



REVISIONES

Adverse events related to practical assistance: an integrative review

Eventos adversos relacionados às práticas assistenciais: uma revisão integrativa
Eventos adversos relacionados con las prácticas asistenciales: una revisión integradora

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ABSTRACT:

Objective: To identify the scientific publications about adverse events related to practical assistance and discuss the culture of patient safety.

Methods: An integrative literature review was done through research in MEDLINE, LILACS and BDNF available in BVS, using the following descriptors: patient safety, patient assistance, surveillance of sentinel event, safety management. 26 scientific articles published in the period defined for this review, 2005 to 2015 met the inclusion criteria.

Results: The analysis of the articles revealed five major categories: characteristics of adverse events related to practical assistance, adverse events occurrence implications, measures for the prevention of adverse events, notifications of adverse events and the intervenient factors and the knowledge and the culture of safety.

Conclusion: The punitive culture comes as responsible for underreporting and omission of adverse events, being constituted a barrier to effective implementation of investigations. It is essential to foster a safety culture to establish strategies that ensure the care provision free of damage.

Descriptors: Patient Care; Patient Safety; Safety Management; Sentinel Surveillance; Quality of Health Care.

RESUMO:

Objetivo: Identificar as publicações científicas sobre eventos adversos relacionados às práticas assistências e discutir a cultura de segurança do paciente.

Métodos: Foi realizada uma revisão de literatura do tipo integrativa, com busca nas bases de dados MEDLINE, LILACS e BDNF disponíveis na BVS, utilizando-se os descritores segurança do paciente, assistência ao paciente, vigilância de evento sentinela, gestão da segurança. Atenderam aos critérios de inclusão 26 artigos científicos publicados no período delimitado para esta revisão, 2005 a 2015.

Resultados: A análise dos artigos revelou cinco categorias importantes: características dos eventos adversos relacionados às práticas assistências, implicações da ocorrência de eventos adversos,

medidas de prevenção de eventos adversos, notificações de eventos adversos e os fatores intervenientes e o conhecimento e a cultura de segurança.

Conclusão: A cultura punitiva aparece como responsável pela subnotificação e omissão dos eventos adversos, constituindo-se uma barreira para realização de investigações eficazes. É imperativo estimular a cultura de segurança para que se estabeleçam estratégias que garantam a prestação de cuidados livres de danos.

Descritores: Assistência ao paciente; Segurança do paciente; Gestão da segurança; Vigilância de evento sentinela; Qualidade da assistência à saúde.

RESUMEN:

Objetivo: Identificar las publicaciones científicas sobre eventos adversos relacionados con las prácticas asistenciales y discutir la cultura de seguridad del paciente.

Métodos: Se realizó una revisión bibliográfica del tipo integrador, con búsqueda en MEDLINE, LILACS y BDNF disponibles en la BVS, utilizando los siguientes descriptores; seguridad del paciente, asistencia al paciente, vigilancia de eventos centinela, gestión de la seguridad. Cumplieron los criterios de inclusión 26 artículos científicos publicados en el período delimitado para esta revisión de 2005 a 2015.

Resultados: El análisis de los artículos reveló cinco categorías principales: características de los eventos adversos relacionados con las prácticas asistenciales, implicaciones de la ocurrencia de eventos adversos, medidas para la prevención de eventos adversos, notificaciones de los eventos adversos y los factores intervenientes y el conocimiento y la cultura de la seguridad.

Conclusión: La cultura punitiva aparece como responsable de la subnotificación y omisión de los eventos adversos, que constituyen un obstáculo para la aplicación efectiva de las investigaciones. Es esencial estimular una cultura de seguridad para establecer estrategias que aseguren la prestación de cuidados libres de daños.

Descriptores: Atención al Paciente; Seguridad del Paciente; Gestión de la Seguridad; Vigilancia de evento centinela; Calidad de la Atención de Salud.

INTRODUCTION

The theme related to patient safety reached global repercussion from the publishing of the report of the *Institute of Medicine (IOM), To Err is Human: Building a Safer Health Care System*, at the end of the 90s, which led the Global health organization to create a work force to evaluate patient safety in health care. The high rates of adverse events shown through epidemiological studies, frequently made by human error, led to a rethinking of care models that were used up until then⁽¹⁾. The notoriousness of the theme gave origin to campaigns, programs and projects to orient actions to better practice, diminish damage cause by non safe practices and stimulate the creation of notifying mechanisms of error and damage⁽²⁾. In this sense the program of *World Alliance for Patient Safety* was created in 2004. The Project includes Canada and the United States, and in Latin American countries which are in Mercosul have been articulating to sign a commitment term that has as a fundamental approach the prevention of damage in patients and the central element is the action named "Global challenge", that from time to time releases a priority theme to be dealt with and a progress report^(1,3).

The discussion of the theme in Brazil started in 2002 with the creation of the Brazilian Network of Sentinel Hospitals by the National Health Surveillance Agency (Agência Nacional de Vigilância Sanitária - ANVISA), that has voluntary participation and has as aim to notify adverse events and technical complaints regarding technovigilance, pharmacovigilance and hemovigilance⁽⁴⁾. The National Patient Safety Program (Programa Nacional de Segurança do Paciente - PNSP), that was released in 2013 based on the network experience, was instituted through the ministerial ordinance number 529/13 in the Health Ministry and in the Assembly Board Resolution

(Resolução da Diretoria Colegiada - RDC) 36/2013, that institutes actions for patient safety in health care. Both programs led to the creation of the Center of Patient Safety (NSP- Núcleo de Segurança do Paciente) in health care through Patient Safety Plan in Health Care (Plano de Segurança do Paciente - PSP)⁽⁴⁻⁵⁾.

Patient Safety is defined as being a reduction, to a minimum, of the unnecessary damage risk related to health care. The minimum that is accepted refers to the current state of knowledge, available findings and to the context in which the care is offered. Adverse event is considered the incident which results in damage to health. On the other hand, damage is the impairment of structure of body function and/or any effect caused by it, including diseases, injury, suffering, death, inability or dysfunction, that can be physical, social or psychological⁽⁵⁻⁷⁾.

The lack of understanding of the error can entail to the Professional feelings of shame, guilt and fear, due to the high punishment culture that is still existing in some institutions that contributes to the concealing of these events⁽⁸⁻¹¹⁾. The health institutions' management understanding that the adverse events are many times directly related to flaws in the system is necessary and they are not only related to negligence or Professional incompetence. Therefore, it is imperative to identify the existing fragilities in the process and to adopt preventive measures more than looking for guilty ones⁽⁹⁻¹²⁾. Patient safety is a current theme that is in global discussion that has been frequently dealt in the media. In this sense, this study had as a goal to identify the scientific publications about adverse events related to practical assistance and to discuss the patient safety culture.

METHOD

This is an integrative literature review, that is a method that synthesizes prior research results in a systematical and ordered manner, facilitating the building of a broad analysis and thereby, contributing for the further development of the knowledge of the theme at issue⁽¹³⁾.

For the search in literature, descriptors in Health Science (DeCS) were limited to: patient safety, patient care, sentinel event vigilance, safety management. The combinations of descriptors that were applied were: patient safety and patient care; sentinel event vigilance and patient care; safety management and patient care. It is valid to clarify that the term "adverse event" is not considered as a descriptor by the DeCS, hence, therefore it refers to the central of the theme in this work, it could not be used as a descriptor in the search phase. The research and selection of articles was conducted in the databases: *Medical Literature Analysis and Retrieval System on Line* (MEDLINE), Latin-American and Caribbean Literature in Health Sciences (LILACS - Latino-americana e do Caribe em Ciências da Saúde) and in the Nursing DataBases (BDENF - Banco de Dados em Enfermagem) that were available in the Virtual Health Library (BVS - Biblioteca Virtual em Saúde).

Scientific articles of diverse methodological approaches that were published in the last 10 years and that were fully available and with easy access to the researchers and that were relevant to the studied theme of the research were included in the sorting of the literature sample and data collection. The research included published articles in Portuguese, English and Spanish. The selection of the articles involved the initial evaluation through titles and abstracts, when met requirements above reading and

analysis were done in full. Articles that only had available abstracts, publications that did not relate to the study theme and those that presented duplicity were excluded.

A total of 4706 articles were found, and from these 26 were selected. It is worth to clarify that the significant number of excluded materials (4680) is due to the fact that many did not fit the established inclusion criteria, an expressive number was in books, dissertation, thesis and monographs formats and were in other databases that were not selected. Still, many articles were not available in open access and repeated themselves amongst databases. Strictness on the studied subject was aimed when including articles in this research.

All included publications were read in full and analyzed for the filling of a spreadsheet which collects and synthesizes information about the identification of the article and authors; year of publication; study objectives; methodological characteristics; results and conclusions. The presentation of the results and data analysis found was done in a descriptive way.

RESULTS

The selected articles in this study ⁽¹⁴⁻³⁹⁾ are described in Table 1, that presents the articles according to the title, journal and year of publication, author, methodological outlines, sample, level of evidence in publications, objectives and main results. From the 26 articles, 19 (73,1%) were found in LILACS, 4 (15,4%) in MEDLINE and 3 (11,5%) in BDNF.

As much as the year of publication, the majority of the articles, 27%, were from 2013, 19% were from 2014, and the years of 2009, 2010 and 2011 were 11,6% each. The majority of the publications were developed by nurses, 22 (85%). In relation to the methodology outline of the articles, a prevalence of quantitative studies were found, corresponding to a total of 17 researches (65,3%). It was verified that as for the level of evidence, three (11,5%) were of the fourth ^(15,20,30) and fifth ^(14,29,36) levels, 18 (69%) were in level six ^(16-19,21-23,25-28,31-35,37-38) and two (8%) belonged to level seven ^(24,39).

The analysis of the articles allowed the identification of the main aspects of relevance of the adverse events related to the practical assistance in four categories: Characteristics and implications of adverse events related to practical assistances; Preventive measures of adverse events; Notification of adverse events and the intervenient factors; The Safety knowledge and culture.

Table 1 – Description of the published articles from 2005 to 2015 of adverse events related to practical assistance.

Study: Journal/authors/year	Outlining of the study and level of evidence	Description of the interventions made in the study	Outcomes
Rev Bras Enferm. Duarte SCM, Stipp MAC, Silva MM, Oliveira FT 2015	Integrative literature review N= 21 publications Level V	Description of the scientific publications on adverse events in nursing assistance types and causes.	The errors most reported were medication errors, not dressing bandages and falls. Punitive culture was pointed out as the main cause of under notification.

Rev Bras Enferm. Novaretti MCZ, Santos EV, Quitério LM, Daud-Gallotti RM 2014	Quantitative, prospective and cohort study N = 399 patients Level IV	Detection of influence of nursing work overload in incidents and events.	The majority of the incidents without injury and adverse events in patients were related to the nursing area. The complications were attributed to work overload and resulted in a longer hospital stay.
BMC Health Services Research Burström L, Letterstål A, Engström ML, Berglund A, Enlund M 2014	Transversal study. N of the city hospital = 108 nurses /auxiliaries and 129 doctors N of the University hospital = 114 nurses /auxiliaries and 149 doctors Level VI	Description of Patient Safety culture in hospitals before and after a quality improvement project	There were changes in patient safety culture, mainly in relation to the team and communication. The majority of the improvements were seen by doctors of the university hospital.
Ciencia Y Enfermeria Rocha JP, Silva AEBC, Bezerra ALQ, Sousa MRG, Moreira IA 2014	Quantitative, descriptive, retrospective and documental study. N = 556 adverse events Level VI	Description of adverse events happened during assistance in pediatric clinic in a teaching hospital.	The events related to the vascular access, followed by tubes/catheters/probes and events of medication administration were the most prevalent
Rev Latino-Am. Enferm Paiva MCMS, Popim RC, Melleiro MM, Tronchim DMR, Lima SAM, Juliani CMCM 2014	Qualitative, phenomenological study N = 31 nursing professionals Level VI	Understanding of nursing professionals' motivation of adverse events notification.	The notification of events is a helping instrument in assistance management. There is an effort to demystify the punitive culture that inhibits notifications.
Global Journal of Health Science Jahromi ZB, Parandavar N, Rahmanian S 2014	Quantitative, Descriptive study N = 300 employees Level VI	Determination of factors associated to not reporting medical errors of the doctor of the work team	The lack of clear definition of errors, types of errors, importance and gravity of errors are among the most important factors for not reporting adverse events.
Rev Assoc Med Bras Mendes W, Pavão ALB, Martins M, Moura MLO, Travassos C 2013	Cohort, retrospective study N = 1.103 patients	Analysis of the avoidable adverse events characteristics in hospitalized	Infections associated to the health care, surgical and/or anesthetic complications, damage from delay or failure in the diagnosis and /or

	Level IV	patients	treatment, pressure ulcers and complication in vein puncture are the main types of avoidable events.
Acta Paul Enferm Paranaguá TTB, Bezerra ALQ, Camargo e Silva AEB, Azevedo Filho FM 2013	Quantitative, transversal study N = 750 hospital admissions Level VI	Prevalence of incidents without harm and adverse events in a surgery clinic	Points to the need of adaptation of work processes. 5672 incident registers, 218 characterized as adverse events causing damage to the patient.
Rev Gaúcha Enferm Pancieri AP, Santos BP, Avila MAG, Braga EM 2013	Qualitative, field, descriptive, analytic study N = 30 surgeries level VI	Verification of team opinion about the influence of the checklist in the safety of the surgical process and interpersonal communication.	The subjects did not perceive changes in the interpersonal communication with the use of the checklist, although, indicated that the use allowed more safety in the procedure. Adaptations were suggested.
Rev Rene Leitão IMTA, Oliveira RM, Leite SS, Sobral MC, Figueiredo SV, Cadete MC 2013	Qualitative, descriptive study N = 37 nurses Level VI	Analysis of the communication process of adverse events in the hospital context	Prevalence of punitive culture in situations in which the same are created. The nurses were not unanimous in the identification of the documents indicated for the registering of the events.
Rev Latino-Am Enfermagem Pires MPO, Pedreira MLG, Peterlini MAS 2013	Methodological study N= 5specialists level VII	Building and validation of pre-surgery pediatric intervention checklist	The use of the instrument is capable to collaborate for the stages of preparation and promotion of a safe surgery
Rev Min Enferm Lima RPM, Melleiro MM 2013	Quantitative, descriptive, prospective study N = 98 health professionals Level VI	Analysis of the perception of the multidisciplinary team on the intervenient factors in the happening of adverse events	The most reported events were the pathological effects expected or not in the medicine leaflet and fall. It is suggested that the reformulation of the assistance and management process is done focusing in the risk.
Acta Paul Enferm Bohomol E, Tartali JA 2013	Quantitative, descriptive study N = 31 nursing professionals Level VI	Analysis of knowledge of the nursing team on the adverse events in surgery patients, its causes and responsible person	Patient safety is not shared by the multiprofessional team. The nursing presents fragmented perspective on the theme.

Rev Saúde Pública Dias MAE, Martins M, Navarro N 2012	Quantitative, retrospective study N = 6.179.869 adult hospital admissions Level VI	Description of the frequency of tracking of potential adverse results in hospitalization in the Unique health System.	The most frequent adverse result tracking was hospital- acquired pneumonia. Cardiac arrest was presented as the greater risk of decease. The higher expenses in hospitalization were related to the hospital sepsis.
Rev Enferm UFSM Fassini P, Hahn GV 2012	Qualitative, descriptive study N = 14 nursing professionals Level VI	Understanding of the nursing team on safety risks of the hospitalized patient.	The excessive work load and the sizing of insufficient personnel were mentioned as main risk generators to patient safety.
Rev Enferm Ramírez OJG, Gámez AS, Gutiérrez AA, Salamanca JG, Vega AG, Galeano EM 2011	Literature review study N = 12 articles level V	Perception of the knowledge and usage of concepts related to patient safety by the health workers	Professionals understand the importance of safety culture in health care. Points out the work overload and the punitive culture as risk factors for the happening of errors, deficiencies being attributed to management and hospital board
Hacia la Promoción de la Salud Ospina AMO, Velásquez MAV, Rivas DC 2011	Quantitative, transversal, cohort, descriptive, retrospective study N= 49 events level IV	Characterizing of the adverse events presented in a Superior Education School of high level in Caldas from 2007 to 2009	The most frequent events were in the gynecology and obstetrics services followed by urgency care. Highlights as a deficiency the possibility of under notification of events.
Rev Bras Epidemiol. Pavão ALB, Andrade D, Mendes W, Martins M, Travassos C 2011	Quantitative, retrospective study N= 1.103 patient records Level VI	Quality evaluation of patient records and adverse events incidence in teaching hospitals	The patient records qualities were considered bad. Patients with adverse events presented a better quality of patient record than those without it.
Rev Bras Epidemiol. Roque KE, Melo ECP 2010	Quantitative, retrospective study N=112 patients level VI	Adaptation of tracking instrument of adverse events in medication and analysis of incidents in a hospital	The medication adverse events tracking criteria allow monitoring of events through time, allowing evaluation if strategies resulted in improvement in the quality of assistance.
Cuidarte Enferm Françolin L, Gabriel CS, Melo MRAC, Correa JS 2010	Quantitative, descriptive, retrospective, transversal	Analysis of adverse events happened in everyday of	Notifications are important tools in error detection and assistance fragilities. Events related to medication errors

	study N= 661 adverse events Level VI	nursing assistance and spontaneously notified.	mainly in delays in administering prevailed.
Rev Latino-Am Enferm Gimenes FRE, Mota MLS, Teixeira TCA, Silva AEBC, Opitz SP, Cassiani SHB 2010	Quantitative, descriptive, multi-centered study N= 215 dosage errors Level VI	Analysis of the writing of the medical prescription on the dosage errors and identification of the pharmacological classes involved in these errors.	Reported that many patients do not receive appropriate dosage for the treatment, compromising the quality of the care apart from making hospitalization time longer
Rev Enferm UERJ Bezerra ALQ, Silva AEBC, Branquinho NCSS, Paranaguá TTB. 2009	Retrospective, quantitative study N= 100 notifications level VI	Analysis of the notifications happened in a hospital	Nursing team was the most compromised professionals with notifications. The notifications were related to medications, related to blood and technical complaints on material and medications.
Online Brazilian Journal of Nursing Balbino CM, Caraméz LFC, Barbosa MS, Cavalcanti PCS, Silvino ZR, Teixeira ER, Simões SMF, Cruz I CF. 2009	Literature Review study N= 25 articles Level V	Identification of the main medication errors registered in literature and measures to avoid them .	The under notification by fear of punishment and retaliation, unsafe working environment and lack in communication were the related errors. The continuing education was suggested as a preventive measure.
Rev Bras Ter Intensiva Beccaria LM, Pereira RAM, Contrin LM, Lobo SMA, Trajano DHL 2009	Quantitative, descriptive, observational study N= 550 adverse events Level VI	Identification of the adverse events in the nursing assistance in an intensive care unit	Adverse events are indicators that show the quality of the given assistance and must be used to subsidize actions of permanent education.
Rev Latino Am Enferm Nascimento CCP, Toffoletto MC, Gonçalves LA, Freitas WG, Padilha KG 2008	Quantitative, retrospective study N= 229 events Level VI	Description of the characteristics of adverse events of intensive care units, semi- intensive care units and hospitalization units with immediate intervention identification.	Events related to gastro-nasal probe followed by fall and medication administration were prevalent. The immediate interventions were probe reinsertion and communication of the happening to the doctor in case of medication errors.

Rev Bras Enferm Bohomol E, Ramos LH 2007	Descriptive, exploratory Survey N= 89 professionals Level VII	Knowledge of the nursing team on medication error and opinion regarding to notification of this type of event	Absence of uniformity in understanding of what is medication error and when it must be notified to the doctor or when occurrence report must be filled out was revealed in the research.
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DISCUSSION

Adverse Events' characteristics and implications related to practical assistance

this review, events related to practical assistance could be identified in various types and that studies in different regions of the country have the frequency of the occurrence and characterization of events as study aim.

A research which analyzed nursing register books, of a pediatric unit, found that the events associated to the vascular access were the most prevalent with a number of 227 (40,8%), followed by events with probes, tubes and catheters 151 (27,2%), and events related with medication were of 86 (15,5%). The unscheduled removal was the most frequent event related to tubes, probes and catheters⁽¹⁷⁾. In a similar way, a study pointed out that 57,6% of adverse events related to tubes, gastric and/or enteric, followed by falling related events 16,5%, and to medication 14,8%⁽³⁸⁾.

The investigation done in general hospital in the countryside of São Paulo reveal a prevalence of events related to medication errors (59%), pressure ulcer being the second event with the most occurrence notifications (15%). The rest of notifications were lower than 6%: skin injury, accidental extubation, phlebitis, loss of catheters, probes and tubes. Regarding the medication error, errors related to delays were prevalent 48,8%, and dispensing errors 16,5%, highlighting the non administration of medication according to medical prescription 8,7%⁽³³⁾.

Supporting these findings, the research found that the majority of adverse events related to the administering of medication pointed out that in this type of event the lack of correct register as checking medical prescription and the noting down of hydric balance prevailed⁽³⁷⁾.

A multi-centered research done in Brazilian university hospitals belonging to the Sentinel Network of ANVISA, revealed that many patients do not receive appropriate dosage for their treatment, what compromises the quality of the given care, apart from prolonging the hospital stay time. Yet, inadequate dosage can cause unwanted effects and, even, the death of the person. In relation to the pharmacological classes involved in medication errors, the majority belonged to bronchodilators, followed by analgesics, antihypertensives and antimicrobials⁽³⁴⁾.

When investigating the knowledge of the nursing team on medication errors, it was found that their members know and recognizes medication errors. Yet, when there is an omission in the administration of medications, the majority (79,0%) do not characterize the occurrence as an error. The omission is a medication error defined as a non administration of a prescribed dosage to the patient⁽²⁵⁾. This type of error is a

multi-professional issue and the circumstances that involve it are multifactorial, not being limited to just one professional category⁽³⁹⁾.

Regarding to the location, in the review study, the events happened mainly in the infirmary (37 patients, 56,9%) and in the surgery center (20 patients, 30,8%)⁽³⁰⁾. Another study pointed out that the intensive unit care hold the higher frequency of adverse events in medications (43,7%), followed by infirmary (25%) and surgery centers (25%)⁽³²⁾. A research that followed 399 hospitalized patients in intensive unit care of two hospitals in São Paulo identified a total of 15,054 adverse events and incidents with no injuries, 98,75% of analyzed hospital admissions. The incidents with no injuries (12.737, 84,6%) affected 391 admissions and the AEs (2.317, 15,4%) affected 296 admissions. Therefore, 74,2% of admissions suffered at least one AE during stay in evaluated the intensive care units⁽¹⁵⁾, a similar finding on another research on the topic⁽²¹⁾.

Some factors can contribute for the occurrence of adverse events. A research done in Rio de Janeiro revealed that the most frequent factors are the non commitment to the norm, in other words, "it was not verified or did not follow the protocol or clinic guideline", 55,9% of the cases, those with causes on technical errors 14,7%, and professional skills with 11,8% of the analyzed cases⁽²⁰⁾. A study found that a frequent cause for occurrence of adverse events in surgery was the routine of the non scheduling of elected procedures, followed by the statement that the member of the nursing team was overloaded with work, the happening of occurrences in the unit was also indicated as the cause and lack of communication was reported, whether it was during changes in the shift or among the members of the multidisciplinary team⁽²⁶⁾.

Medication errors can be caused in the difficulty of the usage of the computerized system⁽³³⁾.

The presence of abbreviations of the data can difficult the understanding of the information by the nursing team that is directly responsible for the preparation and the dose administration. Apart from this, the absence of dosage in the drug prescription can lead to a less or over dose administration in relation to the desirable dose for the treatment, resulting in the non reaching of pharmacotherapeutic goals⁽³⁶⁾. However, literature points out that many studies associate medication errors to personnel sizing and to the working hours of the members of the nursing team^(15,26,28-29). The overload of work of nursing professionals must be understood as a consequence of various factors and, for it to be solved, the manager must use strategies in several levels^(15,29). Still, the managers must consider, as shown in literature^(15,20-21,27) that with the extended stay in day numbers of patient hospitalization involved in AEs, the increase of reimbursement, the high rate of mortality, pressure ulcer, sepsis and pneumonia are consequences of AEs.

Preventive measures of adverse events

Several strategies have been adopted to prevent the occurrence of incidents and adverse events, as the strengthening of patient safety politics, the adoption of quality programs, the implementation of checklists in safe surgery, the implementation of protocols, team training, evaluation of the early risk of falling and the evaluation of potential risks for pressure ulcer development^(21,25,33). The identification of assistance risks is done mainly by the nurse in the moment of the patient's admission. This action shows the management of the care of this professional, as well as the concern with

the ethic and legal aspects that the institution will have to answer in case of damage occurrence to the patient⁽²⁸⁾.

The administering of medication process cannot be dissociated of an interdisciplinary team work⁽³⁶⁾. The key to medication error reduction is to simplify the processes by reducing the number of steps making a standard system, from the stage of electronic medical prescription; with no abbreviations; with standard time; distribution of drugs in the pharmacy always under supervision by the pharmacist, preferably in unique dose, up to the protocols of medication administration⁽³⁷⁾. This way, the use of result indicators as adverse events are fundamental quality tools by pointing to aspects of care that can be improved making patient assistance free from risks and failures and, therefore, safer^(23,38).

Adverse events notifications and intervenient factors

The adverse event notification is a helping instrument for the management of health care, thus, it is important in the identification of problems and in the search of alternatives to solve incidents related to health assistance^(18,23,28-29,33,35). The notification system of AE allows the professionals of assistance to share responsibilities with the managers and stimulate corrective actions, with the non repetition of errors and prevention of future AEs in sight. It also revealed itself as useful in denouncing inadequacy in human resources, as well as other institutional weaknesses. The expectation of manager support and professional safety are conditions that encourage professionals to notify the experienced difficulties and distresses in practical assistance⁽¹⁸⁾. According to the Global Health Organization, this concept, in fact, must be reformulated, in the sense that the notification of unwanted facts starts from professionals that are in the front line, doctors, nurses, technicians or nursing auxiliaries, rather than exclusively from higher hierarchy agents⁽¹¹⁾.

Analyzed studies pointed to the nurse as being the professional that makes more adverse events notifications and also responsible for this action^(18,35). Perhaps, pressured by the daily problems, they use the notification system, to inform their superiors, about the tension in the relationships during assistance, being a result of conflicts, and to search help in the management of the situations⁽¹⁸⁾. The technicians and nursing auxiliaries understand that they can notify, however, show doubt on the authorization to do it and they do not feel enlightened on how to proceed with the registering, making the preference to report the fact to the nurse so that he or she can register it. This way, it is necessary to demystify the centered notification in the nurse professional, promoting orientation and clarifying opportunities to stimulate full participation of all professionals⁽¹⁸⁾.

To contribute on the identification of risk situations and their management, the occurrence register of AE, as an institutional document, must be preferably anonymous, confidential and not used as an instrument of professional accusation^(18,35). The punitive culture damages the event notification and its existence can be proven by the reports of actions of reprehension and punishment of team members, especially in the nursing team. In this context, communicational barriers imply in more adverse occurrences, in the sense that as the feedback of information on the generated consequences by the adverse events and its most effective alternative proposals for its use do not happen, ends up hindering its use^(19,23,29,37).

In this context, notifying is as important as the quality of the registers. A study detected that close to 80% of the registers were classified as bad and regular and only 20% were classified as having good quality⁽³⁰⁾. However, only with monitoring and constant health team stimulation for the notifications is that the management risk sectors may analyze the results and create preventive measures that can be effective, diminishing the possibilities of new occurrences^(35,39).

The knowledge and safety culture

The development of a safety culture, the practice of registering, the discussion of the circumstances in which the incidents happened, as well as the professional and institutional conduct facing the incidents are a path to be followed for the transforming of reality in health institutions^(21,29,38). The professional health team approximation to the matter and to the taxonomy of patient safety is important for the use of a universal language and so that everyone can understand each other in the moment of incident, errors, adverse events communication in the care^(21,23).

The fragilities in the institutional Patient Safety restricts the continuing quality improvement in healthcare⁽³⁰⁾. To ensure the wanted safety requires actions of different nature that goes from professional education up to changes in health care. The creation of a safety committee and the establishment of training programs were mentioned as ways to qualify and make the patient service standard⁽²⁸⁾.

A research conducted in Rio Grande do Sul with professionals of the nursing team identified that the nurses presented conceptual answers on the risks that the patients are exposed to and the nursing technicians brought examples of experiences in professional practice, as the risk of falling, infection, medication errors and pressure ulcer development. The interviewees admitted that there were many risks to patient safety even mentioning the measures to control the risks. However the existence of risks managing protocol was not in consensus among the interviewees. The professionals that claimed the existence of risk management mentioned the classifying routine and risk notifications. This action consists in an evaluation made by the nurse in the moment of patient admission, identifying standard situations as risk of falling, risk of escaping, allergies and pressure ulcer⁽²⁸⁾. Another investigation highlighted a fragmented view on patient safety in this environment, being seen as a responsibility of a professional category (or medical team or nursing team). If, on one hand, the statements pointed to an empowerment of the nursing team, the scenes, on the other hand, revealed that the safety responsibility is not shared equally by all teams⁽²⁶⁾.

It is believed that the clarification of these concepts must be an action done by the risk managers or by the service leaders in the area of Quality Management and Patient Safety⁽²³⁾. The merging of questions of quality care and patient safety in the governmental and academic agenda is fundamental, as well as the training and updating of professional education on the importance of a truthful and complete register in the health information systems⁽²⁷⁾.

CONCLUSION

The study identified that the strengthening of safety policy, the early evaluation of risks and the notifications were mentioned as the main measures of adverse event prevention. It was evidenced that the articles that made part of the review were mostly developed by a nurse, inferring that this professional is involved in care management

as well as patient safety. The punitive culture is responsible for the under notification and omission of events by the health professionals, serving as a barrier for the investigations that could generate efficient preventive measures. It is considered vital the stimulation of safety culture among professionals that make part of the multidisciplinary team, which allows the prevention strategy establishment that ensure patient safety in health institutions.

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