



Saúde e Sociedade

ISSN: 0104-1290

ISSN: 1984-0470

Faculdade de Saúde Pública, Universidade de São Paulo.
Associação Paulista de Saúde Pública.

Mendonça, Vitor; Gallagher, Thomas; Hendryx, Nicholas
Medical error: concept, characterization and management¹
Saúde e Sociedade, vol. 28, no. 4, 2019, October-December, pp. 255-266
Faculdade de Saúde Pública, Universidade de São Paulo. Associação Paulista de Saúde Pública.

DOI: 10.1590/S0104-12902019180105

Available in: <http://www.redalyc.org/articulo.oa?id=406263976021>

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Medical error: concept, characterization and management¹


Erro médico: conceito, caracterização e gestão

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Abstract

The objective of this study is to better understand the tensions involved in the fear of making an error due to the harm and risk this would pose to those involved. This is a qualitative study based on the narratives of the experiences lived by ten acting physicians in the state of São Paulo, Brazil. The concept and characterization of errors were discussed, as well as the fear of making an error, the near misses or error in itself, how to deal with errors and what to do to avoid them. The analysis indicates an excessive pressure in the medical profession for error-free practices, with a well-established physician-patient relationship to facilitate the management of medical errors. The error occurs but the lack of information and discussion often leads to its concealment due to fear of possible judgment by society or peers. The establishment of programs that encourage appropriate medical conduct in the event of an error requires coherent answers for humanization in Brazilian medical science.

Keywords: Medical Error; Training; Physician-Patient Relationship; Narrative; Qualitative Research.

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¹ Grants 2015/09289-9 and 2016/23681-1, from Fundação de Amparo à Pesquisa do Estado de São Paulo (Fapesp).

Resumo

O objetivo deste estudo é compreender as tensões presentes no medo de errar por conta dos riscos e danos que tal erro causaria aos envolvidos. Este é um estudo qualitativo baseado nas narrativas das experiências de 10 médicos atuantes no estado de São Paulo, Brasil. O conceito e a caracterização do erro foram discutidos, bem como o medo de cometê-lo, a proximidade com o erro, como lidar com ele e como evitá-lo. A análise aponta pressões excessivas no tocante a práticas sem erros na profissão médica, considerando a existência de uma relação médico-paciente bem estabelecida de forma a facilitar a gestão de erros médicos. Erros médicos ocorrem, mas a falta de informação e discussão sobre o tema costuma levar ao seu encobrimento, uma vez que médicos temem o possível julgamento feito pela sociedade e por seus pares. O estabelecimento de programas que encorajem a conduta médica apropriada caso um erro ocorra requer respostas coerentes para a humanização da ciência médica no Brasil.

Palavras-chave: Erro Médico; Formação; Relação Médico-Paciente; Narrativa; Pesquisa Qualitativa.

Introduction

Upon investigating the performance of medical professionals, we find that this profession bears the expectation of a certain resolving power since the training of such professionals – who deal with human lives – is strongly marked by the pursuit of infallibility and influenced by the hegemonic message that errors are unacceptable when one has a patient under care. The profession further carries the expectation of preventing ills and improving peoples' living and health standards. These facts create a certain demand and pressure in the professional conduct of physicians (Fujita; Santos, 2009; Leape, 1999; Rosa; Perini, 2003).

The use of medical resources in the Brazilian population is growing, as is the use of new diagnostic and therapeutic technologies aimed at delivering health improvements. At the same time, we have also seen an increase in the occurrences referred to as adverse events, or more commonly, medical errors, occurring during or after the provision of patient care (Cernadas, 2009; Fujita; Santos, 2009; Gomes; Drumond; França, 2001; Rosa; Perini, 2003; Udelsmann, 2002; Weerakkody et al., 2013).

Medicine is one of the oldest professions in the world and the incidence of errors among those who practice it is equally old. In Ancient Rome, various specific offenses were established for physicians who committed errors, obliging them to compensate the patient for the error in question, thereby instituting the civil liability of the physician (Moraes, 2003; Udelsmann, 2002).

Error is now considered a real possibility in medical practice. This continues to frighten both medical professionals and those who seek their services, since the issue is little discussed in Brazilian society.

The possibility of error is more easily accepted in the United States than in Brazil and may occur in any environment within a health institution. Accordingly, health regulatory agencies – such as the National Quality Forum and the Joint Commission – have developed standards for the provision of health care so that processes are established for care and the results of procedures arising from medical errors are disclosed (Gallagher; Studdert; Levinson, 2007).

The issue of medical errors has gained prominence in international health regulatory agencies such as the Pan American Health Organization (PAHO) and the World Health Organization (WHO), becoming such an urgent topic of discussion that the agencies published a bulletin for health professionals, with guidelines on what an error is and how to proceed in the event of such an occurrence (Wannmacher, 2005).

Medical education and training in Brazil have been criticized due to the need for change. Medical schools have given little visibility to issues such as inappropriate medical conduct, medical error or greater pressure and support for the population. Accordingly, students' desires, expectations and subjectivities are not welcomed and discussed during their training and this may result in less humanized physicians who are not as receptive to the demands and suffering of their patients.

The position adopted by medical schools in reinforcing an imaginary scenario of error-free work, in which perfection is evident, both in diagnosis and treatment, is an alarming situation. In practice, the message is clear that errors are unacceptable. The constructive approach to error is thus impaired since perfection is required by peers and patients. Errors are thus seen as punitive, marginalizing and negating, in certain situations (Carvalho; Vieira, 2002).

Improved supervision and curricular changes are suggested so that the future physician has a greater capacity to listen and is more receptive to humanization, maintaining a permanent line of action based on the vision of integral health care, approximating technical capacity, ethics and commitment to citizenship. This may open the possibility of discussing errors in the medical profession (Ayres, 2004; Gomes; Rego, 2011).

The possibility of error in health-related settings is known in Brazil and worldwide to be a real and present issue. There are, however, differences in the ways Brazilians face, understand, accept and report occurrences. A Brazilian study showed that future physicians were concerned regarding discussions on the issue given that, although they were knowledgeable on the subject, discussions and clarification on ways of working with such issue in professional life are lacking. Moreover, there seems to be a certain social pressure on future and active

physicians given the difficulty experienced by the professionals involved in revealing or discussing real cases (Chehuen Neto et al., 2011; Mendonça; Custódio, 2016a).

This scenario contrasts with the North American reality, in which professionals understand errors to be a real possibility and where regulations foresee the need to disclose an error to those involved. Furthermore, some institutions offer training and programs to develop skills and enable continuing discussion on the subject among physicians. At the same time, some universities have already implemented programs focusing on competencies among students and residents in relation to health errors and their consequences, as well as emotional and/or technical support projects, for those involved in an adverse event (Gallagher; Studdert; Levinson, 2007; Gallagher et al., 2006; Shapiro; Galowitz, 2016).

Given the scenario outlined above, this study seeks to understand, from narratives provided by Brazilian physicians, the tensions involved in the fear of making an error due to the harm and risk this would pose to the various agents involved.

Method

The objective was investigated using a qualitative methodology, with data produced using the technique of narratives of lived experiences, from existential phenomenological and Benjaminian perspectives. For Critelli (1996), this conception seeks deep reflection on the lived experience, which then allows the essence of knowledge to be obtained, always thinking about the understanding of humankind and the world based on our own concrete existence. Benjamin (1994) connects narratives and the concept of experience, so the personal or collective experience can be accessed through the narrative. The narrative of lived experiences was thus adopted in this study as a method of providing opportunities for one-on-one listening with the medical professionals, while gaining insight into their perspectives of understanding based on the objective described above.

The study was conducted between August 2015 and January 2017. In-depth interviews were conducted with 10 physicians in total, with no proceedings or convictions for medical error in the Regional Medical

Council of the state of São Paulo (Cremesp). The inclusion criteria were: practicing professional in the São Paulo, with registration in Cremesp, and no involvement or service of process in any proceedings or judgments in Cremesp, pursuant to Article 29 of CFM Resolution No. 1246/88, now revoked, or Article 1 of CFM Resolution No. 1931/09, in relation to medical error. Involvement of physicians in any case under these articles was considered an exclusion criterion since such professionals were not the object of study at this time. The study subjects were chosen by

interpersonal indication and by analyzing the public results of proceedings judged by Cremesp.

The meetings were recorded, including the full accounts provided by the subjects, and a broad list of questions was used to stimulate a free narrative. All participants were given an Informed Consent Form, which was read together, ensuring subjects of the commitment to maintain the confidentiality of their identity. Table 1 shows basic information on the interviewed physicians. Fictitious names were used to ensure confidentiality in the study.

Table 1 – Study participants

Name	Age	Specialty or area of practice	Graduation year
Thomas	61	Health administration	1979
Nicholas	70	Gynecology and hospital administration	1972
Chris	56	Internal medicine and palliative care	1985
Paul	67	Pediatrics	1972
Jennifer	30	Family and community medicine	2009
Justin	29	Family and community medicine	2011
Peter	67	Psychiatry	1974
Matt	45	Plastic surgery	1993
Linda	46	Cardiology	1996
Susan	28	Clinical medicine	2011

Our analysis was based on the phenomenological method, seeking the meaning and significance attributed by the physicians to their routine experiences. Attempts at universal explanations were abandoned to remain with phenomena of concrete experience as they show themselves, according to Giorgi and Sousa (2010). The material was read on many occasions, during which written comments were made and significant sections were identified. Based on the analysis, a descriptive text was drafted, producing a dialogue between the core themes identified and the references adopted by this study.

Results

Various aspects transpired in relation to what the interviewed Brazilian physicians thought about

the possibility of a medical error occurring in their practice. From the narratives, five major themes related to the possibility of error in medical practice emerged: concept and characterization of errors, fear of making an error, near misses or error in itself, how to deal with errors and what to do to avoid them.

Concept and characterization of errors

According to the physicians, on the issue of error in their practice, there is always a concern in relation to adequately characterizing what may be considered an error. The subjects thought many concepts and definitions were used incorrectly by society.

We can only talk about medical error based on the three characterizations: negligence, malpractice

and recklessness. Outside these situations, we can talk about bad results or we can talk about errors credited to the physician that are not caused by the physician, but rather by other circumstances, which nevertheless go out to the media and general population, and they believe that any error that occurs after passing through the hospital door is a medical error. (Thomas)

The harm that occurs to patients is not always the product of errors by the physician. Fortunately, it mostly is not, but harm is indeed caused by physicians in situations that could have been avoided for various reasons. Most cases, however, are due to incidental issues. The particularities of the ill patient and knowledge limitations are examples. (Paul)

The difficulty in communication between the professional and the patient is presented as a great obstacle that characterizes the error, leaving it with a negative connotation and no possibility of working on the subject in practice.

The majority of failures occur in communication. Most patients don't have sufficient knowledge to understand how many medical errors they are or have been subjected to. Sometimes you don't pay attention to what the person wanted or the way in which you give news and the outcome doesn't change. You receive an ultrasound of a child with a malformation, for example, that might have a bad outcome, but you need to work with the person on the issue of childbirth, etc. (Jennifer)

The major cause of errors with patients is a lack of communication. Or a misinterpretation of what you did. My biggest concern is making sure the patient is receiving the best care. But I try to do everything so that the patient understands, in their own unique way, what I'm doing. So that the patient trusts me. Even though it's not necessary to know everything. (Justin)

Another striking characteristic regarding the physician-patient relationship is how this is consolidated in routine medical experiences. The

relationship must be well built since it is the basis for both sides to be open to questioning and seek answers in relation to difficult issues or strategies for unforeseen occurrences.

If you have a good relationship you are able to admit an error and maintain that relationship. But I think if the relationship is lacking, this is more difficult, and often because it is difficult, many people will avoid the issue. Even just to reveal that you made an error, the relationship needs to be very strong. (Susan)

Such difficulty in the relationship ends up categorizing the error as something recognized as unacceptable and becomes a barrier to discussion or even admission. Maintaining a good relationship and communication with the patient and family, while having a precise understanding of the technical concepts used to qualify an error, were the main topics indicated by physicians in this category.

Fear of making an error

It is known that taking responsibility for a medical error or failure in Brazilian society is not easy. Many prefer not to speak of such an event or even deny its occurrence, often due to a lack of information on how to proceed or due to fear of the future. However, some can bring their difficulties to light and speak of what lies behind a real possibility of error.

I have always had a never-ending fear. A fear that I still carry with me today, the fear of a lawsuit. I'll never be able to be a surgeon with this issue. Because I'm scared to death of leaving some gauze in someone's abdomen. As much as I want to help, I could have harmed a person. It haunts me to this day. The fear of not knowing how to deal with a situation. Society demands things of us that we actually don't know how to do. (Justin)

Error is something I try my very best to avoid. Actually, I don't think anyone would want to commit an error and go through a lawsuit. Just for the time it would take, the physical and, especially, emotional strain of you being challenged in court.

I've never had to go through it, but I don't think I'd want to. (Susan)

In addition to massive external pressure on physicians, the fear of being sued also emerges as an important issue. The associated wearing down and the situation of being put to the test are behaviors that result in apprehension among medical professionals.

The near misses or error in itself

In this theme, the relationship between the professional and the patient as well as the belief that errors can affect any professional appear as central issues in the speech of interviewed subjects. A good relationship with the family and patient ensures a certain comfort to the physician, who can trust in this relationship when needing to disclose bad news without fearing an unexpected reaction from the patient.

Believing that any professional can make an error enables physicians to feel less guilty, particularly at a time when the possibility of error becomes an actual occurrence.

Yes. Of course I've made an error in the past. I suppose it never went any further because I continued talking to the patient. All of us can make mistakes. (Peter)

I've made an error in the past too. Who hasn't made an error? I remember I discharged a patient and a few hours later the family came to look for me because he had passed away at home. That was a huge shock to me. I was lucky that I had a good relationship with the family, and they didn't take the case any further. There is a principle in bioethics of non-maleficence, stated as 'do no harm' to the patient. If you can't do any good, never harm. (Chris)

I've been through a situation in which I made an error. I prescribed a drug with a name very similar to another. It's just that one was a natural compound to aid sleep. And the other was a drug that changes heart rate. And the patient was using it and her blood pressure fell. But there were no repercussions in her life. I immediately said that I had mistaken

the name of the drug she was to use. And nothing else happened. (Justin)

It is worth remembering that involvement in a proceeding due to medical error was an exclusion criterion. However, the mere fact of having committed an error in professional practice - as was the case with some of the above subjects - was not considered exclusionary.

How to deal with errors

Some physicians understand that this relationship between errors and medicine is not easy to accept. Personality characteristics are considered reasons that make it difficult for physicians to work on the subject, characterizing the error as unacceptable or something that does not occur to the medical professional.

Sometimes, I get the impression that some professionals consider themselves above good and evil, so they end up taking certain actions without weighing the risks and benefits. Without sharing their decision making with the patient and family. I think the more informed physicians are, the more care they take in relation to the procedures they perform. But I believe that a large part of denial comes from personality traits. (Chris)

I've experienced situations in which I confronted colleagues who had done something absolutely absurd, and you ask the colleague in question why they did it, and they are convinced they did the right thing. This demonstrates personality and poor education. You can't send this person to school. If the individual is a conscientious person, the error serves as substance for study and improvement, so that it is not repeated. The error should be a reason to make progress. And not to hide. What should I do to make sure the error is not repeated? (Nicholas)

Although the professionals seem to have a sense that errors are unacceptable and difficult to admit, they agree it is important that errors lead to a process of reflection, learning and maturation so

that the possibility of error is lowered. Moreover, they believe that assistance or support must be offered and accepted since it serves as a critical process for professional growth.

Physicians don't deal with errors well. They don't like to mention the subject. The way I understand it, after dealing with this for so long, is that if physicians started to see this possibility as natural and discuss any eventual errors, they would avoid committing further errors of the same type. It isn't possible to avoid, and as such it should be confronted, discussed and debated to see the causes, and thereby decrease the possibility of recurrence. (Paul)

Can you avoid it? No, you can't. It is a risk inherent to the procedure. We all have the tools to document this. It's no use wanting to hide, because the institution is the first to want to know so the error isn't repeated. (Matt)

Ultimately, the aim is for you not to commit an error. That's what we're taught. The positive side of this is that you're dedicated and judicious in what you do. You check what you're going to do in order to avoid an error. But once an error occurs, since it is a possibility, you have to know how to deal with it. I think it would be interesting to have a backup, maybe a support, which could even be psychological, for the person who made the error. Having a support system rather than a judgment system. And trying to find the error in the process, not necessarily in the person. (Susan)

This notion of thinking you don't need help from other professionals and that the physician can resolve everything alone is the true law of ignorance. It limits what little knowledge you have, and you think it's okay. You have to open up to a range of possibilities to solve your problem, otherwise ignorance is at work. Ignorance is much more comfortable when you assume an all-powerful profile. (Linda)

What to do to avoid it

This topic presents the importance of the professional conducting a well-defined and

comprehensive clinical examination, which is not necessarily linked to an excessive number of laboratory tests, but rather, knowing how to listen to patients and look beyond their physiological complaint.

I've always listened to the patient! I touched the patient. I wasn't concerned with just wanting to write prescriptions or request tests. I always say that picking up a piece of paper with the tests all filled in and ready to do is a step toward error. Why does the patient want to see you? Because they must have gone to see the guy at the pharmacy, who didn't solve the problem. They've already been on the Internet and read five or six articles and that didn't solve the problem. You have to give the patient space to talk. The patient feels the physician's hand. This is more potent than any analgesic and anxiolytic. But this was lost and replaced by technology. So, for you to avoid medical error, you have to espouse the two. You need to have knowledge that is allied to humanism. (Thomas)

Continual training also emerges as an important theme in avoiding the occurrence of errors in medical practice. Knowing what to do, how to do it and what tools to use are processes that all professionals must be clear on in their routine activities, along with technical knowledge. According to one of the interviewees, requesting assistance when an item in these processes is not well understood by the physician may be a good start for this professional to grow as a citizen.

I think the first thing that's very important is that you stay up to date. In medicine, you have to stay up to date on a continual basis. Sometimes I get a pathology here in the hospital that I haven't seen for many years. I'll read up on it and try to get as much information as possible for the situation in question. If I'm not able to lead a case, I'm not ashamed to discuss it with a colleague or ask for their help. It's important to be humble and share with a colleague. Listen to their opinion (Chris).

I think it's a question of attention. You check the details. Create a routine where you establish an order, and you have to follow it so you don't

miss anything. I always try to create a checklist to avoid lapses and review what hasn't been done. Reread prescriptions and their clinical development. And in relation to the procedure, go through it step by step by reading aloud or in your head, covering the necessary material so you don't miss any steps and the error doesn't occur. (Susan)

Lastly, physicians have a self-perception that they have chosen a profession in which good performance necessitates care and listening, not to mention patience, the individuality that each case demands, and their vocation to work with that which is most vital to human beings, life.

I try to protect my practice. Does my job provide me with good conditions, as far as possible, to perform good work in a reasonable amount of time? And even if it doesn't provide such conditions, I take it out of my own time. For example, I think time is a major factor. My good nature is another aspect, because I don't want to cause harm to anyone. (Justin)

The developed categories were expressed by the above narratives as a way of explaining the physicians' understanding of the possibility of error in their practices as professionals responsible for human care.

Discussion and considerations

In Brazil, medical error is regarded as "inadequate conduct, capable of producing harm to the life or deteriorating the health of the patient, through an action or omission of the medical professional" (Gomes; Drumond; França, 2001, p. 27). Giostri (2002, p. 136) understands medical error as "a failure to exercise the profession, resulting in a poor or an adverse result, brought on by the action or omission of the medical professional."

In the Brazilian Code of Medical Ethics there is no definition in relation to the issue, however, article 1 of chapter III stresses that the physician is forbidden from "causing harm to the patient, through an action or omission, characterized as malpractice, recklessness or negligence" (Brasil, 2009).

In American literature, medical error is defined by the United States National Institute of Medicine as a failure of a planned action to be completed as intended or the use of a wrong plan to achieve an objective. These definitions represent errors in execution and planning, respectively (Kohn; Corrigan; Donaldson, 2000).

The establishment of a relationship between the physician and patient is not easily learned due to multiple barriers, particularly the focus of medical schools being directed more toward technicism and less toward humanism. When there is a need to discuss error, various obstacles impair good progress of the physician-patient relationship, e.g., fear of lawsuits, shame and a lack of training on disclosure (Gallagher et al., 2006).

An American study involving more than 2,500 physicians found that these professionals avoid using the word "error" when discussing something that did not go as planned with their patient; 81% stated that the physician was primarily responsible for the error, 61% expressed mere regret and 33% explicitly apologized (Gallagher et al., 2006).

In another American study, investigating physician-patient relationships and communication, patients indicated that they should be told any and all information in a truthful and compassionate manner. In the physician group, some professionals did not consider it necessary to disclose the error if the harm done was trivial or if the patient did not know that the error had occurred, corroborating the narrative provided by Justin. Furthermore, the physicians in this study believed they needed to choose their words carefully when disclosing an undesired occurrence and were reluctant to provide basic information. For the authors, the fact that the physicians concealed errors is largely explained by the human nature of each professional, also corroborating the data provided by the Brazilian subjects (Gallagher et al., 2003).

With regard to disclosing errors to the patient or family, we see a similar picture in Brazil, where the professionals express difficulties in reporting an occurrence, or even denying it to avoid coming into contact with this predicament - often a reflection of the lack of information on the issue (Mendonça; Custódio, 2016b). A well-established relationship is

the most important element in good communication. Discussing this subject during medical education and creating practical possibilities for training on the circumstances surrounding medical errors are initiatives that aim to facilitate this relationship and help the physician become a humanized health professional (Gallagher et al., 2003; Gallagher et al., 2006; Truog et al., 2011).

In the United States, the practice of disclosure is endorsed by the main health regulatory agencies and by the medical profession itself. The disclosure itself is a conversation in which the medical professional acknowledges the occurrence of an error to the patient. Physicians should disclose minimal information, regardless of whether the patient asks, by means of an explicit statement that an error has occurred, including a description of the error, the reasons why it occurred, how recurrences will be prevented and, lastly, an apology. This characterizes the American disclosure (Gallagher; Studdert; Levinson, 2007; Gallagher et al., 2003; Truog et al., 2011).

The disclosure is standardized but should always be adjusted according to the nature of the event as well as the context and patient. These are difficult and challenging conversations that require appropriate preparation. Various health institutes and universities offer training programs in the simulation and practical application of disclosure. This disclosure conversation is supported by an ethical analysis of American professional standards and is a central component of high-quality health care. Moreover, there is a growing body of evidence showing that disclosure offers substantial benefits to both patients as and physicians such as improving patient safety and reducing the frequency, cost and patient suffering associated with medical errors; alleviating the physician's anguish regarding broken relationships with patients and facilitating peer support; and decreased patient frustration and anger due to lack of information and a perceived lack of empathy among caregivers (Gallagher; Studdert; Levinson, 2007; Truog et al., 2011).

Some of the interviewees admitted they had already committed errors, which leads us to consider how many other errors occur in routine Brazilian medical practice. From the narratives, we can observe that no formal apology was given

and there was often no clear indication in the conversation that an error had occurred. This scenario favors the inclusion and diffusion of disclosure in Brazil as a real possibility of work to be employed by physicians in the event of an error.

From the narratives, we found that the youngest subjects – as well as those who had recently completed their training – were more open to the occurrence of error and able to naturally accept this circumstance. This may be a result of change in medical training, discussing and addressing more current and recurring themes in society. Concurrently, these younger physicians feel that society puts excessive pressure on them, requiring solutions to a multitude of health problems, in relation to which these professionals must maintain good practices and appropriate responses to the demands imposed upon them by society, as noted by Justin.

These more frequent and contemporary issues need to gain space throughout the training of all health professionals, highlighting the anxieties and fears of future professionals, using discussions and simulations and providing practice to tackle the relevant issues – even if not easily accepted by the managing body – such as: medical error, patient death, social demands, the consequences of being a health professional, among others.

The practice of defensive medicine has appeared as a negative factor and should be avoided by physicians. Defensive medicine is nothing more than a reactionary behavior among physicians to the possible need for further defense and is thus maintained in case a patient becomes a potential adversary considering legal action. Accordingly, the physician exaggerates with regard to optional requests for more sophisticated tests (Mendonça; Custódio, 2016b).

One way to avoid the possible occurrence of an error, as mentioned by one of the subjects and stressed by the WHO, is by checking the material to be used, or using a checklist. This initiative should be conducted prior to medical intervention, taking into consideration which equipment is essential for the case in question, seeking to ensure patient safety and quality. The WHO has developed a standard surgical safety checklist for use by health professionals and institutions. This approach, with detailed controls for the physician and respective colleagues,

in relation to all instruments, information and personnel involved in the procedure, has already had a direct impact on reducing cases of medical errors (Haynes et al., 2009; Weerakkody et al., 2013).

Confronting medical error as an opportunity for learning and growth is a scenario in which error could be of a less judgmental and negative nature, becoming something easily discussed and addressed. But, how could this be achieved? Physician support and assistance programs have gained increasing space and acceptance among healthcare professionals and institutions in the United States. In the *Peer Support Program*, developed at the Harvard University hospital, physicians from the hospital itself were trained to provide support to peers when they were involved in an error. The program provides full support to physicians from the moment help is sought until they feel sufficiently prepared and confident to leave the program. It is a specific disclosure program in which the physician works on personal issues related to the error (Shapiro; Galowitz, 2016).

Other programs such as *Medically Induced Trauma Support Services* offer a full medical error support service to those involved. The service provides support on disclosure, the personal issues of all those involved and the institutional aspects of the place where the error occurred. It is an outsourced service in support of working with medical error (Truog et al., 2011). These experiences show the viability of investing in initiatives in Brazil, shifting away from the culture of invulnerability, isolation, shame and guilt in the direction of a culture that truly values a sense of shared organizational responsibility for the physician's well-being and patient safety, in which the possibility of medical error may be regarded less as "personal incarceration", without marginalizing connotations for the physician.

A final issue to be addressed is the discussion between the distinction of medical error and the uncertainty inherent in the clinical judgment of medicine, pointed out by some study participants. This situation prompts doubts in patients, who need to hear from the physician himself the actual situation of his case, reinforcing once again the importance of the disclosure process in Brazil. The physician must report the truth about the case and the physician or the institution who should

communicate about the patient's situation, always preserving the truth, loyalty and justice in cases of judgment of an error or bad result. This becomes necessary to remove the tendency in the judgments involving medical responsibility, recognizing the relationship between physician and patient as a relation of consumption (Guz, 2010).

In judging instances in Brazil, physicians are always the ones who evaluate the distinction of error or the probability of uncertainty. In common justice the judges ask the expert medical reports, and the judges of medical ethics are the medical peers who evaluate this distinction. Thus, an explicit note of this uncertainty must be improved during medical training to promote clinical judgment and decision making.

In Brazilian society, both the general population and medical professionals must understand that medical error is a reality that needs to be confronted, discussed and studied to make the issue increasingly visible. Medicine must take responsibility for itself and assist in this process, acting as an agent in the education of professionals who work for the health and well-being of people. Failures must be pointed out, recognizing that an error has been made and thinking of new ways to correct such an error without recurrence, while always engaging the human and empathic character of medical professionals.

Considering future directions, we recommend that health care institutions and the establishments where new physicians are trained become involved in the discussion and dissemination of actions to reduce medical error, based on raising awareness among professionals that errors should not be a factor related to imprisonment, but rather a way to rethink practices utilized. Medical schools should increasingly stimulate human and ethical elements in education, linked to the growth of technicism in health.

This study presented a section of the population to enable participation in and the conducting of interviews. Since this was mainly a qualitative study, the information collected is better understood as exploratory. Accordingly, further studies are required to expand on the subject and broaden the process of acceptance and management in the various spheres of health. The conclusions of this study are not intended to generate a conflict

of interest or any kind of commotion among professionals and patients, but rather to stress the importance of discussing and working with the issue, increasing its acceptance without the Brazilian physician bearing a burden of guilt or punishment.

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Authors' contribution

Mendonça designed the study, interpreted and analyzed the data, and drafted the paper. All the authors reviewed and approved the final text.

Received: 04/09/2019

Approved: 05/29/2019