ADHERENCE TO THE PROTOCOL OF PATIENT IDENTIFICATION AND SAFE MEDICATION

RESUMO

Objetivo: verificar a adesão da equipe de enfermagem aos protocolos assistenciais relacionados à identificação de pacientes e medicação segura em unidade de terapia intensiva. Método: trata-se de um estudo quantitativo, de campo, transversal, descritivo, desenvolvido com pacientes ≥18 anos, com tempo de internação na UTI > 48 horas. Coletaram-se os dados por meio de checklist à beira do leito. Utilizou-se a teste de Regressão Linear Multivariada para análise de independência e predição entre as variáveis, apresentadas em tabelas. Resultados: compôs-se a amostra por 945 pacientes, com predominio do sexo masculino (56,93%) e idosos de 61 a 80 anos (45,19%). Constatou-se que 89,95% apresentavam pulsera de identificação, 99,47% dos leitos estavam identificados com placa e 78,20% das medicações estavam identificadas corretamente. Conclusão: verificou-se alta adesão da equipe de enfermagem aos protocolos assistenciais relacionados à identificação do paciente e medicação segura. Descritores: Adesão; Equipe de enfermagem; Protocolos clínicos; Eventos adversos; Segurança do paciente; Unidades de terapia intensiva.

ABSTRACT

Objective: to verify the adherence of the nursing team to the care protocols related to the identification of patients and safe medication in the intensive care unit. Method: This is a quantitative, cross-sectional, descriptive study developed with patients ≥18 years of age, with ICU stay ≥ 48 hours. The data was collected by means of a checklist at the bedside. The Multivariate Linear Regression test was used to analyze the independence and prediction among the variables, presented in tables. Results: the sample was composed of 945 patients, with a predominance of males (56.93%) and elderly individuals from 61 to 80 years (45.19%). It was found that 89.95% presented identification wristband, 99.47% of the beds were identified with plaque and 78.20% of the medications were correctly identified. Conclusion: there was a high adherence of the nursing team to the care protocols related to patient identification and safe medication. Descriptors: Adhesion; Nursing team; Clinical protocols; Adverse events; Patient safety; Intensive care units.
INTRODUCTION

It is understood that the incidence of adverse events has significant repercussions in the Unified Health System (UHS) in several aspects, causing an increase in morbidity, mortality, duration of treatment of patients and in care expenses, besides reflecting in other areas of social and economic life of the country. Adverse event (AE) is defined in health services, among the various meanings existing in the world, such as “an injury or unintentional damage caused to the patient by the care intervention, not by the underlying disease [...] avoidable, or error, “and may cause temporary or permanent impairment and even cause death among health care users.” Data from the United States Institute of Medicine show that errors in health care cause between 44 thousand and 98 thousand deaths / year in American hospitals.

It is known that, routinely, protocols are fundamental resources in health care, defined as the detail of a specific situation of care or care that contains a series of operational instructions on how to act in order to direct professionals in care decisions, ensures better communication and avoid human error.

The patient is correctly identified as one of the goals of the National Patient Safety Program in order to reduce incidents and has a dual purpose: in principle, to determine, with certainty, the legitimacy of the recipient of the treatment or procedure and, subsequently, ensure that the procedure to be performed is effectively what the patient actually needs.

It is recommended by the World Health Organization (WHO) that health institutions develop programs highlighting the responsibility of employees for the correct identification of the patient, standardizing the use of identification wristbands containing at least two identifiable components, use of references to room or bed numbers, and to include the effective performance of users and family members in the process of patient identification.

It is estimated that in the United States of America approximately 850 patients per year are transfused with blood products destined for other patients and about 3% die. It is also seen that most of the errors that occur in the administration of medication is related to identification failures. It was observed in a study in a hospital in the North of Brazil, that in the administration of medications, in 61.2% of the doses, the patients were not identified.

It is shown that another considerable circumstance related to the incidence of adverse events corresponds to the medication system in the hospital, which is considered a complex activity that covers several successively interconnected stages and involves several professionals, characteristics that, consequently, can increase the chance of errors.

Medication errors are considered to be common events that can occur at any stage of the system and are capable of assigning clinically significant complications and imposing significant costs on the health system. Estimates indicate that medication errors in hospitals cause more than seven thousand deaths annually in the United States of America generating significant tangible and intangible costs.

Correct identification of the patient and a safe medication system in the hospital are recommended as the primary processes to avoid undesirable outcomes related to errors that may arise from the care provided. It should be noted that in addition, another important aspect is the need to evaluate the causes, as well as the human and structural factors involved in these processes in order to allow the implementation of prevention barriers to avoid recurrence by reducing the risks for patients.

OBJECTIVE

- To verify the adherence of the Nursing team to the assistance protocols and adverse events related to the identification of patients and safe medication in intensive care unit.

METHOD

This is a quantitative, cross-sectional, descriptive study developed in a teaching hospital in the interior of São Paulo, Brazil, in six Intensive Care Units: General UHS (17 beds), Neurological (ten beds) (23 beds), Cardiology (24 beds), fifth floor UHS (20 beds) and Post-Operative Unit (POU) (ten beds).

The data was collected through a checklist filled by bedside nurses, during weekly visits, in the morning, afternoon and evening shifts, alternately, from May to August 2017, using as references, protocols, norms and internal routines of the Nursing Service based on the National Patient Safety Program of the Ministry of Health. The checklist of 22 items related to patient safety was composed and the variables of interest for this work were the presence of an identification bracelet, plaque bedside identification, complete / correct identification of medications based on
the patient identification protocol and medication identification practice.

Included in this study were all adult patients (≥18 years) with an ICU stay longer than 48 hours. All patients in the procedure at the time of data collection we excluded, who were newly admitted to the unit, considering hospitalization less than three hours and patients with contraindication to the care provided.

Descriptive and inferential statistics were analyzed by analyzing the probability questions of a population based on the sample data. The following methods were used in some moments, given the need and, to a better understanding, the following methods: mean, fashion, standard deviation, multiple linear regression, Pearson's correlation, R Square, significance and standard error. The multivariate Linear Regression Test was used for the analysis of independence and prediction among the variables.

Data was collected after approval of the research project in the Research Ethics Committee (REC) under Opinion no. 2,074,847, respecting guidelines and standards recommended by Council Resolution 466/12 National Health / MH, which regulates research involving human subjects.

### RESULTS

It is noteworthy that, of the 945 patients in the sample, 538 (56.93%) were male. The predominant age group was 61 to 80 years (n = 427, 45.19%) followed by 41 to 60 years (n = 273, 28.89%). It was observed that hospitalization time ranged from up to 15 days to > 60 days, with 680 patients (71.96%) remaining in the ICU for up to 15 days and 1.98% (n = 14) presented a time of up to 60 days, according to table 1.

### Table 1. Characterization of the sample. São José do Rio Preto (SP), Brazil, 2017.

<table>
<thead>
<tr>
<th>Information</th>
<th>Records(N)</th>
<th>Proportion(%)</th>
<th>SD</th>
<th>SE</th>
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<tr>
<td><strong>Sex</strong></td>
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</tr>
<tr>
<td>Male</td>
<td>538</td>
<td>56.93</td>
<td>92.63</td>
<td>3.01</td>
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<tr>
<td>Female</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>945</td>
<td>100.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 20 years</td>
<td>19</td>
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<tr>
<td>21 to 40 years</td>
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<tr>
<td>41 to 60 years</td>
<td>273</td>
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<td></td>
</tr>
<tr>
<td>61 to 80 years</td>
<td>427</td>
<td>45.19</td>
<td>163.14</td>
<td>5.31</td>
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<tr>
<td>&gt; 80 years</td>
<td>115</td>
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<td></td>
</tr>
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<tr>
<td><strong>TOTAL</strong></td>
<td>945</td>
<td>100.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Length of stay</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to 15 days</td>
<td>680</td>
<td>71.96</td>
<td></td>
<td></td>
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<tr>
<td>16 to 30 days</td>
<td>185</td>
<td>19.58</td>
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<td>31 to 45 days</td>
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<td>15</td>
<td>1.59</td>
<td>264.68</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>945</td>
<td>100.00</td>
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</tr>
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</table>

SD = standard deviation; SE = standard error

It was found that 850 (89.95%) patients had regular use of the identification bracelet. The bed identification plate was present in 940 beds (99.47%).

Regarding the identification of the medication, 78.20% (n = 739) were correctly identified, according to institutional practice, 9.36% (n = 91) were not identified and 12.17% (n = 115) represented patients who had saline-treated venous accesses, that is, they did not present continuous infusion of medications, making it impossible to evaluate.

During the stay in the intensive care units during the study period, seven (0.74%) reports on the adverse event “medication error” occurred predominantly in the Cardiology ICU. These included: (1) administration of the wrong drug; (2) time error (< or > 60 minutes of prescribed); (2) dose error (> or < than prescribed); (1) administration in the wrong patient and (1) no administration of prescribed medication. Regarding the degree of damage of the medication errors reported: (2) without damages; (4) slight damage and (1) moderate damage. It is important to emphasize that the classification of the degree of damage is done by the professional who makes the notifications and subjective interpretations may occur.

After the analysis of the data, it was found that the inferential crosses between the variables “Identification Brace”, “Identification Plate”, “Medication Identification” and “Medication Error”, with the
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"Sociodemographic Data", only the between "Identification Plate" and "Age" presented statistical evidence of dependence (p = 0.013). The other crosses did not present significant statistical evidence. However, when analyzing the correlation between the variable "Medication Error" and "Sex", "Age" and "Length of Stay", even though there was no significant evidence of dependence, it was observed that the variable with greater power of explanation of the oscillation of the dependent variable was "Time of hospitalization" (p = 0.081) assuming that the longer the patient’s hospitalization time, the more susceptible to medication error.

It should be noted that, when calculating the result of the statistical dependency ratio between the variables "Identification Brace", "Identification Plate" and "Identification of Medication", with the dependent variable "Medication error", using the test statistical analysis Multiple Linear Regression, it was verified that the model has a low level of explanation, taking into account the variables pointed out in the sample. Therefore, it is understood that the independent variables do not explain the dependent variable in any hypothesis, with the values of significance of each variable reaching values below p = 0.05.

DISCUSSION

A predominance of males (56.93%) was found to corroborate the literature. A study carried out in the public hospital of Florianópolis / SC, on the epidemiological characteristics of patients admitted to the intensive care unit, indicated that 61.6% of the patients, out of a total of 695 medical records analyzed, were male. It was concluded that this data may be due to the low interest in health by men. In view of the government’s initiatives to work with preventive actions with the male sex, gravity is already installed, requiring more complex assistance.13

It is reported that, in this study, the age group with the highest prevalence was from 61 to 80 years old, adding up to individuals aged 80 years (57.36%). Other studies have shown that the elderly population is more prevalent in ICU admissions. A study conducted in the city of Anápolis-GO described the profile of hospitalizations in adult intensive care units reporting that 46% of the sample were from 60 to 89 years old, a fact that can be explained, according to the study, by the increase in life expectancy, increasing population aging and a higher incidence of chronic degenerative diseases, since these diseases increase with the advancing age.14

In this study, 71.96% of the patients were hospitalized for up to 15 days. A study performed at a university hospital in Rio de Janeiro (RJ) showed an average length of stay in the ICU from eight to nine days.15 Another study showed a minimum variation from zero (less than 24 hours of hospitalization) to a maximum of 73 days, with an average time of hospitalization of six days. No consensus was found in the literature regarding the number of days of ICU stay, which can be explained, according to the study cited, by the fact that most studies are performed in units with a mixed population, i.e. clinical and surgical, factors that affect the disparity of hospitalization time.15

Increasingly, there is evidence of the importance of patient identification as an additional resource to minimize possible devastating errors that incorrect identification can bring, 16 as well as being an indispensable and inherent step in any therapy or care provided to the patient. patient, which cannot be neglected.

Two ways to identify the patient are indicated, according to the patient identification protocol used at the institution of this study. The first, the standardized identification wristband containing the following information: full name of the patient; date of birth (considered the second identifier); name of mother and care, and should be allocated preferentially in the left forearm to be conferred. If it is not possible to use the standard member, follow the order of the right forearm, left leg, right leg and head of the bed. The second is another identifier used: the standardized bed identification plate, available in the MV PEP system, which contains fields to be filled. For adults, there are two models of plaques: wards and operating room. It should be performed by the Nursing team, at the patient’s admission, to print the plaque after filling in the fields and placing it on the acrylic display. The protocol should be applied to all individuals hospitalized at the institution, requiring the use of at least two identifiers (full name and date of birth).

It was found, through the results, that 89.95% of the patients were identified with a bracelet according to said protocol. A study performed at a hospital institution in the northwest of São Paulo, in three intensive care units, which corroborates the findings of this study, showing that 89% of the patients had an identification bracelet.17 In another study in a university hospital in Rio de Janeiro
January (RJ) resembles the results of this study showing that, in 400 observations made during the analysis of the procedures for identification of the critical patient, 96% of these patients were identified with the bracelet.16

It is recalled that the identification bracelet is a safety instrument indicated throughout the patient’s hospitalization period in the health unit, which is one of the resources capable of reducing incidents.16 It is a low cost practice for institutions and easy insertion in the services, as well as the strategy of implanting identification wristbands as a tool to promote care that values security. 18

It is noted that data related to the characterization of the bracelets were not collected in this study according to the appropriate placement, integrity and readability, however, some conditions were described in other studies also experienced during the data collection of this study. It is thought that it is opportune and important to emphasize them. A study was carried out in an ICU of a university hospital, located in Rio de Janeiro (RJ), that the presence of the identification bracelet was observed below the mechanical restraint of the patient or bandages for heating the upper limbs as a consequence of the frame clinical or from the pharmacological action of medications in use during hospitalization.16 In addition, other nonconformities such as illegibility and the absence of the bracelet are cited.18 In a study, these nonconformities are considered as conditions that make it impossible to see, which may expose the patient to risks when receiving treatment or assistance that would be destined to another patient increasing the risk of errors and iatrogenias.16

It is pointed out that, in relation to the presence of the identification plaque in the bed, the results of this study where 99.47% of the beds presented the plaque according to the institutional protocol. Similar data was found in a hospital in the northwest of São Paulo, with special care, and the care practices for patient safety in an intensive care unit were analyzed, where 95% of the beds were identified with the plaque.17

The study institution has a protocol for the administration of medication, bringing the identification of medication as an additional measure to minimize errors, and all medication must be identified with a label containing the following information: patient; the date of birth (according to the patient’s identifier); the medicament to be infused and their respective amount; dilution; the name of the professional responsible for the preparation; the date and time of installation.

It was demonstrated by this study that 78.20% of the medications were identified according to the practice recommended in the institution; 9.63% were not identified and 12.17% of the patients did not present medication infusion at the time of observation. Differing data were found in a survey in a general ICU of the University Hospital of Mato Grosso do Sul (MS), which analyzed the quality of Nursing care, noting that the correct identification of the installed sera obtained a Positivity Index (PI) = 21, 7%. The PI below 70% is considered in the study to be a poor care, since the identification of the medications installed occurred, most of the time, incompletely or even absent during some observations.19 It should be noted that this study presents characteristics which differ from this study since it was performed in an ICU with eight active beds, with a sample consisting of 23 patients, where eight items and 61 sub-items were analyzed. It is noted the scarcity of studies with data related to this indicator and papers that speak of the importance of correct identification of medications in the prevention of adverse events related to medication.

Seven (0.74%) reports on the adverse event “medication error” in ICUs were identified from May to August / 2017. A study that analyzed the adverse events and incidents occurred in a general ICU of a university hospital in Cascavel (PR), of the 253 reported adverse events / incidents, only 3 (2.7%) were analyzed. were associated with medication, a relatively low number according to the study.20

Similar data was found in another study carried out in three teaching hospitals in Rio de Janeiro (RJ), showing that of the 1,103 patients included in the study, 56 suffered damages as a consequence of adverse events, and three (4.6%) of these were drug-related, an outcome considered underestimated by the study.21

Contrary to the findings of this study, a study was carried out in a hospital in the south of Minas Gerais, where a total of 189 reports of adverse events were analyzed in a one-year period, showing that the medication errors were the most reported events corresponding to 63% (n = 119) of the survey. The divergence between the data with this study can be due to the underreporting since, according to the study, it is possible to perceive that the notifications of adverse events were related to a punitive character in the view of professionals, who fear to respond...
to ethical-legal processes, which amplifies the occurrence of underreporting. It is considered that, in this study, data on underreporting were not collected, however, it is important to highlight that the described condition impairs the reliable analysis of the events and the repercussions on the patient's health, as well as making it impossible to implement measures that avoid new occurrences, in addition to causing institutionalization to prolong hospitalization, financial losses, and interfere with indicators of evaluation of care assistance and patient safety.

It was observed that, when correlating the variables “Identification plate” and “Age”, statistical evidence of dependence was obtained \((p = 0.013)\), however, no studies were found to corroborate this data.

It is revealed that this study did not present significant statistics for the relation “Time of hospitalization” and “Medication errors”. Data describing this association are described in the literature. A study was carried out in nine ICUs of various specialties of a high-complexity public hospital in São Paulo (SP), showing that 70.2% of the elderly patients who had AE had the mean stay of 10.62 days, than the mean 5.06 days of the elderly who did not suffer moderate and severe AE. It was also verified in the study that, on each day of stay, the chance of a patient suffering from AE increased by 10.0%. Another study was carried out in a hospital in the northwest of São Paulo, of special size, general, proving this data showed that there was a higher percentage of medication errors with damages in patients with prolonged hospital stay and hospitalized in closed units.

### CONCLUSION

There was a high adherence of the nursing team to the care protocols related to patient identification and safe medication. A high percentage of compliance was found in the use of the identification bracelet, identification plate of the bed and identified medications, however, it was noticed the need to raise awareness about the importance of the notification of adverse events in order to favor the management of care risks.

### REFERENCES


Adherence to the protocol of patient...