministério da Saúde. Os fatores relacionados ao turno da noite e ao uso de fontes de interrupção/distração podem estar associados a ED, especialmente ao de omissão.
Descritores: Erro de dispensação; erros de medicação; segurança do paciente; sistemas de medicação.

RESUMEN
Objetivo: analizar los factores asociados e identificar los tipos de errores de dispensación (ED) de medicamentos. **Método:** estudio transversal con 5604 medicamentos en un hospital universitario brasileño, em 2016 y 2017. Después de obtenerse los datos, con la aplicación de un *checklist* y apertura de kits de dispensación, se aplicó la regresión jerárquica ajustada para identificar factores asociados a ED. **Resultados:** ED ocurrieron en 236 medicaciones, y variados métodos de cálculo permitieron encontrar tasas de 4,2%, 7,3% y 24,9%. Los principales errores fueron de contenido, por desvío de calidad, y omisión. En el modelo final de regresión, las variables que siguieron asociadas al aumento de las chances de ED fueron: el turno noche y la presencia de fuentes de interrupción/distracción. **Conclusión:** La frecuencia de ED fue menor al utilizar el método de cálculo del Ministerio de Salud. Los factores asociados al turno noche y el uso de fuentes de interrupción/distracción pueden estar relacionados a ED, especialmente los de omisión.
Descriptores: Error de dispensación; errores de medicación; seguridad del paciente; sistemas de medicación.

INTRODUCTION

Medication errors are the main cause of preventable harm in health systems worldwide. At least one patient dies every day in the United States as a consequence of this type of accident, and adverse events occur with 1.3 million people a year, resulting in a cost of US$ 42 billion, that is, nearly 1% of the total health-related costs in the world[1,2]. Statistics of deaths caused by medication errors are not available in Brazil, but the need to prevent them led the Ministry of Health and the Brazilian Health Regulatory Agency to design the Protocol of Safety in Prescription, Use, and Administration of Medications[3,4].

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Because of the relevance of this subject, the World Health Organization launched the Third Global Challenge in 2017, whose target is to decrease the rate of serious and preventable harm in 50% until 2022. To achieve this goal, it will be necessary to develop safe and efficient health systems in each step of the process[2].

Professionals' fatigue, work overload, miscommunication, dose omissions, and interruptions/distraction, among other problems, can cause medication errors in the process of prescription, dispensing, and administration of medications[5-10]. It is important to know these factors to implement preventive measures. Many studies have evaluated the knowledge of healthcare professionals regarding medication errors in hospitals aiming to understand the involved factors[11,12].

There is a lack of analytical studies on the factors associated with errors in medication dispensing. These errors have been defined according to accounts in reporting systems and/or interviews[13-18]. A systematic review carried out in the United Kingdom, Brazil, United States, and France showed that the rates in these countries were between 0.015% and 33.5% and that most of the studies focused on classifying the errors according to their types but did not take into account their severity, associated factors, or the strategies to reduce them[19].

The present study aimed to identify the types of medication dispensing errors (DE) in the adult unit of a Brazilian teaching hospital, analyze the associated factors, and propose preventive measures to contribute to preventing accidents, in accordance with the Third Global Challenge of the World Health Organization.

LITERATURE REVIEW

Over the past years, the "to err is human" concept has been opposed to the idea that human beings are infallible. However, errors do not occur just because of human fallibility, but also as a consequence of deficiencies in systems and environmental factors[20].

Medication error is defined as any preventable event that may lead to inadequate use or cause harm while the medication is under the control of healthcare professionals, patients, or consumers[21]. It is attributed to care flaws and may occur in any of the medication process phases: prescription, dispensing, preparation, administration, and monitoring[2,22].

Medication dispensing is not simply supplying a prescribed medication. One of its stands is promoting the rational use of medications and the effective participation of pharmacists in the processes of analyzing prescriptions, providing information for the correct use of the drugs, and following up the proposed pharmacotherapy[23].

Health organizations must implement rational medication dispensing systems. These systems are classified as collective, individualized, mixed, unit dose, and automatized. The dispensing system type is directly related to error frequency[24].

Dispensing errors are mistakes made at the pharmacy when a prescription is being provided. They may be corrected still at the pharmacy (DE or near miss) or professionals may realize that they happened after the delivery of the medications to be used (undetected DE)[14,25]. They are classified as content, labeling, and documentation errors. Content errors are related to the prescribed medications and the dispensed content. Labeling errors are connected to medication labels that can originate questions during dispensing and/or administration. Documentation errors are flaws in the register of the dispensing process[26].

Understanding the factors associated with these errors allows to reduce risks and improve the quality in health systems[3].

METHODOLOGY

Cross-sectional study carried out at the pharmacy sector at one of the units of a large size public general teaching hospital in the Northeast Region of Brazil. The examined unit provided care to adults and had 312 beds distributed over intensive care, clinical surgery, and clinical medicine and was chosen because it had a higher number of dispensed medications than the maternal-child unit.

The pharmacy sector of the adult unit has an environment exclusive for medication dispensing. In the period in which the present study was carried out, 5,356 monthly prescriptions were provided on average, which corresponded to 58,916 medication items. The proposal was approved by a human research ethics committee as per CAAE no. 47169815000005086.

Medication dispensing for inpatients was performed mainly as individualized doses. The medications were dispensed by using electronic prescriptions. The technicians calculated the number of doses for a 24-hour period and the pharmacists analyzed the prescriptions and reviewed the calculations before the medications were separated. These were then put in labeled plastic bags, designated as kits, with the patient name and their bed and sent to the inpatient

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units at scheduled times for checking by the nursing team. The reviewer pharmacist, the pharmacy technician, and the nursing team collaborator that received the medications signed the prescriptions. The pharmacists did not review the content of the kits.

The population of the present study was the medications dispensed in the kits. The sample was defined taking into account the quantity of 58,198 kits per year, a sampling error equal to 3%, and a confidence level of 95%. The number of analyzed kits/prescriptions was 1,077, totaling 10,885 prescribed medications. Among this amount, oral solid drugs and injectable drugs dispensed as individualized doses, totaling 5,604 medications, were considered for error analysis. *If needed* medications that were not dispensed in the kits were not considered in the present study, as well as oral liquids, large volume parenteral solutions, ointments, creams, and thermolabiles.

Data collection occurred between April 7, 2016 and September 30, 2017 to identify and classify the error types. A table with random numbers was used to draw the weekdays (Monday to Sunday) on which data collection would happen in each month, including holidays. The shift was also selected using the same method. Collection days and shifts were not divulged to the dispensing team.

The researchers went to the sector only at times at which the medication kits had already been prepared to decrease observation bias in this step. The kits were numbered and those that would make up the sample were drawn, with 12 kits open per day. When errors were detected, they were computed and the pharmacist was informed about them so the correction was performed before the kits were given to the nursing team. In this step, DE involving potentially dangerous medications or high-alert medications were also detected, and the drugs were identified by using a list drafted by the pharmacy sector with adaptations based on the literature[27].

The episodes were classified as content, labeling, and documentation error[26]. Content errors involve: omission (when a medication is prescribed, but not dispensed); incorrect medication (when the dispensed medication is different from the prescribed one, or when the dispensed medication was not prescribed); concentration error (when the medication is dispensed at the wrong concentration); pharmaceutical form error (when the medication is dispensed with the wrong pharmaceutical form); dosage error (when the medication is dispensed at the wrong dosage); and quality deviation (when the medication shows cracks, spots, or particles, is outdated, or has a damaged or inadequate package). Labeling errors occur when the medication has flaws related to the identification of the drug, its batch, concentration, and expiration date. Documentation errors include errors in dose calculation or its absence, errors in prescription date or its absence, expiration of the prescription for over 24 hours, and lack of the prescriber's, dispenser's, or reviewer's signature.

To identify the variables related to DE, the direct observation of the work environment of the professionals (technicians and pharmacists) at the dispensing sector was carried out on the same days and shifts in which the step reserved to identify and classify the error types was performed. The procedure was executed for 88 days for 2 hours a day, by applying a checklist with criteria addressed in the protocol designed by the Ministry of Health and the Brazilian Health Regulatory Agency[3]. Before the beginning of the observation period, the main researcher and a resident pharmacist spent four days at the pharmacy practicing the collection instrument and the observation technique that was adapted from the World Health Organization[29] handbook to minimize the Hawthorne effect[28]. The conducts of keeping discretion and not intervening in the activities were kept until the end of the study, even when the professionals got used to the presence of the researchers.

The variables were classified as proximal, intermediate, and distal. The considered outcome variable was "medication DE". The following variables were described: Block 1: distal variables – clean environment: absence of dirt on the ground, counter, benches, and bins; weekday: business days (from Monday to Friday) and non-business days (Saturdays, Sundays, and holidays); shift: morning, afternoon, and night. Block 2: intermediate variables – organized environment: the researchers observed the counter, medication bins, boxes on the benches, and an excessive number of forms. Block 3: proximal variables – present pharmacist: at least one per shift; flow of people: restricted to the dispensing room, only professionals related to the pharmacy; sources of interruptions/distraction: use or no use of television, music equipment, and cell phones and existence of side talks during dispensing; prescription analysis: by the pharmacist, verified by observing the signature in the prescription of the medications to be dispensed; number of prescribed medications; number of dispensed medications; number of pharmacists present at the place; number of technicians present at the place.

Error rates were compared with the several calculation methods available in the literature[3,25,30,31].

$$\frac{\text{Number of medications dispensed with error}}{\text{Total number of dispensed medications}} \times 100$$

$$\frac{\text{Number of DE}}{\text{Number of dispensed medication items}} \times 100$$

$$\frac{\text{Number of prescriptions provided with DE}}{\text{Total number of provided prescriptions}} \times 100$$

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Data processing and analysis were carried out by using STATA (Data Analysis and Statistical Software) version 14, year 2017. The number of medications with DE and the occurrence of the error types were calculated as absolute frequencies. Fitted hierarchical regression was adopted for association analysis to determine how the outcome variable, medication DE, could be influenced by the explanatory variables.

Regression models that fitted each block of variables (distal, intermediate, and proximal) were developed. In addition to these fittings, the proximal block was fitted for all the variables in the intermediate and distal block that showed p<0.10 in non-fitted analysis, and the variables in the intermediate block were fitted for all the variables in the distal model that showed p<0.10 in non-fitted analysis. The magnitude of the association between exposure and outcome was expressed as prevalence ratios (PR) and their respective confidence intervals (95% CI). In the final regression model, the variables that showed p<0.20 in non-fitted analysis were inserted, from the distal to the proximal block, in ascending order of the magnitude of association with the outcome. Variables with a p-value lower than 0.05 were considered associated in all analyses.

RESULTS

Analysis encompassed 5,604 dispensed medications in 1,077 kits/prescriptions. It was found that 236 medications showed DE. The medication DE rate was 4.2%. Other rates were found, according to the adopted calculation method: 7.3% (407 errors) and 24.9% (268 prescriptions provided with error).

It was considered that the total number of DE was 407, with the most frequent being the content ones (36.9%), followed by the labeling (35.8%) and documentation types (27.3%), as shown in Table 1. Among content errors, the quality deviation category prevailed, with 50 (33.3%) occurrences: damaged package, with 38 (76.0%); inadequate package, with 11 (22.0%); and expired validity, with 1 (2.0%). Regarding omission errors (30.7%), the drug classes that stood out were high-alert anticoagulants, with 7 episodes (15.2%); antihypertensives, with 13 (20.3%); antimicrobials, with 6 (13%); and others, which totaled 20 (43.5%). The lot was absent in 41.8% of the labeling errors and the main documentation error was the lack of the reviewer's signature (77.5%). Among the dispensed medications, 751 (13.4%) were high-alert ones, with 26 (3.5%) showing some error. The flaws were detected mostly in warfarin, with 6 occurrences (23.1%); 10% potassium chloride, with 3 (11.5%); injectable tramadol, with 3 (11.5%); and heparin, with 2 (7.7%).

TABLE 1: Dispensing errors at the pharmacy of a public teaching hospital. São Luís, state of Maranhão, Brazil, 2017

Error types	n	%
Content error		
Omission	46	30.7
Wrong medication	12	8.0
Wrong concentration	1	0.7
Wrong pharmaceutical form	2	1.3
Wrong dosage	39	26.0
Quality deviation	50	33.3
TOTAL	**150**	**100.0**
Labeling error		
Lack of lot	61	41.8
Lack of information on concentration	30	20.5
Lack of information on expiration date	13	8.9
Error related to the medication name	42	28.8
TOTAL	**146**	**100.0**
Documentation error		
Calculation error	2	1.8
Lack of prescription date	1	0.9
Lack of the prescriber's signature	7	6.3
Lack of the dispenser's signature	1	0.9
Lack of the reviewer's signature	86	77.5
Prescription provided with expired date	14	12.6
TOTAL	**111**	**100.0**

Note: 407 errors were observed.

Most of the times the environment was restricted to people who worked in the sector and showed a favorable cleaning condition. However, environmental disorganization was noticed in 39.4% of the observations. There was a prevalence of one pharmacist and four technicians per shift. In 90.3% of the observations, the pharmacist was present

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and analyzed the prescriptions. Analyses on business days and on the morning shift were the most frequent. The main source of interruptions/distraction were side talks. It is important to emphasize that the shift had no pharmacist in nearly 10% of the occurrences and that there was no double-checking in 97% of the times, as shown in Table 2.

TABLE 2: Distribution of the variables related to dispensing errors. São Luís, state of Maranhão, Brazil, 2017

Variables	f	%
Clean environment		
Yes	5444	97.1
No	160	2.9
Weekday		
Business	3388	60.5
Non-business	2216	39.5
Shift		
Morning	2721	48.5
Afternoon	2010	15.6
Night	873	35.9
Work environment		
Organized	3399	60.6
Not organized	2205	39.4
Pharmacist		
Present	5061	90.3
Absent	543	9.7
Restricted flow of people		
Yes	5477	97.7
No	127	2.3
Source of interruptions/distraction (cell phone)		
Absent	5312	94.8
Present	292	5.2
Source of interruptions/distraction (television)		
Absent	5414	96.6
Present	190	3.4
Source of interruptions/distraction (music)		
Absent	5456	97.4
Present	148	2.6
Source of interruptions/distraction (conversations)		
Absent	3868	69.0
Present	1736	31.0
Prescription analysis		
Carried out	5106	91.1
Not carried out	498	8.9
Double-checking		
Carried out	166	3.0
Not carried out	5438	97.0
Number of pharmacists present at the place		
0	543	9.7
1	3437	61.3
2	1624	29.0
Number of technicians present at the place		
1	939	16.8
2	48	0.9
3	1066	19.0
4	1546	27.6
5	1140	20.3
6	695	12.4
7	109	1.9
8	61	1.1

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In the final model fitted analysis, the associations of DE that showed high probability remained: with the night shift (PR:1.37; CI:0.59-2.14) and with the presence of sources of interruptions/distraction (PR:0.52; CI:0.19-0.85). Side talks were sources of interruptions/distraction, with an increase in the chances of errors, according to data shown in Table 3.

TABLE 3: Final hierarchical model for factors associated with medication dispensing errors. São Luís, state of Maranhão, Brazil, 2017.

Variables	Fitted PR	95% CI	p value (*)
Block 1: Distal			
Shift			
Morning	1	Reference	
Afternoon	0.24	-0.09 – 0.58	0.156
Night	1.37	0.59 – 2.14	0.001
Block 2: Intermediate			
Work environment			0.337
Organized	1	Reference	
Not organized	-0.16	-0.49 – 0.17	
Block 3: Proximal			
Pharmacist			0.97
Present	1	Reference	
Absent	-0.01	-0.99 – 0.96	
Source of interruptions/distraction (cell phone)			0.783
Absent	1	Reference	
Present	0.08	-0.53 – 0.71	
Source of interruptions/distraction (television)			0.207
Absent	1	Reference	
Present	-0.56	-1.43 – 0.30	
Source of interruptions/distraction (music)			0.115
Absent	1	Reference	
Present	0.57	-0.14 – 1.29	
Source of interruptions/distraction (conversations)			0.002
Absent	1	Reference	
Present	0.52	0.19 – 0.85	
Prescription analysis			0.165
Carried out	1	Reference	
Not carried out	0.55	-0.22 – 1.32	
Double-checking			0.346
Carried out	1	Reference	
Not carried out	0.41	-0.45 – 1.28	
Restricted flow of people			0.221
Yes	1	Reference	
No	-0.49	-1.29 – 0.29	
Number of pharmacists present at the place	0.001	-0.41 – 0.41	0.995
Number of technicians present at the place	0.07	-0.08 – 0.22	0.366

95% CI – 95% confidence interval; PR – prevalence ratio; (*) Model of hierarchical regression fitted for all the variables with p<0.20 in the non-fitted analysis.

DISCUSSION

The results showed that the different methods to calculate medication DE rates provided the following values: 4.2%, 7.3%, and 24.9%. The errors were mostly of the content type, caused by quality deviation and omission; labeling type, as a consequence of lack of medication lot; and documentation type, because of the absence of the reviewer's signature. In the three analyzed hierarchical levels, the night shift and the presence of sources of interruptions/distraction (side talks) were associated, in the final model, with the increase in medication DE.

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The most common factors found in other studies have been: work overload, low number of employees, confusion involving similar names and sounds, lack of knowledge/experience of the pharmacy team, hurry, and interruptions/distraction. However, these factors have been mentioned in subjective accounts, interviews, and/or incident reporting forms[13-18].

The comparison of DE rates cannot be performed, given that the literature registers at least five ways to obtain the parameter. Error rates were low in comparison with those reported in other Brazilian studies that used the same calculation method, except for the rate based on the Brazilian protocol[3], which provided a value higher than that registered in the literature[31].

It is possible that this mixture of calculation methods for DE rates still occurs because of the failure of the protocol issued by the Ministry of Health and the Brazilian Health Regulatory Agency[3] in considering the number of medications dispensed with errors rather than the total number of DE.

The present study found 407 DE, but only 236 were part of the calculation because only one error is computed when there is more than one DE for the same medication[32]. This happened, for instance, for Tacrolimus 1 mg, which was involved in five errors: was dispensed at the wrong dose, had a damaged package, and showed illegible information on the medication name, lot, and expiration date. Additionally, 109 documentation errors were not considered, because they are related to a medication itself only when a calculation error is involved.

The main content error identified in the present study was related to quality deviation and caused by inadequacy and the presence of damages in packages. The pharmacy was going through a testing phase regarding the process of dose packaging and individualization with sealing machines, and ruptures on the sealing point were frequent, which caused the medications to come loose inside the kits. In other situations, plastic bags were used to pack medications obtained in multi-dose vials. A situation like this may lead to the wrong use of the medication and compromise the substances' stability and integrity[33]. These error types were not considered in the calculation of the dispensing indicator by the pharmacy.

Several authors have indicated medication omission as the most common content error[9,30,34]. This error type was registered 46 times in the present study, and 26 (56.5%) involved high-alert anticoagulant medications, antihypertensives, and antimicrobials. Flaws like these can result in increased hospital stays and severe adverse events[35].

The omission errors found in the present study may be related to the sources of interruptions/distraction. Interruptions are also called distraction and are caused by people themselves or external factors, leading employees to break an activity in progress to begin a task that was not planned[36].

Studies have pointed to an association between DE and interruptions/distraction and showed that nearly half of the interruptions are provoked by healthcare professionals themselves[8,10]. The present study revealed the use of sources that could be avoided, such as cell phones, television, music, and side talks during the dispensing process. The conversations were associated with an increase in DE in the regression final model and are a risk factor for the reduced performance of the professionals who work at the dispensing sector and, consequently, can compromise patient safety.

Many actions have been carried out to prevent interruptions/distraction during the preparation of medications by the nursing team, including the use of a red vest[37], but regarding dispensing it is necessary to propose measures so the whole team is focused during the calculation and separation of medications.

Labeling errors occurred mostly because of problems with printed tags. Data about medication name, lot, concentration, and expiration date were lost according to the time they were kept in storage bins or the printing quality. In some cases, all the data registered in the same tag were lost.

The main documentation error was caused by the absence of the reviewer's signature. In general, the pharmacist was present during daytime shifts and reviewed the prescriptions, but 93.6% of the prescriptions provided during the night shift were not reviewed before dispensing.

The night shift showed a strong association with DE. This result can be explained by the absence of the pharmacist in 62.2% of the nighttime collections and by the work overload of the technician, who was the only collaborator at the pharmacy in this case, which hindered the proper execution of all the necessary activities. Work overload has been the main factor pointed by pharmacists and technicians in other studies[13-15], and sleep deprivation in night jobs may lead to fatigue and, consequently, a decrease in performance, level of attention, and reaction time. These problems increase the employees' vulnerability to errors[5].

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Measures to protect patients from medication errors have been described in the literature. The recommendations include using bar codes and distributing unit doses[3,38-40]. These measures had not been implemented in the examined pharmacy. Other important strategies are suggested, such as: implementing an internal safety protocol for communication in the pharmacy service, with actions that regulate excessive talks, times for breaks, and the use of media; carrying out discussions when errors are detect, aiming to learn with them; using an isolated room to analyze prescriptions; adopting the checking of medication kits by a technician different from the one who prepared them; taking into account the patient identification protocol in the preparation of medication labels; keeping a sufficient number of pharmacists and technicians to guarantee a safe dispensing, including the night shift; reviewing the protocol designed by the Ministry of Health and the Brazilian Health Regulatory Agency to standardize the calculation method of indicator rates and facilitate the comparison of data collected in different studies, the benchmarking between institutions, and the monitoring of all DE types. Additionally, it is important that the pharmacy review all the safety process related to medication use to identify its weaknesses and implement interventions.

CONCLUSION

The DE frequency was lower when the calculation method proposed by the Ministry of Health and the Brazilian Health Regulatory Agency was applied. This document must be improved to express the real number of errors. The factors related to the night shift and to the use of sources of interruptions/distraction may be associated with DE, especially the omission ones. The collected data are useful to improve the quality of medication systems in health units with different levels of complexity.

The present study contributes to the general literature, because it used a hierarchical statistical model to analyze factors associated with DE and pointed out strategies to use medications safely, whereas most of the publications on the subject focus on investigating DE types and providing subjective reports of associated factors. In addition, the present study emphasizes the limitations of the calculation method proposed in the Brazilian protocol and warns about the fact that pharmacy services need to include quality deviation and labeling errors in the DE calculation formula as suggested in the previous sections. The present study confirmed the existence of preventable sources of interruptions/distraction, providing relevant data for the development of future studies on the work process of the professionals who develop their activities at the pharmacy.

One of the limitations of the present study was the impossibility of nullifying the influence of the observer during the execution of the experiment (Hawthorne effect). Another point that must be mentioned is that the checking of the medications dispensed inside the kits was carried out by only one researcher at a time, which means that errors may have occurred and not been detected. The obtained data were collected at the adult unit of a hospital and may not represent the reality of other units, such as the maternal-child one, which was not inspected.

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