

Adverse events at the Intensive Care Unit: nurses' perception about the culture of no-punishment

EVENTOS ADVERSOS EM UNIDADE DE TERAPIA INTENSIVA: PERCEPÇÃO DOS ENFERMEIROS SOBRE A CULTURA NÃO PUNITIVA

EVENTOS ADVERSOS EN UNIDAD DE TERAPIA INTENSIVA: PERCEPCIÓN DE LOS ENFERMEROS ACERCA DE LA CULTURA NO PUNITIVA

Carla Matilde Claro¹, Daniella Vianna Correa Krocockz², Maria Cecília Toffolletto³, Kátia Grillo Padilha⁴

ABSTRACT

The safety culture of Intensive Care Units (ICU) recommends following the no-punishment approach when adverse events (AE) occur. It is, however, questionable if nurses perceive those AE. Objectives: to characterize AE report systems; to verify AE frequency and consequences to the professionals; and to verify the nurses' level of confidence to report AE. This descriptive study involved 70 ICU nurses, who answered a questionnaire in 2007, followed by descriptive analyses. Most nurses (70.0%) reported the existence of an AE notification system at their place of work. The frequency of AE was reported as *sometimes* and *several times* by 51.4% and 28.6% of the sample, respectively. For 74.3% of nurses, punishment happens *sometimes* and *always*, mainly through verbal notice (49.0%). Most nurses (74.3%) reported feeling *confident* and *completely confident* to report AE. In conclusion, punishment still exists in the Units.

KEY WORDS

Intensive Care Units.
Security measures.
Nursing.

RESUMO

A cultura de segurança nas unidades de terapia intensiva (UTI) pressupõe a abordagem não-punitiva dos eventos adversos (EA), porém questiona-se a sua existência segundo a percepção dos enfermeiros. Foram objetivos do estudo: caracterizar os sistemas de notificação de EA; verificar a frequência dos eventos e consequências para os profissionais; verificar o grau de segurança dos enfermeiros para notificá-los. Estudo descritivo, com questionário respondido por 70 enfermeiros, em 2007, seguido da análise descritiva dos dados. A maioria dos enfermeiros (70,0%) referiu-se à existência de um sistema de notificação de EA nas instituições onde atuam. A ocorrência de EA *algumas* e *várias vezes* foram citadas por 51,4% e 28,6% dos enfermeiros, respectivamente. Para 74,3% da amostra, a punição ocorre *às vezes* e *sempre*, predominando a advertência verbal (49,0%). A maioria (74,3%) referiu sentir-se *seguro* e *totalmente seguro* para notificar um EA. Conclui-se que a cultura punitiva ainda persiste nas UTIs.

DESCRIPTORIOS

Unidades de Terapia Intensiva.
Medidas de segurança.
Enfermagem.

RESUMEN

La cultura de seguridad en las unidades de terapia intensiva (UTI) presupone el abordaje no punitivo de los eventos adversos (EA), no obstante, se cuestiona su existencia según la percepción de los enfermeros. Fueron objetivos del estudio: caracterizar los sistemas de notificación de EA, verificar la frecuencia de los eventos y consecuencias para los profesionales, verificar el grado de seguridad de los enfermeros para notificarlos. Estudio descriptivo, con cuestionario respondido por 70 enfermeros, en 2007, seguido del análisis descriptivo de los datos. La mayoría de los enfermeros (7%) refirió la existencia de un sistema de notificación de EA en las instituciones donde se desempeñan. La ocurrencia de EA *algunas* y *varias veces* fue citada por el 51,4% y 28,6% de los enfermeros, respectivamente. Para el 74,3 de la muestra, el acto punitivo ocurre *a veces* y *siempre*, predominando la advertencia verbal (49,3%). La mayoría (74,3%) refirió sentirse *seguro* y *totalmente seguro* para notificar un EA. Se concluye en que la cultura punitiva persiste aún en las UTIs.

DESCRIPTORIOS

Unidades de Terapia Intensiva.
Medidas de seguridad.
Enfermería.

¹ Undergraduate Nursing Student at the University of São Paulo School of Nursing. São Paulo, SP, Brazil. carlausp2004@yahoo.com.br ² RN. Doctoral Student, Graduate Program in Adult Health Nursing, University of São Paulo School of Nursing. São Paulo, SP, Brazil. daniellavck@usp.br ³ RN. Ph.D. in Nursing, Graduate Program in Adult Health Nursing, University of São Paulo School of Nursing. São Paulo, SP, Brazil. mariacel@usp.br ⁴ RN. Full Professor, Medical-Surgical Nursing Department at the University of São Paulo School of Nursing. São Paulo, SP, Brazil. kgpadilh@usp.br

INTRODUCTION

The target of quality in the different services offered to society has been increasingly valued, consequently improving results. In healthcare, hospital institutions have incorporated this perspective with a view to offering excellent care, decreasing costs and guaranteeing client satisfaction at any care level, including Intensive Care Units (ICUs). In this context, patient safety stands out, with a change in the approach used until then, with little explored and valued adverse events (AE), not even by multiprofessional team members⁽¹⁻²⁾.

Nowadays, investments in patient safety serve to improve programs aimed at creating a safety culture in health institutions, with a view to preventing any kind of AE⁽³⁻⁵⁾. In this sense, attempts are made to enable each individual to assess the environment for potential danger, receiving institutional support to identify errors and routes to appropriately eliminate, reduce or control them^(4,6-7). In short, attempts are made to insert a collective awareness of AE prevention, using a proactive, non-punishment approach to encourage spontaneous and anonymous event notification^(2-4,8-10).

Despite the emphasis on non-punishment attitudes for professionals involved in AE, in daily practice, it is questioned whether this culture is present in the ICU reality. In other words, is the safety culture, which stimulated the anonymous notification of AE, actually incorporated in institutions, guaranteeing the non-punishment of ICU nursing professionals when events occur? Do the nurses feel safe to notify the occurrence of an AE in daily practice?

Experts agree that reported AE figures represent a very modest estimate of the actual problem. This leads to the undesirable sub-notification and omission of event reports, fundamental to establish prevention measures⁽⁴⁾.

The literature review shows increased AE analysis and, hence, patient safety research, exploring specific and general events, focusing on the environments where care takes place, proposing prevention strategies^(6,11-14), among other approaches. Studies and organizations recommending a non-punishment culture are also unanimous regarding the establishment of prevention measures^(2-4,7-8,14). Little is known about the non-punishment culture in the daily practice of ICUs where the nurses work, however, according to these professionals' perception.

This study is justified since, more than one decade after the publication of the main patient safety research⁽⁴⁾, it is relevant to find out whether these recommendations have been incorporated at ICUs. The researchers believe this knowledge will contribute to health professionals and institutions' education, so that punishments do not act as barriers for safe care delivery to severe patients.

OBJECTIVE

1) To characterize the AE record system at the ICUs; 2) verify AE frequency and existence of punishment in the nurses' perception; 3) identify the nurses' degree of safety to notify AE.

METHOD

A quantitative, exploratory and descriptive research was carried out.

The study population comprised ICU nurses who participated in a scientific event on intensive care, promoted by the São Paulo Intensive Care Society held in Campos do Jordão, SP, Brazil in August 2007. The sample included all nurses willing to participate in the study, after receiving the informed consent term, independently of their time since graduation and ICU experience.

For data collection, a questionnaire was elaborated with closed questions, including variables related to the professional (gender, age, time since graduation and length of ICU experience), the institution and the ICU (hospital type, administration, hospital accreditation and ICU type) and the AE record system (form or computerized register, anonymous or nominal notification, responsible for the notification and nature of monitored events, i.e. medication errors, pressure ulcer, falls, probe, drain and catheter management, urinary tract and pulmonary infection acquired in hospital and others). It also joined data on the nurses' perception of the event frequency and notification (often, sometimes, rarely and never),

besides information on the existence and type of punishment at the institution (verbal warning, written warning, suspension, moral harassment, dismissal and other), previous experience of this event type (often, sometimes, rarely and never) and degree of safety to notify AE at the unit (totally safe, very safe, safe, hardly safe and unsafe).

Before applying the questionnaire, a group of five intensive care nurses active in ICU patient safety research proceeded with its validation.

After obtaining approval from the Research Ethics Committee (process No 649/2007/CEP-EEUSP) and permission from the professionals responsible for the Congress, the researchers distributed the questionnaires on one single day, before the activities started, and collected them at the end of the conferences and lectures programmed for that period.

Nurses who returned the questionnaire were identified through a codename, with a view to their localization in case they dropped out of the study.

is the safety culture, which stimulated the anonymous notification of AE, actually incorporated in institutions, guaranteeing the non-punishment of ICU nursing professionals when events occur?

Data were included in an Excel database and analyzed through descriptive statistics. Absolute and relative frequencies were used for the qualitative variables. For the quantitative variables, averages were used to summarize the information, and standard deviations to indicate data variability. The results were presented as tables and graphs.

RESULTS

In total, 220 questionnaires were distributed to the nurses, 70 (31.8%) of which were returned to the researchers. In this sample, most participants (66-94.3%) were female and their average age was 30.8 (+7.7) years, with 5.9 (+6.1) years since graduation and 3.7 (+3.8) years of intensive care experience.

Regarding the place of work, 98,6% of the nurses informed working at general hospitals, as observed in 91.4% of the ICUs; as for the administration, 35.7% (25) worked at mixed hospital, 34.3% (24) public, 24.3% (17) private, while 5.7% (4) worked at health insurance institutions. Only 24 (34.3%) nurses informed some kind of hospital accreditation, 21 by a Brazilian and 3 by an international agency. Independently of accreditation, however, most of the nurses (49-70.0%) mentioned that some kind of AE notification system existed, predominantly forms (42-85.7%), with anonymous notifications (14-28.6%) and nurses responsible for the notification (41-83.7%). As to the nature of the monitored AE, most of the 49 nurses (28-57.1%) indicated that some specific events were notified, previously selected by the institutions, while 21(42.9%) mentioned registering events in general, without a priori determination.

Focusing on the set of monitored events, independently of previous indication or not by the institution, out of 102 types the 49 respondents indicated (1.4 type/nurse), medication errors and pressure ulcer predominated (20-71.4% each), followed by falls (18-64.3%) and problems with probes, drains and catheters (17-60.7%). Urinary tract (10-35.7%), respiratory (7-25.0%) and other infections (10-35.7%) were also mentioned, although less frequently.

The nurses' perception on the non-punishment culture, focused on in this study, showed the following results.

Regarding the AE frequency the nurses mentioned, the majority (36-51.4%) indicated that events happen *sometimes*, followed by *several times* (20-28.6%) and *rarely* (9-12.8%). Only three (4.3%) nurses answered that the AE happen *often* at the units where they work. Two answers (2.9%) did not include any information (Figure 1).

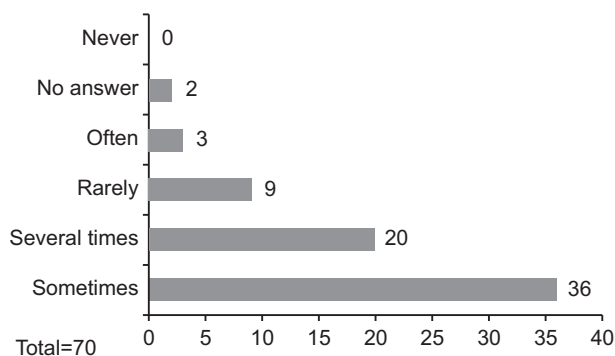


Figure 1 - Distribution of nurses (n=70) according to the perceived occurrence of AE at ICUs - São Paulo - 2007

Most (50 - 71.4%) of the nurses in this study perceive AE sub-notification at their work units. These professionals indicated 115 reasons for these behaviors, i.e. 2.3 reasons/professional. Work overload (29-25.2%), forgetfulness (26-22.6%) and non-valuation of AE (23-20,0%) were the most mentioned reasons, followed by feelings of fear (18-15.7%), shame (13-11.3%) and others (6-5.2%).

When asked about the presence of punishment at their workplace, 17 (24.3%) nurses gave a negative response, although the majority (52-74.3%) indicated that punishment occurs *sometimes* and *always*. One response (1.4%) included no information.

The 52 nurses mentioned 100 types of retaliations (1.9 type/professional), among with verbal (49-49.0%) and written warning (33-33.0%) predominated. Other punishments were also reported, including suspension (11-11.0%), dismissal (5-5.0%) and moral harassment (2-2.0%) (Figure 2).

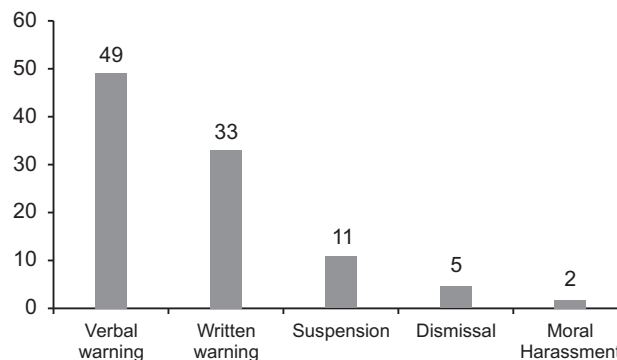


Figure 2 - Distribution of type of punishment (n=100) the nurses mentioned in view of AE occurrence - São Paulo - 2007

As for professional safety to notify an AE, 52 (74.3%) nurses mentioned feeling *safe*, *very safe* and *totally safe*, against 15(21.4%) who manifested *hardly safe* or *unsafe*. Three (4.3%) nurses did not answer this question.

When asked about their personal experience with AE occurrence, i.e. whether they had committed some adverse event while working at the ICU, out of 69 respondents (1

blank answer), only 2 professionals (2.9%) had never had any AE experience, while 67 (97.1%) did, distributed as follows: 42 (62.7%) informed having experienced these situations *sometimes*, followed by 15 (22.4%) *rarely* and 10 (14.9%) *many times*. Fifty-four (80.6%) of the 67 professionals informed no punishment, as opposed to 13 (19.4%) who reported retaliations, such as verbal (12-92.3%) and written warning (1-7.7%).

As for personal safety to notify AE, among the 67 professionals who reported AE experiences at the ICU, it was observed that, out of 54 (80.6%) who had not been punished, the majority (44-81.5%) mentioned feeling *safe*(30), *totally safe*(11) and *very safe*(3) to notify an event. Ten (18.5%), however, indicated *hardly safe*(7) and *unsafe*(1). Also, out of 13 (18.8%) professional who were punished, the majority (8-61.5%) answered feeling *safe*(3) and *totally safe*(5) to notify the AE. Five (38.5%) nurses informed feeling *hardly safe* to notify AE at ICUs (Figure 3).

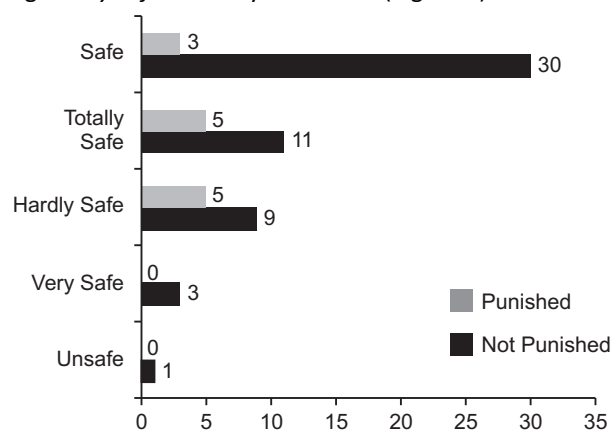


Figure 3 - Distribution of nurses who experienced AE at the ICU (n=67) according to the degree of safety mentioned for AE notification - São Paulo - 2007

DISCUSSION

The establishment of a safety culture at health institutions, focusing on the search for systemic errors instead of blame and punishment, is one of main strategies of organizations whose mission is care quality improvement. With this focus, anonymous AE registration is considered a fundamental action to obtain information on errors, which will permit the implantation of pro-active measures to decrease the number of occurrences⁽³⁻⁴⁾.

In this study, based on information from 70 ICU nurses, it was verified that only 34.3% informed that the institutions adhered to some hospital accreditation program. These Brazilian or international organizations certify institutions that follow quality improvement standards, with AE monitoring as one of the indicators used⁽⁸⁻⁹⁾. Despite low accreditation frequency levels, most nurses (49 - 70.0%) indicated that some AE registration system was used at the ICU, revealing the nurses' concern with event notification and, consequently, with patient safety.

As for the registration characteristics, 85.7% were forms, with anonymous registrations (28.6%), and nurses responsible for the notification (83.7%).

In this sense, independently from the registration form, i.e. whether computerized or in print, one noteworthy aspect is the fact that nurses file the notification, normally the professional's immediate head, added by the nominal identification of the employee directly involved in the event, as opposed to recommendations to encourage AE notifications^(3-4,7,10). These behaviors definitely contribute to the omission of occurrence registers, according to 71.4% of the sample, as the reasons for sub-notification include fear and shame, which 31 nurses appointed (27.0%). Besides, the workload, an institutional problem, and also forgetfulness were mentioned as the main factors for AE sub-notification, in line with other authors' findings⁽¹¹⁻¹³⁾.

According to the IOM⁽⁴⁾, the traditional *shame and blame* approach of health care errors (i.e. emphasis on individual guilt) not only distances the central focus from health care system failure, but also contributes to discourage people to report errors, as they can suffer a range of adverse consequences. Also, considering professionals who work at the bedside guilty avoids the investigation of latent system errors that contribute to adverse event occurrence.

As for the frequency of AE occurrence at the ICUs, most of the sample informed that they happen *sometimes* (51.4%), followed by *several times* (28.6%), against only 12.8% who mentioned *rarely*. These results evidence that, in a complex environment like ICUs, AE are actual threats, strengthening the need for investments in systemic error analysis with a view to decreasing these events, which are harmful not only for patients, but also for health professionals and institutions⁽⁴⁻⁷⁾.

In this sense, the safety culture is also needed at ICUs, as it departs from the premise that human beings commit errors. Hence, the key is to structure systems that minimize the opportunity that errors will happen⁽⁴⁾. This premise applies to critical units, as the work dynamics itself at these units and the presence of unstable and severe patients demands structures and work processes oriented towards prevention and interception of errors before they occur, in line with the main patient safety recommendations^(8-9,14-15).

Various studies⁽¹⁶⁻¹⁷⁾ confirm this need, affirming that patients attended at ICUs are exposed to severe AE risks with potential to cause several kinds of damage. In this respect, 80.0% of the nurses mentioned that AE occurred several times (28.6%) and sometimes (51.4%) at the ICUs where they worked.

Against recommendations to put the institutional safety culture in practice, most nurses (74.3%) indicated that professionals were punished at the ICUs, with verbal warning (49.0%) as the predominant type of punishment.

It was observed, however, that 18.0% of the retaliations the nurses mentioned were severe punishments, such as dismissal and suspension, besides moral harassment, demonstrating that the punishment culture has not been overcome year, despite the efforts different organizations and international and Brazilian patient safety networks have made towards their abolition.

Although punishments existed that generate negative feelings and entail sub-notification, most nurses (74.3%) revealed feeling secure, very secure and totally secure to notify an AE.

Despite the difference positive safety levels mentioned, i.e. secure, very secure and totally secure, these data show that the nurses demonstrate confidence to notify an AE at the units where they work.

In view of these results, it can be inferred that this behavior reflects, besides the professionals' greater awareness of the safety culture, ethical commitment in risk activity management, consequently gaining safety for themselves and clients. On the other hand, it can be supposed that verbal warning, which is a punishment that entails lesser consequences, do not intimidate professionals for AE notification.

In view of these results, however, it cannot be ignored that 15 (21.4%) nurses manifested *little* and *no* safety to notify an AE at the ICU, which demonstrates little credibility at the institution regarding the measures triggered by an AE, i.e. the punishment and its consequences.

Focusing on the notification safety according to nurses who experienced AE at the ICU (67-97.1%), the results show that, although most of the non-punished (44-81.5%) and punished (8-61.5%) professionals indicated safety to notify the AE, five professionals (38.5%) who were punished and 10 (18.5%) who were not mentioned insecurity to notify. These results merely highlight that punishment practices reinforce event sub-notification behaviors, as opposed to the ICU safety culture principles, and should not be stimulated at institutions^(3-5,14-15).

It should be highlighted that, although the nurses expressed safety to notify an AE, based on the results, it could be concluded that the punishment culture is still present at the ICUs, against the global AE notification movement as a strategy to prevent these events. 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.

These research results are relevant because they address the non-punishment culture from the perspective of intensive care nurses, but their limitations should be taken into account. The small sample size and the involvement of nurses who were participating in a regional event do not permit generalizations. However, the study appoints the need for further research and discussion on the theme. Moreover, it creates perspectives for educative activities with regard to the non-punishment culture in hospital institutions and particularly in ICUs.

CONCLUSION

According to the nurses' perception in the sample, 70.0% (49) informed some AE notification system at the institutions where they worked, accomplished through forms (42-85.7%) and anonymously (14-28.6%). Professionals responsible for notification were mainly nurses (41-83.7%).

The referred frequency of AE at the ICUs was *sometimes* (51.4%), followed by *several times* (28.6%).

For 71.4% of the sample, AE are insufficiently notified, with work overload (29-25.2%), forgetfulness (26-22.6%) and non-valuation of AE (23-20.0%) as the main reasons. Thirty-one (27.0%) professionals mentioned the combination of fear and shame.

Most of the nurses (52-74.3%) informed that punishment occurs *sometimes* and *always* at their workplace, with verbal warning as the predominant type (49.0%). Nevertheless, it was observed that the same percentages mentioned feeling *secure*, *very secure* and *totally secure* to notify AE at the ICU where they work.

As for the personal experience of an AE, the large majority of the sample (67-97.1%) indicated this experience at the ICU, with "sometimes" as the predominant frequency (42-62.7%). Among the 67 nurses, 54 (80.6%) informed that they did not receive any kind of punishment and felt secure to notify the AE occurrence. The majority (8-61.5%) of the 13 (18.8%) professionals also mentioned safety for AE notification.

Finally, it is concluded that, although undesirable, the punishment culture in case of AE is a reality nurses still experience at ICUs. This indicates the need for educative programs on patient safety directed at intensive care professionals and hospital institutions in general.

REFERENCES

1. Labbadia LL, Matsushita MS, Piveta VM, Viana TA, Cruz FSL. O processo de acreditação hospitalar e a participação da enfermeira. *Rev Enferm UERJ*. 2004;12(1):83-7.
2. Padilha KG. Ocorrências iatrogênicas na prática de enfermagem. In: Cassiani SHB, Ueta J. A segurança dos pacientes na utilização da medicação. Porto Alegre: Artmed; 2004. p. 111-21.

3. Gandhi TK, Kaushal R, Bates DW. Introduction to patient safety. In: Cassiani SHB, Ueta J. A segurança dos pacientes na utilização da medicação. Porto Alegre: Artmed; 2004. p. 1-10.
4. Kohn LT, Corrigan JM, Donaldson MS, editors. To error is human: building a safer health system. Washington: Institute of Medicine, National Academy Press; 1999.
5. Lawton R, Parker D. Barriers to incident reporting in a healthcare system. *Qual Saf Health Care*. 2002;11(1):15-8.
6. Cassiani SHB. Erros na medicação: estratégias de prevenção. *Rev Bras Enferm*. 2000;53(3):424-30.
7. Leape LL, Kabacoff AI, Gandhi TK, Carver P, Nolan TW, Berwick DM. Reducing adverse drug events; lessons from a breakthrough series collaborative. *Jt Comm J Qual Improv*. 2000;26(6):321-31
8. The Joint Commission. Patient safety [Internet]. [cited 2010 Mar 20]. Available from: <http://www.jointcommission.org/PatientSafety/>
9. World Health Organization (WHO). Patient safety: implementing changes [Internet]. [cited 2010 Mar 12]. Available from: <http://www.who.int/patientsafety/implementation/en>
10. Kuhn A, Youngberg B. The need for risk management to assure a culture of safety. *Qual Saf Health Care*. 2002;11(2):158-62.
11. Santos AE, Padilha KG. Eventos adversos com medicação em serviços de emergência: condutas profissionais e sentimentos vivenciados por enfermeiros. *Rev Bras Enferm*. 2005;58(4): 429-33.
12. Padilha KG, Kitahara PH, Gonçalves CCS, Sanches ALC. Ocorrências iatrogênicas com medicação em unidade de terapia intensiva: condutas adotadas e sentimentos expressos pelos enfermeiros. *Rev Esc Enferm USP*. 2002;36(1):50-7.
13. Carvalho VT, Cassiani SHB. Erros na medicação e consequências para profissionais de enfermagem e clientes: um estudo exploratório. *Rev Lat Am Enferm*. 2002;10(4):523-9.
14. Pedreira MLG. Errar é humano: estratégias para a busca da segurança do paciente. In: Harada MJCS, Pedreira MASP, Peireira SR. O erro humano e a segurança do paciente. São Paulo: Atheneu; 2006. p. 1-18.
15. Leape LL, Berwick DM. Five years after "To Err is Human": what have we learned? *JAMA*. 2005;293(19):2384-90.
16. Henneman EA. Unreported errors in the Intensive Care Unit: a case study of the way we work. *Crit Care Nurse*. 2007;27(5):27-34.
17. Osmon S, Harris CB, Dunagan WC, Prentice D, Fraser VJ, Kollef MH. Reporting of medical errors: an intensive care unit experience. *Crit Care Med*. 2004;32(3):727-33.

Funded by FAPESP (Process n. 2007,05009-5)