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Barriers to patient safety incident reporting by Brazilian health professionals: an integrative review

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Abstract *An integrative review was performed to identify and analyze national studies on barriers to patient safety incident reporting by health professionals within Brazilian health services. A search in the Virtual Health Library (BVS) Portal, PubMed and Web of Science was performed in January 2017 for papers published in the last ten years. One thousand and seven publications were identified and, following application of inclusion and exclusion criteria, eight papers were analyzed, five of which were qualitative and three quantitative. All research was conducted in hospitals, exclusively with nursing professionals, and 75% was conducted in Southeast Brazil. Most studies showed an under-reporting of incidents, and the main reasons were fear about reporting, reporting focused on more severe incidents, lack of knowledge about the subject or how to report and, registered nurse-centered reporting. While study of this theme is still incipient in Brazil, this review found important weaknesses in the process and barriers to incident reporting by professionals, revealing a need for encouraging their participation, eliminating or reducing such barriers with a view to strengthening patient safety.*

Key words *Patient safety, Adverse event, Reporting, Health information system, Risk management*

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Introduction

Since the publication of the *To err is human* report of the US Institute of Medicine[1] in 1999, the issue of patient safety has gained prominence worldwide, as it revealed the death of approximately 100,000 patients per year due to adverse events (AE) in US hospitals, with a higher mortality than that attributed to HIV, breast cancer and trampling. After this publication, other studies were added, pointing out that 1 in 8 to 10 hospitalized patients suffered some unnecessary harm[2,3]. In Brazil, the reality is similar, since a 7.6% incidence of AE was found in hospitalized patients[4].

Data on the occurrence of healthcare-related AEs do not suggest that the professionals intended to cause harm to patients, but that they work in a system that does not prioritize their safety[5,6]. Currently, it is known that AEs' main contributing factors are failures and weaknesses in the health care system and processes[7,8], which must be improved.

In this context, the occurrence of AEs or patient safety incidents should lead to learning and implementation of measures aimed at avoiding similar events and consequently increasing the safety of patients[1,7,9-12], as well as that of health professionals. According to the International Classification for Patient Safety, the incident is conceptualized as an event or circumstance that could result, or resulted in unnecessary harm to the patient, while AE is an incident that results in harm to a patient[13].

One of the strategies considered by various countries and health organizations to improve patient safety is the reporting of AEs by health professionals or, more broadly, patient safety incidents using incident reporting systems (IRS)[14]. These systems can be computerized or not[5,15], and local system consists of recording or reporting the occurrence of these events to the department responsible in the health service, generally to risk management or to the quality department[10]. In Brazil, as of 2013, this notification by professionals has occurred to patient safety core[16]. Such reporting can contribute to learning from weaknesses and to systemic changes in the prevention of similar incidents[1,5,7,11]. In this setting, health professionals are the best sources of knowledge for understanding the risks related to health care and true errors[5].

In Brazil, incident reporting is indicated by Brazilian health regulation as an important patient safety tool[16] and promoted by the National Patient Safety Program, which emphasizes that professionals, in a context of patient safety culture, are encouraged to identify and report security-related issues[17].

However, the underreporting of incidents by professionals is an important limitation to IRSs[5,10,18,19]. Besides being high, underreporting is pointed out because of several barriers perceived by health professionals. International studies point out as main barriers: time required to report, fear of the consequences of their reporting[6,10,12]; lack of feedback, uncertainty about what to report[6,12,18] and because reports often do not lead to positive changes[6,7,18,20]. Although underreporting of incidents is well described in the literature, knowing the factors or reasons that cause Brazilian professionals not to do so is poorly explored and is important for the adoption of specific strategies that improve the reporting process. Thus, the following objective was defined: to identify and analyze national studies on barriers to patient safety incident reporting by professionals in the context of Brazilian health services.

Methods

An integrative review of the literature was carried out from national studies that addressed the theme 'barriers to patient safety incident reporting by health professionals' in Brazilian health services.

This research method is focused on a broad literature review[21] and allows the inclusion of primary studies of several methodologies that are both quantitative and qualitative[22], and is structured in six steps for its accomplishment: 1. Identifying the theme and defining the guiding question; 2. Establishing inclusion and exclusion criteria; 3. Defining the information to be extracted from the studies and categorizing the studies; 4. Evaluating included studies; 5. Interpreting the results; 6. Showing the review and the synthesis of the content obtained[21]. These steps were adopted in this study.

The question that guided this review was: what are the reasons pointed out by Brazilian health professionals for non-reporting patient safety incidents?

The search was performed in October 2016 and was reviewed in January 2017, in the databases of the Virtual Health Library Portal (BVS), PubMed and Web of Science, using the search strategy shown in Table 1. Initially, all identi-

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fied studies were evaluated through the analysis of titles and abstracts. In studies where title and abstract reading was not sufficient for the application of the inclusion and exclusion criteria, the entire publication was read.

Inclusion criteria were publications that addressed barriers to patient safety incidents reporting by health professionals in Brazilian health services from the perspective of these professionals; published in the last ten years, i.e. from 2007 to 2016; and in Portuguese, English or Spanish. We excluded studies that did not meet the previous requirements, were performed in health services outside Brazil, those that did not address the research topic and duplicated papers. The flowchart for selecting the studies of this integrative review is shown in Figure 1.

A data collection tool was prepared and included the following selected information for analysis of the papers included: 1) authors, 2) year of publication, 3) title, 4) type of incident and its definition, 5) city or state of services searched 6) context or type of service, 7) participating professionals, 8) database in which the publication was identified, 9) methods, 10) objective, 11) Main results regarding the barriers to incident reporting, and 12) authors' proposals or recommendations. The selected papers were double-read in their entirety and extracted the information cited above, which were organized in the respective categories shown in Charts 2 and 3, by realm of analysis, in ascending order of publication.

The analysis and interpretation of the information collected in each paper were carried out, which was then shown and discussed in seven main themes: Characterization of papers included in the integrative review; Context in which the studies were carried out; Objectives of the studies; Concept of patient safety incident; Underreporting in the context of the hospitals studied; Barriers to patient safety incident reporting; Fear and punitive culture in the context of health services; and Recommendations of papers regarding incident reporting.

Results and discussion

In all, 1,007 publications were identified in the electronic databases, including duplications and, after reading titles, abstracts and exclusion of duplications, 41 were selected for full-text reading. Of these, eight papers that met the inclusion and exclusion criteria previously established were included in this review. Table 1 shows the number of papers identified in each database, and Figure 1 shows the selection flowchart of the integrative review studies.

Table 1. Search strategy.

Base	Terms	Number of publications	Studies included
BVS	((("incident#" OR err# OR "adverse event#" OR "patient safety" OR "segurança do paciente" OR "evento adverso" OR "eventos adversos" OR "err#") AND (notifica# OR registro OR comunic# OR communic# OR inform# OR report# OR subnotificação OR underreport# OR under-report# OR "gerenciamento de risco" OR "risk management"))) AND País de afiliação: Brasil	357	7
Pubmed	(("adverse events" OR "adverse event" OR "incident" OR error OR "Medication Errors"[Mesh]) AND (report OR reporting OR notification OR underreporting OR under-reporting OR "incident reporting system" OR "incident reporting" OR "communication"[MeSH Terms] OR "communication")) AND (("brazil"[MeSH Terms] OR "brazil" OR brazilian OR brasil))	467	3
Web of Science	(("adverse events" OR "adverse event" OR "incident" OR error OR "Medication Errors") AND (report OR reporting OR notification OR underreporting OR under-reporting OR "incident reporting system" OR "incident reporting" OR "communication")) AND (("brazil"OR "brazil" OR brazilian OR brasil))	183	1

Source: Authors (2017).
Caption: BVS - Virtual Health Library Portal.

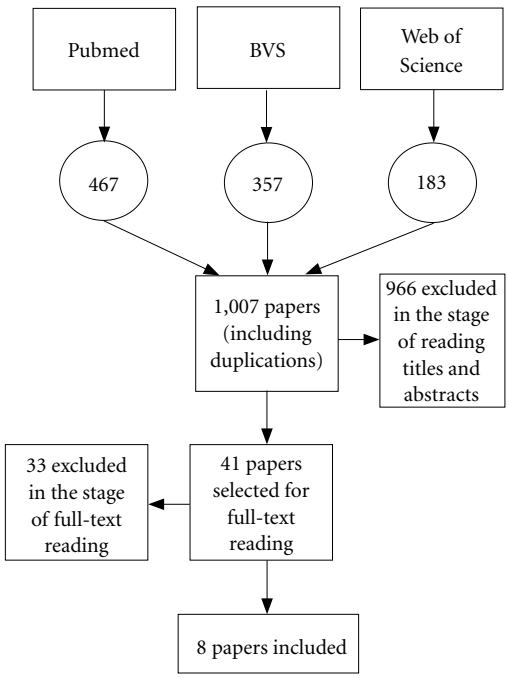

Figure 1. Flowchart of selection of studies of integrative literature review.

Source: Authors (2017).
Caption: BVS - Virtual Health Library Portal.

Characterization of papers included in the integrative review

Only eight papers on this topic have been identified in the last 10 years, revealing that publishing studies on barriers to incident reporting, from the point of view of health professionals is still incipient in Brazil. In the period studied, the publications occurred between 2007 and 2015, with the highest concentration found in 2011 and 2013.

Regarding the methodology of the study, most (n = 5) adopted a qualitative methodological approach, performing semi-structured interviews[23-27]. Three studies used quantitative methodology through the application of questionnaires[28-30]. Both approaches, namely, the qualitative, studying the complexity of phenomena, facts and processes, and the quantitative, with the objectivity of data, indicators and trends, should be perceived as complementary methodologies[31,32] and capable of bringing better knowledge about reality. In the context of incident reporting, qualitative and quantitative research should be encouraged as it contributes to a better understanding of this process relevant to patient safety.

Context in which the studies were carried out

Six (75%) studies were carried out in the Southeast region,[23,26-30] and the other studies conducted in the Northeast[24] and Southern Brazil[25]. This result may be a reflection of the greater concentration of hospital services in this region[33], and that the large centers still concentrate most of research investments and, consequently, most of the publications.

All studies were performed in hospitals, and three had more than one hospital in their sample[27,29,30]. The reviewed studies included public and private hospitals and one university hospital.

In general, patient safety investigations are hospital-centered[8], although most health care is conducted in primary health care. This setting is expected, since hospital care is more complex and high-risk[34]. Another aspect is that incident reporting is still a practice most common in hospitals, and therefore, there is little experience outside this level of health care, which may explain the fact that no studies were found to analyze the barriers to incident reporting outside the hospital environment. Marchon et al.[35] studied the occurrence of AE in primary health care of the State of Rio de Janeiro, but the research aimed to identify the profile of these occurrences and their contributing factors, not the possible barriers to their reporting.

The eight papers studied the subject exclusively with nurses or nursing staff, and in all, 346 nursing professionals composed the participants of the surveys included in this review, five of which included only nurses in their sample. In Brazil and in other countries, incident reporting is nurse-centered and, consequently, these professionals report more incidents than other categories[5,15,29,36-38]. These results express the need to include other categories of health professionals in research on the subject, among them the Brazilian physicians, who are an important portion of professionals in this area. In addition, all professionals working in health services must be reached through awareness-raising strategies on the importance of their participation in the incident reporting process, favoring reduced underreporting and the involvement of the various hierarchical levels and professional categories in the movement for patient safety.

Chart 1. Characterization of studies included in the integrative review, according to authors, year of publication, title, type of incident, city or state of the service, context, participating professionals and database in which the publication was identified.

Authors/ Year of publication	Título	Type of incident addressed and its definition	City/ State	Context Typo of service	Participant professionals	Database
Bohomol and Ramos[27] (2007)	Medication errors: importance of notification in the management of patient safety	Medication error: any error in the process of prescribing, dispensing or administering a medication	São Paulo/ SP	1 Private hospital	89 nursing professionals	BVS
Coli et al.[23] (2010)	The attitudes of nurses from an intensive care unit in the face of error: an approach in the light of bioethics	Error, adverse event and iatrogeny, addressed in the study as synonyms. Error: non-intentional use of an incorrect plan to achieve an objective, or non-achievement of a planned action. AE: errors that result in harm or injuries or harm due to interventions carried out by health professionals and not related to the intrinsic patient conditions.	São Paulo/ SP	ICU of 1 Private hospital	14 Nurses	Pubmed Web of Science
Claro et al.[29] (2011)	Adverse events at the Intensive Care Unit: nurses' perception of the non-punishment	AE, but with no definition. Quoted some examples of AE.	São Paulo/ SP	ICU of public, private and mixed hospitals	70 ICU nurses participating in regional scientific event	BVS Pubmed
Silva, et al.[30] (2011)	Adverse event in intensive care: what they know the nurses	EA: any events that produce or can potentially produce unexpected or unwanted results that affect the safety of patients or others. Reveals focusing on AEs related to the use of healthcare technologies.	Rio de Janeiro	Public and Private Network Hospitals	68 nursing professionals	BVS
Leitão et al.[24] (2013)	Analysis of the communication of adverse events under the perspective of assistant nurses	AE: incident resulting in patient harm	Fortaleza/ CE	1 Public Hospital	37 Nurses	BVS
Costa et al.[25] (2013)	Best practices of nurses managers in risk management	AE, but with no definition.	Região Sul do País	Southern region of the country	8 nurses from the risk management committee and 1 risk manager	BVS
Paiva et al.[26] (2014)	The reasons of the nursing staff to notify adverse events	AE: Unexpected or unwanted situation that brings harm to the patient during care. Participating professionals report notification of other types of incidents, such as no harm incidents	São Paulo	1 University Hospital	31 nursing professionals	BVS Pubmed
Siqueira et al.[27] (2015)	Management: perception of nurses of two hospitals in the south of the state of Minas Gerais, Brazil	Incidents and AE, but with no definition.	Poços de Caldas/ MG	2 Hospitals (1 public and 1 private)	29 nurses	BVS

Source: Authors (2017).
Caption: ICU: Intensive Care Unit; BVS - Virtual Health Library Portal; AE: Adverse Event.

Chart 2. Description of the studies included in the integrative review, according to methodology, objective, main results, research tool and proposals or recommendations.

Study	Methods	Objective	Main results regarding the barriers to incident reporting	Authors' proposals or recommendations
Bohomol and Ramos[28] (2007)	Quantitative descriptive	To verify with the nursing team their understanding of what a medication error is and express their opinion regarding the notification of the event and the completion of the report of medication adverse events.	- 70.1% of practitioners reported that some medication errors are not reported because the staff member fears the reaction they will suffer from the responsible nurses or co-workers. - 21.8% reported that they non-notified the medication error because they felt the error was not serious enough to justify reporting. - There was no uniform understanding as to what a medication error is, when it should be informed to the doctor and filled an events reporting.	"There is a need to develop educational programs that elucidate what medication errors are, discussing settings to understand the causes of the problem with proposed improvements." "The health services administration should be focused on developing a work system to reduce or eliminate barriers to reporting medication errors, focusing on patient safety as a high quality health care standard."
Coli et al.[23] (2010)	Qualitative	To analyze the attitude of nurses in the face of errors that occur in nursing procedures in an ICU in the light of bioethics.	- Stance of recognizing errors, a recognition that, even involuntarily, one might commit errors and the importance of communicate errors. - Omission errors happen, showing that they are not always reported. Error omission occurs when professionals know that it will not bring immediate consequences to the patient, because the expectation of non-failure is in force and when the error involves more people or teams.	"Rethinking nursing practice based on bioethics, resorting to an error analysis also focused on the relationships between those involved. Keeping in mind that errors occurs in a network of relationships, thus, should not be seen individually or only in technical terms, but rather in a relational way, and seek an integrated understanding of reality."
Claro et al.[29] (2011)	Quantitative descriptive	To characterize the AE record at the ICUs; verify AE frequency and the existence of punishment according to the nurses' perception; identify the nurses' degree of safety to notify AE.	- 71.4% mentioned sub-notification (underreporting) of AE. - Professionals indicated 115 reasons for underreporting. Main reasons: work overload (25.2%); forgetfulness (22.6%); non-valuation of AE (20.0%); feelings of fear (15.7%). - 74.3% mentioned that punishment sometimes or always occurs. - 83.7% indicated that the nurses were responsible for the notification. - 21.4% of nurses showed hardly safe or unsafe to report AE in their institution.	The results and limitations of the study point to "the need for further research and discussion on the theme." "Professionals need to overcome the punishment culture and AE registration systems need to be put in practice to improve care quality and, consequently, to achieve ICU patient safety." "Need for educative programs on patient safety directed to intensive care professionals and hospital institutions in general."

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Silva et al.[30] (2011)	Quantitative descriptive	Identify the level of knowledge of nursing professionals about what it is, how it is identified and how to report an AE.	- 21% of professionals said they could not identify an AE. - 51% of professionals said they were unaware of the existence of a risk management sector in the service they work for. - At least 36% of AEs experienced by the professionals were not reported by them. - 14% of participants heard about AE during vocational training, in a context where 41% of participants had less than a year's graduation. - The authors considered the following factors favoring low reporting: lack of knowledge about what it is, how it is identified and how an AE is reported; leaving the reporting under the responsibility of the nurse and for not having sufficient knowledge to report.	"The health institution must promote a non-punishment culture, thus encouraging the reporting of adverse events and the implementation of actions that prevent their occurrence". "The adverse event theme needs to be further discussed even during vocational training, whether in the university or in technical courses." "Professionals must be aware of adverse events."
Leitão et al.[24] (2013)	Qualitative	To analyze the process of communicating adverse event in the hospital context, from the nurses' perspective	- Despite report of AE notification, this is threatened, since there is not always notification and adequate case discussion. - Some nurses reported that the AE registration process is hierarchical, since some communicate the situation to nurse coordinator, although there is a proper form for notification to risk management. - There is no uniform AE recording, since nurses were not unanimous in the identification of forms and flow. - The less serious AEs are less reported. - Finding that the punitive culture still prevails in the occurrence of errors or AE, evidenced by reports of practices of reprimand and punishment of nursing professionals.	"It is necessary to undertake further research focusing on the issue of the occurrence and and communication of adverse events and their consequences to the service, the professionals, and principally, the patients (…) Promoting reflection and behavioral changes in the workers, structural changes in services and new health policies directed at patient safety." "Encouraging for the efficient communication of adverse events related to nursing care, which can be ensured through the recording and monitoring risks in the nurse's daily practice, as a means of strengthening the culture of safety and quality"
Costa et al.[25] (2013)	Qualitative	To identify the actions, undertaken by nurse in a risk management program, considered as best practice.	- Certainty of underreporting by participants. This situation may be related to the fear of punishment, lack of knowledge on the part of employees about the objective of the risk management program, high turnover, hindering the organizational culture about this process. - In addition, the nurse is who makes the notification most of the time, although the flow of notification is available to all, through electronic and printed medium favoring underreporting.	"Importance of strategies that involve not only multidisciplinarity and interdisciplinarity, but also the non-fragmentation of processes for continuous improvement and excellence of practices."

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Study	Methods	Objective	Main results regarding the barriers to incident reporting	Authors' proposals or recommendations
Paiva et al.[26] (2014)	Qualitative	To understand the motivation for reporting adverse events from the perspective of nursing staff in the work environment	- Although the study focused on the reasons for notifying AE, the fact that nurses were appointed as the professionals responsible for reporting was seen by authors as a hindrance for other practitioners to take responsibility for notifying AE. - Fear reported by some participants, but it was evidenced that the culture of punishment is in transition and the notification is understood auxiliary instrument to manage health care delivery. - Inconsistencies regarding taxonomy in patient safety.	"Need to disseminate the WHO taxonomy in patient safety in order to improve the quality of information and encourage reporting." "Importance of understanding the subjective aspects of nursing professionals' action in the AE reporting system, through knowledge about the expectations and reasons that permeate their decisions and conducts." "It is necessary to demystify nurse-centered reporting and to promote opportunities for orientation, clarification and encouragement towards participation by all professionals."
Siqueira et al.[27] (2015)	Qualitativa	To identify the nurses' perception of risk management and to analyze facilitators and barriers to the operationalization of risk management processes.	"Statements betrayed the nurses' concealment of errors, whose record can be used against them, and their fear of punishment." "The participants' statements revealed that adverse events were often underreported because of the lack of time to fill the forms, work overload and the fear of retaliation."	"Need to reflect on the impact of the adverse event on the health professional, to rethink the underuse of talents in hospitals, to analyze the cost of deaths generated by lack of an effective risk management process, by communication failures and, above all, slow responses."

Source: Authors (2017).
Caption: ICU: Intensive Care Unit; BVS - Virtual Health Library Portal; AE: Adverse Event; WHO: World Health Organization.

Study objectives

The objectives of the included studies focused on evaluating the knowledge of the nursing team about the subject of AE, error or AEs reporting[28,30], to know the conduct or opinion of professionals in the event of an AE[23,28], while others sought to understand or analyze the incident reporting process or system[24,29] or in a broader scope, risk management[25,27]. Although Paiva et al.[26] sought to understand the nursing team's motivation for reporting AEs, and this process was reportedly positive among participants, researchers also identified possible hindrance to reporting, such as nurse-centered reporting, seen as making it difficult for other professionals to assume this responsibility, as well as the fear of reporting, cited by some participants.

Concept of patient safety incident

Two papers addressed the term "error", one specifically about medication error[28], while the other used the terms "error" and "AE" as synonyms[23]. Among the six papers that quoted AE in the approach with participating professionals, only three defined it as an incident or event that caused harm to the patient[23,24,26], similar to the definition of the Conceptual Framework for the International Classification for Patient Safety[13], published in 2009 by the World Health Organization (WHO) and encouraged for the standardization of taxonomy in this area. Only the most recently published study approached with professionals the term patient safety incident, in the context of risk management[27], considered a broader concept, since it includes, in addition to AEs, incidents that did not cause harm to patients, but which show important opportunities for improvement and patient safety[5].

Underreporting in the context of the hospitals studied

In most studies (87.5%), participating professionals expressed the existence of underreporting of AEs or errors in the hospitals in which they worked[23-25,27-30]. Analyzing together the results of the two quantitative studies, 70.2% of the 159 participating professionals reported underreporting at their institution[28,29]. These results are compatible with several publications on the subject, both national and international[5,6,12,18-20,39,40], reinforcing the need to know the main reasons that contribute to this fact.

Barriers to patient safety incident reporting

The fear in report incidents and AEs was reported by participants in five (62.5%) of the eight studies included in this review[25-29], in agreement with other national and international publications[6,10,12,40]. Although fear was reported in the study by Paiva et al.[26], authors realized that the punishment culture was in transition and professionals believed in the non-punitive purpose of the reporting. In the study by Bohomol and Ramos[28], 70.1% of professionals reported that some medication errors are not reported because the nursing professional fears of the reaction by responsible nurses or other work colleagues. Leitão et al.[24] do not explicitly report the fear among the results found, but the identification of underreporting and punitive culture in force in the occurrence of errors or events allowed authors to infer that fear can permeate the decision of whether to report the incidents or not.

In the study by Claro et al.[29], 115 reasons were identified for the occurrence of underreporting, with an average of 2.3 reasons per participant. The most cited were work overload (25.2%), forgetfulness (22.6%) and non-valuation of AEs (20%) and 27% reported a feeling of fear or shame among professionals, also found in the literature review conducted by Pfeiffer et al.[18].

Incidents considered by professionals to be less serious, or which have non-immediate or milder consequences to patients are less reported, according to three studies[23,24,28]. While occurring more frequently in health care, no harm incidents or less severe are cited as less reported by researchers in the area,[5,41] evidencing that the rationale of reporting is inverse to the occurrence of incidents. However, reporting no harm incidents or those with milder harm is relevant to increasing patient safety[5] and must be encouraged.

The lack of knowledge about AE or how to make reports was also identified in three studies (37.5%)[24,25,30], a similar situation similar to that found in an international literature review[18], showing the need to make clear to professionals what, how and where to report. However, it is even more crucial that these professionals believe in the importance of this action, which depends on the evidence of efforts made for improvements from the reporting.

Hierarchization of the reporting process was identified in four studies (50%), in which nurses were designated as responsible for reporting[25,26,29,30], while one study found that nurses reported AEs to the nursing coordination or

management, although a form for reporting to risk management[24] was available. Authors see this as a hindrance that hampers the nursing team and other professionals' active participation in the reporting process[26].

The lack of time to report and work overload were also cited in studies by Claro et al.[29] and Siqueira et al.[27], as well as by other authors and research in this area[6,18,19,39,42].

These results point to the importance of making reporting easy[43], unbureaucratized and hierarchy-free, otherwise professionals tend to omit the occurrence of incidents[5,12]. Not least important, but little explored, the under-dimensioning of the care team must be evaluated and solved, since it contributes to underreporting[27,29] and can negatively impact patient safety[27,44].

In addition to the reasons found in this integrative review, the lack of feedback to the reporters[12,18,20], the lack of incentive to professionals to make them report[12], and also because the reporting does not often lead to positive changes[5-7,18,20] are also shown by international studies as hurdles to professionals reporting incidents which ultimately result in underreporting.

Punitive culture in the context of health services

The punitive culture regarding the occurrence of the error or incident in the hospital context, in addition to the fear reported by the professionals about reporting safety incidents was found in four studies (50%)[24,25,27,29]. Paiva et al.[26] referred to the punitive culture as being in the transition stage. In the study by Claro et al.[29], 74.3% of professionals reported that punishment occurs for the occurrence of AEs. Leitão et al.[24] shows as a worrying result the observation that punitive culture still prevails in the presence of errors and AEs.

A Brazilian study carried out in three hospitals, which aimed to analyze the reporting of AEs from the perspective of nursing professionals, found that, for 45.5% of the participating professionals, the reporting of AEs led to punitive measures for professionals involved in the occurrence[42], agreeing with the findings of this review that punitive culture still permeates the incident reporting process. It is important to emphasize that the history of punishment of professionals for these events only contributes to the consolidation of punitive culture, besides favoring feelings of guilt and shame thereof[45].

Initially, Patient Safety pledged its efforts to improve care processes and generate a culture of not blaming professionals. There is now a greater understanding of the need to balance "non-accountability" in cases of slips and failures, with an accountability approach to careless, inconvenient and failing professionals regarding basic rules of safety and quality[5].

Unfortunately, the academic training of physicians and nurses, which, according to Carvalho and Vieira[46], reinforces the imaginary that the work done by these professionals is error-free, conveys a message that such errors are unacceptable. In this setting, errors are seen as lack of care, attention or knowledge. If the culture of services is based on blame for the occurrence of an AE, this may result in the lack of knowledge of important information about these events, thus not allowing the construction of a culture that prioritizes safety[24,40]. It is important to emphasize that the search for guilty people and the punishment of these professionals have no impact on the reduction of AEs and the implementation of strategies to prevent them[26]. Wachter[5] states that the fundamental foundation of patient safety remains the confidence that professionals can have in communicating errors and that this leads to improvements. The same author advocates the need for a just culture, defined as an atmosphere of trust in which people are encouraged to communicate information essential to patient safety, but, on the other hand, affirms that professionals must clearly know the limit between an acceptable and unacceptable behavior. James Reason[47] stresses that less should be focused on trying to perfect human behavior and invest efforts in making the organization safer. Assuming that professionals err and will continue to do so, it is necessary to improve the organization of systems to reduce the likelihood of errors and incidents[1] and to promote learning when they occur.

Papers' recommendations for incident reporting

A contour in the recommendations made by the authors of the papers, to emphasize those related to the reporting process of patient safety incidents, point out that overcoming the punitive culture[29,30], encouraging reporting[24,28], investing in professional training and awareness on the subject[28,29] and implementing actions to reduce the occurrence of AEs[24,30] were prevalent among the authors. It was also recommended expanding studies on this theme[24,29] which, according to Leitão et al.[24], must be disseminated in order to

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contribute to the promotion of "reflections and workers behavioral changes, structural changes in services and new health policies geared to patient safety", including during professional training[30].

Conclusion

This is the first integrative review of Brazilian published literature on barriers to patient safety incident reporting by health professionals. Due to the small number of studies produced and published during the review period, the overview on the main barriers that contribute to the underreporting of AEs or patient safety incidents in Brazil is limited. However, if this review does not make it possible to generalize study findings across the country, they are in line with the international literature on the subject.

The study of this subject in Brazil is restricted to the nursing area, evidencing the need to extend it, including other professional categories, because patient safety is a multi-professional theme and requires an integrated effort.

In summary, fear or worry are an important barrier to reporting, confirming the findings of other studies and publications of organizations and researchers of references in the area. We highlight the importance of working with a just culture in the face of the occurrence of incidents, which considers professional accountability, but which aims to identify weaknesses or failures in the system and not in the performance of professionals, to strengthen the safety of patients attended in health services. In addition, it is necessary to make clear to professionals important aspects related to the reporting, such as: what, how and where to report incidents; and making efforts to make reporting easier and less bureaucratic, encouraging them to participate in this important process.

There are few published studies on the topic at the national level, evidencing a gap to be filled with studies in other regions of the country, since most of the included studies were carried out in health services in the Southeast of the country. This reveals the need and importance of encouraging and supporting research on this theme in other regions of the country, allowing a broader and more representative diagnosis, since the development of research in this area has the potential to promote greater discussion about the relevance of incident reporting, with the objective of strengthening patient safety in health services. The expectation is that this more in-depth and comprehensive understanding will lead to the implementation of strategies to encourage reporting and participation of professionals in this process. In the face of barriers and the reasons given by professionals for non-reporting, all efforts should be undertaken by the health services organization to sensitize professionals to report incidents and, more importantly, they should feel safe and be recognized in this participation and realize that reporting is worthwhile, since this information should provide and contribute to strengthening patient safety in health services.

Collaborations

MFT Alves worked on the design of the paper, methods, search for publications and paper writing. DS Carvalho and GSC Albuquerque participated in the design, methods and final writing of the paper.

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