

## A CULTURA DE SEGURANÇA DO PACIENTE NO ÂMBITO DA ENFERMAGEM: REFLEXÃO TEÓRICA

### THE PATIENT SAFETY CULTURE IN THE SCOPE OF NURSING: THEORETICAL REFLECTION

### LA CULTURA DE SEGURIDAD DEL PACIENTE EN EL ÁMBITO DE LA ENFERMERÍA: REFLEXIÓN TEÓRICA

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#### RESUMO

**Objetivo:** refletir sobre o conceito de Cultura de Segurança e suas dimensões, no contexto da equipe de Enfermagem. **Método:** estudo descritivo, tipo análise teórico-reflexiva, elaborado por meio de artigos científicos em bases eletrônicas de dados. **Resultados:** a reflexão foi mobilizada em quatro dimensões: "Compromisso da liderança e aspectos organizacionais"; "Trabalho em equipe"; "Comunicação eficiente e gerenciamento de risco"; e "Aprendizagem organizacional e abordagem não punitiva dos erros". Constatou-se que, para uma cultura de segurança positiva, torna-se imprescindível uma liderança comprometida com a melhoria contínua da qualidade, o estímulo ao trabalho em equipe centrado em apoio mútuo e compartilhamento de informações, bem como avaliação dos erros com foco em discussões dos erros notificados, capacitações e educação contínua. **Conclusão:** acredita-se que a implementação de intervenções multifacetadas, pautadas nas dimensões da cultura de segurança, possam auxiliar enfermeiros e equipe na prevenção de erros em diversos níveis e setores dos cuidados em saúde. **Descritores:** Enfermagem; Segurança do paciente; Assistência à saúde; Gestão da segurança; Cultura organizacional.

#### ABSTRACT

**Objective:** to reflect on the concept of Safety Culture and its dimensions, in the context of the Nursing staff. **Method:** descriptive study, type theoretical-reflexive analysis, elaborated through scientific articles in electronic databases. **Results:** the reflection was mobilized in four dimensions: "Leadership commitment and organizational aspects"; "Team work"; "Efficient communication and risk management"; and "Organizational learning and non-punitive approach to mistakes". One can see that for a positive safety culture, it is essential leadership committed to continuous quality improvement, the encouragement of teamwork focused on mutual support and information sharing, as well as errors evaluation with focus on discussions about the reported errors, training and continuing education. **Conclusions:** it is believed that the implementation of multifaceted interventions, based on the safety culture dimensions, can help nurses and staff to prevent errors at various levels and sectors of health care. **Descriptors:** Nursing; Patient safety; Delivery of health care; Safety management; Organizational culture.

#### RESUMEN

**Objetivo:** reflexionar sobre el concepto de Cultura de Seguridad y sus dimensiones, en el contexto del equipo de Enfermería. **Método:** estudio descriptivo, tipo análisis teórico-reflexivo, elaborado por medio de artículos científicos en bases electrónicas de datos. **Resultados:** la reflexión fue movilizada en cuatro dimensiones: "Compromiso del liderazgo y aspectos organizacionales"; "Trabajo en equipo"; "Comunicación eficiente y gestión de riesgos"; y "Aprendizaje organizacional y enfoque no punitivo de los errores". Se puede constatar que para una cultura de seguridad positiva se hace imprescindible un liderazgo comprometido con la mejora continua de la calidad, el estímulo al trabajo en equipo centrado en el apoyo mutuo y el intercambio de información, así como la evaluación de los errores con enfoque en discusiones de errores notificados, capacitaciones y educación continua. **Conclusión:** se cree que la implementación de intervenciones multifacéticas, pautadas en las dimensiones de la cultura de seguridad, puedan auxiliar enfermeros y equipo a la prevención de errores en los diversos niveles y sectores del cuidado de la salud. **Descriptor:** Enfermería; Seguridad del paciente; Asistencia a la salud; Gestión de la seguridad; Cultura organizacional.

**Descritores:** Enfermería; Seguridad del paciente; Asistencia a la salud; Gestión de la seguridad; Cultura organizacional.

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## INTRODUCTION

Patient safety and the development of a culture that favors measures aimed at reducing the risk of unnecessary damage to the patient during healthcare are on the agenda of discussions in various spaces, such as academia, the judiciary and private and public health services. This discussion is also on the agenda of the World Health Organization (WHO) and its Member States, of the Brazilian Government in national, state and municipal instances. Therefore, they are globally discussed, which has generated changes and a growing quest for continuous improvement of health services' quality<sup>(1-2)</sup>.

There is a growing concern for clarification about the main causes of adverse events arising from the health care process, as well as chances to avoid them<sup>(3)</sup>. Studies conducted in developed countries, with health systems, more structured than those of developing countries, warn of the problem magnitude, by revealing that millions of patients suffer some type of error or incident resulting from the health care process<sup>(4)</sup>. Error is a failure in the action as planned and desired or executing a plan wrongly. By definition, error is not intentional, unlike the transgressions that are intentional and may become routine or automatic. Incident is an event or circumstance that might have resulted or resulted in unnecessary damage to the patient. When incidents reach the patient, but do not cause discernible damage, they are called incident without damage, and when they result in discernible damage, they are named adverse event<sup>(2)</sup>.

Despite all advances in patient safety, human error is one factor that stands out and error episodes involving health professionals are often reported by the press and the media, causing great social commotion. The lack of understanding about the error may lead the involved professional to feel ashamed, guilty and fear, given the strong punitive culture that still exists in some institutions, which contributes to the omission of the episodes<sup>(5)</sup>.

Errors can be present in any action, regardless of the sector, since it is an immutable feature of cognitive process of human beings. On the other hand, the more complex a system, or more complex the activity, the higher is the risk of errors and adverse events. In the health area, not all errors culminate in adverse events and not

all adverse events result from errors. This distinction is important for implementing prevention strategies, especially of adverse events resulting from errors, classified as preventable adverse events. Harms to patients not always come from major flaws made in activities with complex systems, but can occur due to little mistakes that can cause fatal consequences, depending on the patient's condition<sup>(2,6)</sup>.

Policies and procedures are adopted to protect patients from harm; however, a more detailed design of "why" an incident occurred, with decreased focus on the individual who caused the error, can generate positive implications for safety culture<sup>(6)</sup>.

Safety culture results from values, attitudes, group and individual perceptions and competencies, that determine a pattern of behavior and the institution's safety commitment, replacing the guilt and punishment by the opportunity to learn from mistakes<sup>(2)</sup>. Safety culture requires understanding these values, in addition to beliefs, norms and attitudes about what is important in an institution and that customs and behaviors related to patient safety are entrusted, tolerated and reimbursed by employees<sup>(7)</sup>.

The National Patient Safety Program (PNSP - *Programa Nacional de Segurança do Paciente*) advocates the configured safety culture in five working features for the management of an organization: a culture in which all workers, including professionals involved in care and management, are responsible for their own safety, the safety of their colleagues, patients and family members; a culture that prioritizes safety over financial and operational goals; that encourages and rewards the identification, notification and resolution of safety-related issues; that promotes organizational learning from the occurrence of incidents; and lastly, providing resources, structure and accountability for effective safety maintenance<sup>(3)</sup>.

The components of a safety culture are leadership's commitment to safety, open communication based on trust, organizational learning, a non-punitive approach to adverse events, teamwork, and the shared belief of safety importance<sup>(7)</sup>.

In this perspective, improving safety culture requires an effort of the entire health system, which involves extensive actions aimed at

improving processes, environmental security and risk management<sup>(8)</sup>. Since culture results from organizational behavior and identity with regard to attitudes and values, it can appear differently in different administrative natures. Factors such as teamwork, leadership's commitment to safety, registry of errors and failures, as well as non-punitive approach to error can be influenced according to the existing culture<sup>(7)</sup>.

Information about safety culture can guide interventions in search for quality health services. There is a growing interest in health institutions in researches on Safety Culture assessment, since it is considered the first step for the construction of the patient safety committee<sup>(3)</sup>.

We also need a patient safety culture in which professionals and services share practices, values, attitudes and behaviors to reduce the damage and promote safe care<sup>(9)</sup>. This process involves each health professional that makes up the multidisciplinary teams of organizations, highlighting the nursing team's workforce, which stays longer with the patient regarding its care actions. Nursing must evaluate, report and measure errors and flaws in health care, in order to provide more assertive practices, such as reducing nosocomial infection rates, falls prevention, medication errors and pressure injuries<sup>(9-10)</sup>.

For nursing professional, the occurrence of adverse events can lead to various problems, given the emotional stress, the ethical principles and legal punishments to which he/she is exposed. Thus, investing in a safety culture is important, by disseminating the patient safety concept and a non-punitive discussion about adverse events<sup>(5)</sup>.

Culture generally involves the commitment of the institution and of its managers to identify the need for the theme and establish it as a guiding axis of its organization, as well as engaging with everyday situations and seeking to know difficulties and challenges that the direct caregiver faces daily, in order to create effective communication with hierarchical levels and allow building trust among all involved. Therefore, when the reliable links are signed, the needs and the errors are exposed more clearly by the professionals and the institution can intervene in work processes and permanent formation, empowering professionals to ensure a safety culture and a safer assistance<sup>(11)</sup>.

Thus, considering the need to discuss the nursing and safety culture interface, this study

proposes a theoretical reflection, which aims to reflect on the safety culture concept and its dimensions, in the context of Nursing team. However, safety culture must be developed, discussed and analyzed with the entire multidisciplinary team assisting directly and indirectly the patient in all health services. Studies related to the challenges in patient safety practices involving nurses, in the implementation of a safety culture and quality improvements are essential, as they can assist in strategies and actions for achieving the safety goals.

## **METHOD**

Descriptive study, of theoretical-reflective analysis type, drawn from reflections related to the patient safety science. The survey of the scientific articles was conducted from February to June 2017, considering publications from the past 10 years, available in the databases Medline, Lilacs and Scielo library.

Thematic analysis was carried out and the results, discussed in four themes: "Leadership commitment and organizational aspects"; "Team work"; "Efficient communication and risk management"; and "Organizational learning and non-punitive approach to mistakes".

## **RESULTS AND DISCUSSION**

### **Leadership commitment and organizational aspects**

The role of leadership is a key component for developing a safety culture, because leaders allow other professionals to create strategies and structures to promote safe and quality health care. Furthermore, they help to shape a culture in which errors and failures are seen as a form of knowledge and continuous learning<sup>(12)</sup>, which will be discussed later.

In a study developed in 14 hospitals certified by the National Accreditation Organization and by the Joint Commission International in São Paulo, leadership was the most important competence in nursing managers, according to their superiors<sup>(13)</sup>. In this sense, leaders can create a safety climate that makes front-line professionals to feel safe to report errors, which makes safety leadership a critical dimension of safety culture<sup>(14)</sup>.

Care planning is a process that allows achieving results with a minimum of errors and through dynamic attitudes, i.e., dependent on realities found in the institutions, considering uncertainties and contingencies of assistance

scenarios. Therefore, it becomes necessary to exercise a leadership deeply cognizant of the team's weaknesses and potentialities<sup>(5)</sup>.

The scope of the safety culture depends on the way leaders at all levels of an organization obtain, use and disseminate obtained data and information. Consequently, one must assess the safety culture of each section or unit, and organizational level, in order to identify areas of culture that need to improve and increase awareness of patient safety concepts; assess the effectiveness of patient safety interventions progressively and continuously; and establish internal and external goals. Therefore, the biggest challenge in assessing the culture is to establish a link between safety culture and results of the assistance provided to the patient<sup>(11)</sup>.

A study identified that leadership's organization and support of a unit showed a significantly positive effect on fear of repercussions<sup>(14)</sup>. A intervention study obtained the same results, which proposed a training to improve the perception of patient safety climate in hospital nursing managers. Leaders' support for developing safety could reduce the fear of repercussions of mistakes more than their own safety training intervention could<sup>(15)</sup>.

Both theoretical studies as empirical investigations corroborate the view that a positive safety culture requires that leaders of organizations support patient safety initiatives decisively<sup>(14)</sup>. Otherwise, professionals will not have a suitable environment to learn from mistakes, one they will not have the leader's support. Thus, the silence and punishment culture, already hegemonica, will remain in the institutions.

On the other hand, developing a fair and honest culture is necessary, which has a clear line between acceptable and unacceptable behaviors. Fair culture is a way of thinking in a justice range of both sides. One side of this range is the individual's responsibility and the other is the system's responsibility. The individual's responsibility is considered a product that contributes to a high safety level, in which all members of an organization share the same commitments and values for an effective patient safety. Nevertheless, there is risky behavior, in which professionals knowingly disrespect safety criteria, requiring an accountability approach<sup>(16)</sup>.

Regarding the system's responsibility, a satisfactory, safe and empowering working environment is considered healthy for staff and

patients<sup>(17)</sup>. Factors such as high workload, insufficient number of professionals, problems in communication between teams, lack of equipment and lack of management support are against productive when the goal is a safe and quality assistance<sup>(17-18)</sup>.

The practices of the working environment are also key attributes for safe practices, because individuals' favorable attitudes for safety are influenced in this environment. Therefore, managers of health institutions need to promote a safety policy within the organization, thus setting responsibilities, qualification and training<sup>(16)</sup>.

A cross-sectional study recently conducted in Turkey with 274 nursing professionals of a regional university hospital identified a significant association between working environment, empowerment of the nursing staff and patient safety culture<sup>(17)</sup>. Turkey is an emerging country as well as Brazil, where health services are still in transition. Other international studies also showed the same finding<sup>(10)</sup>.

Another research carried out in Switzerland with 9,236 nursing professionals also detected a strong relation between working environment and the participants' perception of patient safety. Factors such as sufficient staff and resources to discuss nursing issues with other nurses, to complete work and to provide quality care, as well as good relations between doctors and nurses, and visible and competent nursing leadership were highly related to a better assessment of the patient safety<sup>(10)</sup>.

Another study, whose objective was to evaluate the safety culture at three public hospitals in Ceará, Brazil, identified that the most and least important aspects were, respectively, Job Satisfaction and Management Perception. Outsourced professionals presented better perception of safety culture in comparison to statutory professionals. On the other hand, graduated professionals presented better perception of stressing factors than technical professionals. The level of safety culture found in this study was considered sub-optimal, and management actions were considered the main contributor to the culture's fragility<sup>(19)</sup>. In this sense, institutions need a leadership committed to continuous improvement of the quality, in which the development of a patient safety culture is at the heart of the organization's strategic planning, which will direct work processes and, consequently, positive assistance results.

## Teamwork

For a positive safety culture, it is imperative to stimulate teamwork within units, which corresponds to the support staff offer each other, working together and respectfully. Nonetheless, different units of an institution must work together, cooperatively and in a coordinated manner, to provide high-quality care for patients<sup>(18)</sup>. This is important since the units, although with specific goals and work processes, are interdependent.

Researches report the reduction and management of errors in healthcare through teamwork performed with quality and everyone's cooperation in the process<sup>(18)</sup>. In this sense, modern health care has increasingly based on multidisciplinary teams organized in a more complex and shared network. However, this transition has not been accompanied by changes in the systems of communication between professionals, especially from different disciplines<sup>(18,20)</sup>. Failures at work in interdisciplinary teams and communication contribute with 61% to sentinel events<sup>(21)</sup>, because they can directly compromise patient care, cause tension and anguish in the professionals, and reduce their efficiency, thus influencing substantially the occurrence of errors<sup>(20)</sup>.

Importantly, effective teams feature five key dimensions: team leadership, mutual performance monitoring, backup behavior, adaptability and team orientation. Team leadership involves the ability to direct, coordinate and evaluate members' performance, in addition to assigning tasks, developing knowledge, skills and motivating team members, in order to plan, organize and establish a positive atmosphere. Mutual performance monitoring refers to the ability to develop common understandings in the team environment and develop strategies to monitor the teammate's performance. Backup behavior is the ability to anticipate the needs of other team members through a knowledge about everyone's responsibilities, beyond one own responsibility. In this sense, activities change to achieve the balance during periods of high workload or pressure. Adaptability is the set of strategies in response to changes in internal or external conditions using backup behavior and reallocation of roles within the team. Finally, team orientation takes into account others' behavior during group interaction and the belief

that the team's objective is more important than its members'<sup>(22)</sup>.

Such dimensions are coordinated by the underlying mechanisms of mutual trust (shared belief that everybody will protect the teammates' interests), closed-loop communication (information exchange between a sender and a receiver regardless of the medium) and shared mental models. This last engine has been considered fundamental to an effective teamwork in healthcare. Shared mental models provide team members a common understanding of the situation, the treatment plan and individual responsibilities. Thus, it allows predicting team members' needs, identifying changes in the clinical situation and adjusting strategies. In this way, team's different components can fully contribute to the problem-solving and decision-making<sup>(18,20,22)</sup>.

Teams' functioning following these precepts enables to address one of the main challenges in health area: sharing information. Various healthcare scenarios require communication between professionals and teams; however, it has been inadequate especially in critical contexts as in care transfers in high-complexity units, such as emergency units or operating room<sup>(20)</sup>.

## Efficient communication and risk management

A study of communication in operating rooms identified a failure every eight minutes. Interdisciplinary exchange of information resulted in almost twice as frequent failures as in intradisciplinary. In 81% of the failures, the result was inefficiency, also presenting waste of resources (19%) and increased work (13%)<sup>(23)</sup>. In this sense, the difficulties and even absence of multidisciplinary discussion, whether before an incident or even when planning patient care, is a powerful paradigm to be overcome within health services' culture. Another investigation found that teams that shared information about the patient less frequently when beginning a surgical case and in the post-surgery transfer had more than twice the risk of surgical complications than teams that shared this information frequently. Other findings show that during postoperative transfers, doctors do not report many critical information (for example, allergies or intra-operatively problems) to nurses in the ward. The gaps in information sharing aforementioned become critical factors that compromise the effective communication and safe care for the

patient, being considered educational, psychological and organizational deficits<sup>(20)</sup>.

Communication failures can be corrected by implementing strategies like the teaching of communication techniques, practices including all team members, simulations and use of protocols, checklists and other gimmicks. Another important measure is the development of an organizational culture that supports health teams<sup>(18,20)</sup>.

Effective communication allows avoiding errors that can lead to preventable harm to patient's health, which is one of the major objectives of safety culture. Reason, a psychologist and researcher at the University of Manchester, is one of the most notable scholars on human safety and responsible for describing the Swiss cheese model of accidents<sup>(8)</sup>. According to this model, the organizational systems have defensive layers (barriers) with flaws, such as "holes" in slices of Swiss cheese. These "holes" are continually opening, closing and changing their location, and, when they line up momentarily, provide a path to opportunity of accidents that do not find barriers and end up reaching the patient<sup>(24)</sup>.

In this context, modern health services lead professionals to perform a lot of tasks under extreme time pressure and frequent shortages of resources, inserted into a complex network of multidisciplinary teams that must interact with the purpose of providing quality care to patients and high degree of accuracy<sup>(14)</sup>. These working conditions predispose to active failures and latent conditions in the organizational system that, when combined, originate adverse events<sup>(24)</sup>.

Reason explains active failures as unsafe acts committed by people who are in direct contact with the patient or system, caused by slips, lapses, mistakes. Latent conditions are inevitable "pathogenic resident agents" within the system, arising from decisions made by managers. They may present as conditions that lead to error, as time pressure, human resource shortages, inadequate equipment, fatigue and inexperience or as conditions that cause faults in the system's defences. Unlike the active failures, which are often difficult to predict, the latent conditions can be identified and corrected preventively when there is a proactive, not-reactive, risk management<sup>(24)</sup>.

This type of management is employed by high-reliability industries like aviation, air traffic control and nuclear power. They manage highly complex technology with diverse and skilled

personnel, and base on the premise that, when errors occur, the punitive approach only encourages the denial, fear, and the secret. Therefore, one should move from a "person's approach", in which error results from workers' personal failure, to a "systems' approach", which accepts humans as fallible and focuses on the systemic causes of errors<sup>(14,24)</sup>.

When transposing that idea to health organizations, one realizes the pressing need to strengthen the barriers that protect patients from risks. This can be done by outlining measures such as upgrading of professionals, using clinical protocols and surgical checklist, establishing hand hygiene protocols, prescribing single doses of medicines and creating a system to report errors<sup>(8,24)</sup>. This last may be the most important measure, since error notifications systems are recognized as key mechanisms for safety and promote a positive organizational culture and quality assistance. When health professionals are in an environment where a positive organizational culture was developed, their commitment to report errors increases, which leads to a consequent improvement in patient safety and reduction in mortality rates<sup>(6,19)</sup>.

Moreover, strategies to improve communication can come from both leadership as each team. Leadership, for example, can promote actions that facilitate communication and integration of teams, including the minimization of hierarchy between the professionals, since the hierarchy different gradients generate a distance between contributor and leaders. On the other hand, in work routine, each team member can produce a favorable environment for good coexistence and communication, resulting in a healthy work environment that offers a safe assistance to patients.

### **Organizational learning and non-punitive approach to mistakes**

The evaluation of errors through the learning culture encourages opportunities to share lessons learned and consider the educational process continuous and evolutionary<sup>(12)</sup>. However, it is only present when leaders demonstrate willingness to learn and create an awareness among professionals to report incidents, and when they promote a learning environment through opportunities, allowing identifying unsafe conditions for patient safety<sup>(16)</sup>.

As the safety culture matures in the institutions, the learning culture becomes more proactive to identify and improve potentially unsafe process to prevent errors<sup>(12)</sup>. Nevertheless, the punitive culture still remains at most institutions, which causes professionals' dissatisfaction and demotivation.

In this case, it is essential to move from a punitive culture to a learning culture, which leads to the possibility of opening communication, leading staff to talk in an uninhibited manner about errors that can affect patients and to feel free to question employees with greater authority when they are having unsafe behaviors. In this way, it is possible to increase the reporting of adverse events, enabling feedback on errors, allowing the implementation of changes and the discussion of strategies to prevent new incidents<sup>(14,17)</sup>.

Errors reports are essential because they offer information about working conditions and processes that contribute to the occurrence of errors during patient care. They allow health professionals to expose and record, generally, voluntarily and confidentially, the occurrence of incidents or of any safety irregularity observed in the workplace. In this way, they can increase the knowledge about errors and risks inherent to the task and the work type and place. Investigating the event and analyzing various incidents aggregates still generate useful information to correct identified weaknesses or gaps<sup>(5)</sup>. Therefore, notification systems are an important diagnostic tool in situations of risk and, thus, can be a source of recommendations designed to improve safety and good health practices<sup>(3)</sup>.

Studies using data from incidents as a result indicator to assess the effectiveness of interventions are continuously published<sup>(25-26)</sup>. However, health care organizations are often not able to learn from their failures, mainly due to under reporting of errors<sup>(17,25)</sup>. This problem can result from several factors, such as the inconvenience and delay to complete forms, causing delays in carrying out tasks and/or activities, the belief that error report will not improve safety, confidentiality and legal concerns, traditions of professional autonomy, perfectionism, hierarchies of power within and between professional teams, poorly designed reporting systems and a punitive work environment<sup>(17)</sup>. If there is only filing of data collected in the institution's internal notification system, without the proper treatment with

improvement actions and discussion with all institution's professionals, there will be no organizational learning. For developing a strengthened safety culture, leaders must use these data for care management and promotion of training and discussion of the reported errors.

In addition to the four dimensions discussed, the development of an organizational culture focused on patient safety should generate the necessary change of several paradigms. The transposition from the biomedical model that values only the biological aspect, to the detriment of human beings in their entirety, to a model aimed at an integral, humane and safe attention at health organizations, stands out. To this end, the development process of patient safety culture needs to be grounded in theoretical models, since these will guide and systematize the steps of this process of improvement, which is continuous and needs the engagement of all professionals of the institution's multidisciplinary team.

## CONCLUSION

Considering the main reflections raised, there is need to establish patient safety in healthcare organizations as cultural process in order to promote greater awareness of both the nursing professionals as each professional of the multiprofessional team who works at organizations. This process should be based mainly on ethical commitment, effective communication and non-punitive culture of errors. Accordingly, an assistance with a minor error index can be obtained by changing work, environment organization, active participation of health care professionals and patients in order to encourage users' participation regarding the identification and prevention of adverse events in health care environments. Risk management supports users' participation, since this strategy proposes a "systems' approach" that takes humans as fallible and focuses on the systemic causes of errors.

The perception of risk situations consists in an important measure because it collaborates to manage care properly, focused on error prevention and establishment of safety culture in the institution. Adverse events must be understood in their entirety, considering what exists beyond their occurrence, i.e., work overloads, lack of knowledge, lack of effective communication, precarious institutional infrastructure, leaders' little involvement, lack of knowledge about the local reality and other

structural and organizational problems that prevail at health institutions.

We highlight the advances obtained by nursing regarding performance based on identification and assessment of risks, prevention of adverse events and adoption of better practices and management of assistance to achieve patient safety goals proposed by WHO. However, such a theme still requires investigation, especially in relation to the effectiveness of strategies adopted to aid nurses and team to develop appropriate interventions to manage errors properly and strengthen safety culture in the various levels and sectors of health care. Improvements arising from the implementation of multifaceted interventions, with a view to different dimensions of safety culture, shall achieve more efficient and satisfactory results.

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