

## THE SITUATION OF REFERENCE HOSPITALS FOR THE ESTABLISHMENT AND OPERATION OF PATIENT SAFETY CENTERS\*

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**ABSTRACT:** This study was conducted to learn how reference hospitals employ guidelines and protocols on patient safety in relation to the instatement of the corresponding national policy. A descriptive study with a quantitative approach was conducted in the six reference hospitals of the state of Mato Grosso do Sul in 2014, with a script developed using the normative framework of National Policy for Patient Safety resolutions of the Health Surveillance and recommendations of World Health Organization. Findings show that even within Patient Safety Centers, protocols such as surgical prophylaxis, surgical safety checklists and adverse event reporting are observed. Some hospitals lack structure, which prevent full adherence to protocols. This fact is compounded by the shortages of workers, equipment and resources. Results show that the existence of resolutions and guidelines are not enough to guarantee patient safety.

**DESCRIPTORS:** Patient Safety; Quality of Health Care; Health Services Evaluation; Public Health Policy; Safety Management.

### SITUAÇÃO DOS HOSPITAIS DE REFERÊNCIA PARA IMPLANTAÇÃO/FUNCIÓNAMENTO DO NÚCLEO DE SEGURANÇA DO PACIENTE\*

**RESUMO:** Este estudo objetivou conhecer a situação dos hospitais de referência quanto ao uso de normas e protocolos sobre segurança do paciente diante da implantação da respectiva política nacional. Foi realizado um estudo descritivo de abordagem quantitativa nos seis hospitais de referência de Mato Grosso do Sul em 2014, com o uso de um roteiro desenvolvido a partir do arcabouço normativo da Política Nacional de Segurança do Paciente, resoluções da Vigilância Sanitária e recomendações da Organização Mundial de Saúde. Os achados evidenciam que mesmo com o Núcleo de Segurança do Paciente implantado, protocolos como de profilaxia cirúrgica, de checagem de verificação de cirurgias, notificações de eventos adversos são cumpridos. Há falta de estrutura em algumas instituições hospitalares que prejudicam o pleno desenvolvimento de protocolos como falta de profissionais, de equipamentos e materiais. Os resultados apontam que a existência de resoluções e normas não são suficientes para garantir a segurança do paciente.

**DESCRIÇÕES:** Segurança do Paciente; Qualidade da Assistência à Saúde; Avaliação de Serviços de Saúde; Políticas Públicas de Saúde; Gestão da Segurança.

### SITUACIÓN DE LOS HOSPITALES DE REFERENCIA PARA IMPLANTACIÓN/FUNCIÓNAMIENTO DEL NÚCLEO DE SEGURIDAD DEL PACIENTE

**RESUMEN:** Estudio con el objetivo de conocer la situación de hospitales de referencia respecto de uso de normas y protocolos sobre seguridad del paciente ante implantación de la respectiva política nacional. Realizado estudio descriptivo de abordaje cuantitativo en seis hospitales de referencia de Mato Grosso do Sul en 2014, utilizando rutina desarrollada basada en estructuración normativa de la Política Nacional de Seguridad del Paciente, resoluciones de Vigilancia Sanitaria y recomendaciones de Organización Mundial de la Salud. Los hallazgos evidenciaron que inclusive con el Núcleo de Seguridad del Paciente implantado, protocolos como el de profilaxis quirúrgica, de chequeo de verificación de cirugías, notificaciones de eventos adversos, son incumplidos. Existe carencia estructural en algunas instituciones hospitalarias que perjudican el desarrollo pleno de protocolos, como falta de profesionales, de equipo y materiales. Los resultados expresan que la existencia de normas y resoluciones es insuficiente para garantizar la seguridad del paciente.

**DESCRIPTORES:** Seguridad del Paciente; Calidad de la Atención de Salud; Evaluación de Servicios de Salud; Políticas Públicas de Salud; Gestión de la Seguridad.

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## ● INTRODUCTION

Adverse events are unintentional harms caused during care in any circumstances that bring losses to patients. These losses may be light or even severe when they cause death, threaten life, cause permanent damage or prolong hospital stays. They also cause higher numbers of readmissions and deaths. Adverse events affect between 2.9% and 39% of patients and studies show higher frequencies in teaching hospitals in comparison to general hospitals<sup>(1)</sup>.

The magnitude of harm caused to patients and the costs for health services make patient safety an important discussion in the field of health policies worldwide. Patient Safety has also been the focus of various programs supported by World Health Organization and, more recently, Brazil's Ministry of Health<sup>(2,3)</sup>.

In 2013, resolution 529 came into effect in Brazil. It established the National Policy for Patient Security and defined actions and goals. In the same year, the Resolution of Collegiate Board – RDC 36 defined that the establishment of a Patient Safety Center (NSP) is mandatory in hospitals to reduce the occurrence of harm and adverse events in patient care, improve service quality and to promote and improve the quality of records.<sup>(3,4)</sup>

The National Program for Patient Safety has six protocols that aim to reduce the occurrence of adverse events in health institutions: patient identification; pressure ulcer prevention; safety in the prescription, use and administration of medication; safe surgery; hand hygiene practice in health services; fall prevention<sup>(5,6)</sup>. However, frequently, there are problems for setting up or implementing these protocols in hospitals. Workers' knowledge and their adoption of clinical protocols and guidelines are crucial for patient safety strategies to be effective, as well as the availability of resources and equipment for carrying them out<sup>(1)</sup>.

The high costs of adverse events, the diversity and complexity of procedures, patient and family monitoring and legal requirements lead managers to increasingly adopt systematized evaluation practices in services, using tools capable of identifying and locating factors that interfere in generating expected results<sup>(7,8)</sup>.

Evaluation is based on learning from real experiences. It involves understanding the causes that led to successes or errors, and thus clarify what measures need to be taken to avoid difficulties and reach expected results. From such evaluations, it is possible to correct errors, improve institutional performance and reduce the occurrence of adverse events<sup>(9)</sup>.

With the requirement to establish the protocols of the National Program for Patient Safety and the scarcity of national studies on this theme, this study was conducted to learn about the situation of reference hospitals in Mato Grosso do Sul with respect to their establishment and implementation of such protocols. The study adopts the principle that the existence of defined guidelines and recommendations in health policies alone do not guarantee expected results; it is also necessary to use tools for systematic monitoring and evaluation to establish safety practices in daily care.

## ● METHOD

A cross-sectional study was conducted in the six reference hospitals of Mato Grosso do Sul in the four health regions distributed in the state: three hospitals in the Campo Grande area, which includes the capital of the state, one hospital in the Corumbá area, one in the Dourados area and one in the Três Lagoas area.

From a total of 84 hospitals registered in the state of Mato Grosso do Sul, the six reference hospitals in the state were chosen. They are responsible for more complex hospital services. Among all existing hospitals, the ones selected received 66,648 (41%) of total admissions in the state in 2014<sup>(10)</sup>. Those hospitals were chosen because they carry out high complexity procedures that require organized services with established patient safety protocols. The following codes were adopted: Campo Grande area hospitals (HCG-1; HCG-2; HCG-3); Corumbá Hospital (HCO-4); Dourados Hospital (HDO-5) and Três Lagoas Hospital (HTL-6).

All invited hospitals agreed to participate in the study. Data gathering was carried out between the months of February and June, 2014. In order to fill out the checklist, the researcher performed direct observation in all care sectors and verified documented records and evidence along with a worker chosen by the managers of each hospital, who, after data gathering was concluded, reviewed and signed the script containing information from the relevant institution.

For data gathering, a checklist was created with the collaboration of workers from Vigilância Sanitária de Mato Grosso do Sul (Mato Grosso do Sul Health Surveillance). It observed the requirements of Decree 529/2013, of RDC 36, of commissions and guidelines proposed by various RDCs. The World Health Report titled "African Partnership for Patient Safety: Analysis of the status of Patient Safety", which assessed the status of patient safety in that region, was also used<sup>(3,4,11)</sup>. The script contained items grouped by categories that can be observed in Figure 1. Checklist items were grouped inside the variables that were defined using the script.

The script has a total of 50 items, consisting of the inclusion of commissions and services that contribute to the consolidation of practices focused on patient safety, such as: hospital acquired infection control, death, medical records, reprocessing, standardization of products and materials, permanent education, bandages and medicine. Other items for check up present in the script were: presence of protocols and checklists according to the National Policy for Patient Safety; protocols focused on infection control and service organization; presence of permanent education policies; mechanisms for performance of hospital acquired infection control; mechanisms for performance of microbial control; presence of guidelines and procedures shared with patients and families; participation of families in therapy; presence of safety centers; performance of actions instated by the safety center.

Items were structured with three possible responses: yes, for their presence, no, for their nonexistence, and unknown when workers did not know the item or there was no evidence of its existence.

Results were analyzed through frequency distribution while observing guidelines and standards as parameters and the limits and potentials of each institution were identified.

Project was approved by the Research Ethics Committee of the Federal University of Mato Grosso do Sul, ruling 625.980.

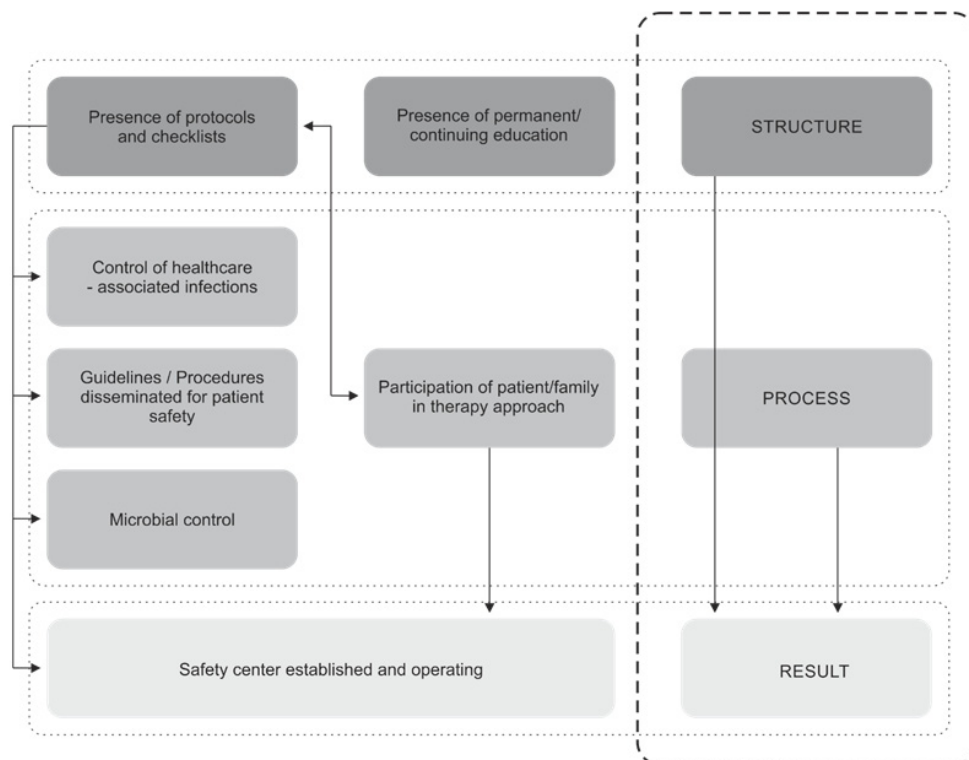


Figure 1 – Variables of the study’s checklist created by the authors. Campo Grande, state of Mato Grosso do Sul, Brazil, 2015

## ● RESULTS

Six hospitals were part of the study. They consisted of three public and three philanthropic hospitals with cooperation agreements with SUS, all of them in the main cities of the state's health regions: Campo Grande, Corumbá, Dourados and Três Lagoas (Table 1).

Table 1 – Characteristics of participating hospitals. Campo Grande, state of Mato Grosso do Sul, Brazil, 2014

Hospitals	Type	No. of Slots	No. of adult ICU Slots
HCG-1	Private/Philanthropic	464	57
HCG-2	Public	248	19
HCG-3	Public	190	16
HDO-4	Public	187	15
HCO-5	Private/Philanthropic	126	7
HTL-6	Private/Philanthropic	115	10

Source: CNES/DATASUS

Frequency distribution of checklist items can be found in Table 2. The first column shows the description and number of observations referring to checklist items. Hospitals mentioned having strategic management plans and organizational charts with Safety Centers established and presented them, except for the Dourados hospital, which adopts some safety protocols, such as hand hygiene and pressure ulcer prevention, but has not established said plans.

The other hospitals have patient safety centers already in place, but have not adopted all corresponding protocols.

In the Três Lagoas area<sup>1</sup>, at HTL-6, protocols for surgical prophylaxis and reporting of surgical complications are not established.

The protocol that was present and common to all hospitals was reporting of communicable and non-communicable diseases linked to the national program for epidemiological surveillance, which is not part of the National Policy for Patient Safety.

Table 2 – Items that are part of the checklist and frequency distribution in investigated hospitals. Campo Grande, state of Mato Grosso do Sul, Brazil, 2014

Grouping of items	HCG-1		HCG-2		HCG-3		HCO-4		HDO-5		HTL-6	
	N	%	N	%	N	%	N	%	N	%	N	%
Protocols and checklists for patient safety (n 10)	8	80	10	100	5	50	6	60	6	60	8	80
Routine for control of hospital acquired infections (n 6)	6	100	6	100	6	100	4	66	6	100	6	100
Routine for microbial control (n 4)	4	100	4	100	4	100	4	100	3	75	2	50
Established commissions (n 8)	7	87	7	87	6	75	7	87	7	87	7	87
Permanent education (n 4)	4	100	4	100	2	50	3	75	2	50	4	100
Resources and materials (n 3)	3	100	3	100	3	100	2	66	3	100	3	100
Routines for patients and family members (n 7)	4	57	5	71	4	57	3	42	4	57	4	57
Participation of families in therapy (n 3)	2	66	2	66	2	66	3	100	1	33	1	33
Established NSP (n 1)	1	100	1	100	1	100	0	0	1	100	1	100
Operating NSP (n 4)	2	50	4	100	3	75	2	50	2	50	4	100

The authors observed that HCG-2, HCO-4 and HTL-6 do not have Reprocessing Commissions. There are no Bandage Commissions at the three hospitals in the Campo Grande area and the Continuing Education Commission was not established at HDO-5 in the Dourados area.

Regarding hospital-acquired infection control and microbial control, results show that processes are compliant in the three investigated hospitals of the Campo Grande area. The hospitals have coordinators and multidisciplinary teams for microbial control, with every member having defined responsibilities and full-time physicians or nurses. In Corumbá (HCO-6), there is no microbial control because there are no microbiology services in the area.

For information management, there are computers available at HDO-5, HTL-6, HCG-1 and HCG-3. In Corumbá, at HCO-4 and at a hospital in the Campo Grande area, HCG-3, there are no computers dedicated to information management, which is crucial for the adoption of electronic records.

Of the seven questions addressing guidelines and procedures for patients and family members and the three addressing family participation in treatment, it was found that the three hospitals in the Campo Grande area have the top performances. In Dourados (HDO-5), family participation focused on patient safety is compliant with established services. The services are, patients' certificate and bill of rights, presence of procedures to inform patients of their rights (brochures, signs) and forms and protocols for obtaining patient consent before procedures.

Although not all processes are established, at HTL-6 there is a form system to obtain patient consent before procedures and at HCO-4 there are brochures available to patients and family members and signs with instructions.

Strategic management plans were found at the hospitals. HCG-1, HCG-2 and HTL-6 have development programs and are participating in certification processes or external assessment focused on care quality.

One hospital did not have an established Patient Safety Center and at HCO-4 there were no professionals qualified for patient safety, which restricts the establishment and monitoring of protocols and checklists, even with operating NSPs. The authors learned that a Patient Safety Center is operational at HTL-6, in the Três Lagoas area.

## ● DISCUSSION

At older hospitals, such as the ones researched in this study, routines and protocols are deeply rooted and may hamper the adoption of new initiatives if they are challenging and different from existing procedures<sup>(12)</sup>.

From an organizational viewpoint, the development and implementation of protocols are effective measures for the reduction of excessive expenditure because they also affect routines in the sectors of infrastructure and care support, such as purchases, stock management, distribution and others. It promotes institutional efficiency as a whole<sup>(7-13)</sup>. In some of the study's hospitals, there were structural problems such as worker shortage for creating commissions, lack of equipment such as computers and even the absence of microbiology labs for the tests required for quality and safety of patient care, which reinforces the conclusion that many incentives for patient safety depend on institutional decision-making.

Moreover, commissions that should be implementing better practices and reduction of adverse events were not yet established at all researched hospitals. In some hospitals, the authors found no continuing actions. In others, routines are established when there is demand, with no work plans or goals. In others, there are no routines and the team consists of one worker who has other responsibilities, with no priority given to activities of the commission.

Commissions should be in full effect before establishing NSPs, such as Hospital Acquired Infections Commission, Microbial Control, and Death Investigation. Research suggests that from the viewpoint of care, the commissions' interventions encourage changes in the safety culture at hospitals, since they support the implementation of protocols and the observation of clinical guidelines and routines,

which is fundamental to guarantee quality in care and work processes in general<sup>(13,14)</sup>.

Results of monitoring and evaluation by commissions favor the goals of continuing education services when addressing problems and experiences in practice. International certification commissions such as Joint Commission on Accreditation of Health Care Organizations recommend the use of protocols with systematic evaluations, aiming for zero tolerance for adverse events as a pre-requisite for patient safety<sup>(1)</sup>.

There are signs that permanent education is the main tool for changes in work processes<sup>(15)</sup>. Our study's results show that even in permanent education practices, all workers are not included and they have activities similar to continuing education, which has little to do with the daily realities of hospitals.

Possible difficulties in changing practices are based on the understanding that changes are associated with the perception of problems and with the degree of importance that relevant subjects give to that perception<sup>(16)</sup>. Recognizing how harmful non-evidence-based procedures are, which are maintained just because of habit, can give rise to the perception that changes are necessary, and a possible tool for that is permanent education. Continuing educational interventions focused on protocols with evidence-based actions support changes in standards<sup>(17)</sup>.

Regarding resources and materials required by activities, workers who accompanied and participated in data gathering mentioned important advancements despite some structural limitations and difficulties such as lack of equipment, laboratories and workers, which are the result of scarce financial resources. Structural problems such as lack of resources and materials are some of the issues that came up in supposed financial adjustments. The authors understand the great difficulty of establishing safety with inadequate or scarce material resources or inadequate technological support for attending to patients<sup>(18)</sup>.

Patient security must be seen as an ecosystem, in which support services, infrastructure and the adoption of technology must effectively support work processes, contributing to and meeting the quality and demand for care for both patients and their family members. Hospitals that seek zero tolerance for adverse events tend to adopt policies for the integration of the whole organization and to effectively work for change in their cultures<sup>(19)</sup>.

Patient and family participation must be part of the practices focused on patient safety. The concept that patients must be passive recipients of care is still present in the researched hospitals, where instructions for patient and family participation are still rare. Communication among all those involved in care must be objective and transparent. This ranges from the reporting of irregular activities to notices that must be given to patients and families on relevant observations to be considered during their stay<sup>(6)</sup>.

There is the belief that patients and families prefer to be part of the treatment when responsibilities are clearly delineated by trusted professionals who are following the patient's treatment. Research suggests that patients and families tend to follow treatment more intensely and collaborate with therapy when they feel that hospitals are trustworthy and safe<sup>(20,21)</sup>. There is evidence of more positive outcomes when patients and families understand the problem and participate in care focused on safety and treatment<sup>(21)</sup>.

Five of the six researched institutions had NSPs, a clear demonstration of their observing the law. It should be noted that the operation of NSPs is mandatory, with city or state health surveillances being responsible for inspections. Lack of NSP is a sanitary infraction<sup>(4)</sup>.

Research results show that even with operational NSPs, some hospitals did not incorporate some protocols in work processes, teams were not established and worker training did not cause changes in care.

However, the authors observed efforts from some workers to improve care, maintain records and the establish protocols. In a recent study, it was observed that among the limitations and barriers for patient safety, are the pressures that workers undergo during care, such as excessive demand and augmented workload, which in turn hamper the search for scientific evidence to establish patient safety measures<sup>(12)</sup>.

## ● CONCLUSION

Research on patient safety is not a means for quality improvement by itself, but it is part of a wider process of organizational learning and continuing quality improvement, which incorporates feedback and data analysis.

Results showed the evidence of issues in hospitals when it come to patient safety. Considering the fact that the hospitals researched are references in their areas, and perform complex procedures, they have to be more attentive to safety guidelines given that their patients are exposed to risks of adverse events.

In conclusion, it is worth noting that observing guidelines and legislation, such as the implementation of safety centers, does not necessarily guarantee the attainment of their ultimate goals, which is effective patient safety.

The authors emphasize that this study is limited by the fact that its script was not validated, although it was developed from legislation focused on patient safety, taking into consideration, beyond RDC 36 and resolution 526, the collaboration of health surveillance technicians of Mato Grosso do Sul's VISA. However, direct observation, reading of records and the verification by workers who followed the application of the script were positive factors for evidence finding.

The study contributed to the dissemination of the theme, especially considering the fact that investigations on this theme are new and scarce in Brazil. Results can be used by the investigated hospitals as portrayals of their actual situation for the establishment of prospective plans for improvement. The script's structure can be reproduced for analysis of the situation of patient safety in hospitals in general.

Additional studies are necessary to find links between the presence of established commissions and protocols to results of indicators established to monitor and evaluate institutional results regarding patient safety and adverse events.

## ● REFERENCES

1. Vendramini RCR, da Silva EA, Ferreira KASL, Possari JF, Baia WRM. Segurança do paciente em cirurgia oncológica: experiência do Instituto do Câncer do Estado de São Paulo. *Rev. esc. enferm. USP.* 2010; 44(3): 827-32.
2. Kohn LT, Corrigan JM, Donaldson MS (editores). *To err is human: building a safer health system.* [Internet] 2000 [acesso em 16 mar 2015]. Disponível: <http://www.csen.com/err.pdf>
3. Ministério da Saúde (BR). Portaria nº 529 de 1 de abril de 2013. Institui o Programa Nacional de Segurança do Paciente (PNSP). *Diário Oficial da União*, [Internet] 25 jun 2014; [acesso em 25 fev 2014]. Disponível: [http://bvsms.saude.gov.br/bvs/saudelegis/gm/2013/prt0529\\_01\\_04\\_2013.html](http://bvsms.saude.gov.br/bvs/saudelegis/gm/2013/prt0529_01_04_2013.html)
4. Ministério da Saúde (BR), Agência Nacional de Vigilância Sanitária (ANVISA). Resolução da Diretoria Colegiada - RDC nº 36 de 25 de julho de 2013. Institui ações para a segurança do paciente em serviços de saúde e dá outras providências. *Diário Oficial da União*, [Internet] 25 jun 2014 [acesso em 25 fev 2014]. Disponível: [http://bvsms.saude.gov.br/bvs/saudelegis/anvisa/2013/rdc0036\\_25\\_07\\_2013.html](http://bvsms.saude.gov.br/bvs/saudelegis/anvisa/2013/rdc0036_25_07_2013.html)
5. Ministério da Saúde (BR). Portaria nº 1.377 de 9 de julho de 2013. Aprova os Protocolos de Segurança do Paciente. *Diário Oficial da União*, [Internet] 10 jul 2013 [acesso em 25 fev 2014]. Disponível: [http://bvsms.saude.gov.br/bvs/saudelegis/gm/2013/prt1377\\_09\\_07\\_2013.html](http://bvsms.saude.gov.br/bvs/saudelegis/gm/2013/prt1377_09_07_2013.html)
6. Ministério da Saúde (BR). Portaria nº 2.095 de 24 de setembro de 2013. Aprova os Protocolos de Segurança do Paciente. *Diário Oficial da União*, [Internet] 29 set 2013 [acesso em 25 fev 2014]. Disponível: [http://bvsms.saude.gov.br/bvs/saudelegis/gm/2013/prt2095\\_24\\_09\\_2013.html](http://bvsms.saude.gov.br/bvs/saudelegis/gm/2013/prt2095_24_09_2013.html)
7. Rossaneis MA, Gabriel CS, Haddad MCL, Melo MRAC, Bernardes A. Indicadores de qualidade da assistência: opinião de enfermeiros gerentes de hospitais de ensino. *Cogitare enferm.* 2015;20(4):798-804.
8. Giles SJ, Lawton RJ, Din I, McEachan RR. Developing a patient measure of safety. *BMJ Qual Saf.* [Internet] 2013

[acesso em 19 ago 2014]. Disponível: <https://dx.doi.org/10.1136/bmjqs-2012-000843>

9. Demo P. Avaliação qualitativa. 9ª ed. Campinas: Autores associados; 2008.

10. Departamento de informática do SUS [Internet]. Brasília [acesso em 03 jun 2015]. Disponível: <http://tabnet.datasus.gov.br/cgi/tabcgi.exe?sih/cnv/qgms.def>

11. Organização Mundial de Saúde (OMS). Parceria Africana para a segurança do paciente: Análise da situação sobre a segurança do paciente (formulário longo). 2012. [acesso em 12 abr 2014]. Disponível: [http://www.who.int/patientsafety/implementation/apps/resources/APPS\\_Improv\\_PS\\_Situational\\_Analysis\\_LF\\_2012\\_07\\_PT.pdf](http://www.who.int/patientsafety/implementation/apps/resources/APPS_Improv_PS_Situational_Analysis_LF_2012_07_PT.pdf)

12. van Leijen-Zeelenberg JE, van Raak AJA, Duimel-Peeters IGP, Kroese EAL, Brink PRG, Ruwaard D, et al. Barriers to implementation of a redesign of information transfer and feedback in acute care: results from a multiple case study. *BMC Health Serv. Res.* [Internet] 2014; 14(149) [acesso em 20 out 2014]. Disponível: <https://dx.doi.org/10.1186/1472-6963-14-149>

13. Carvalho PA, Gottens LB, Pires MRGM, de Oliveira MLC. Cultura de segurança no centro cirúrgico de um hospital público, na percepção dos profissionais de saúde. *Rev. Latino – Am. Enfermagem.* 2015; 23(6): 1041-8.

14. Cauduro FLF, Sarquis LM, Sarquis LMM, Cruz EDA. Cultura de segurança entre profissionais de centro cirúrgico. *Cogitare enferm.* 2015; 20(1): 129-38.

15. Winterbottom AE, Jha V, Melville C, Corrado O, Symons J, Torgenson D, et al. A randomised controlled trial of patient led training in medical education: protocol. *BMC Med Educ.* [Internet] 2010; 10:(90) [acesso em 21 nov 2014]. Disponível: <https://dx.doi.org/10.1186/1472-6920-10-90>

16. Teixeira RR. Humanização: transformar as práticas de saúde, radicalizando os princípios do SUS. *Interface (Botucatu).* 2009; 13(supl 1): 785-9.

17. Oliveira RM, Leitão IMTA, da Silva LMS, Figueiredo SV, Sampaio RL, Gondim MM. Estratégias para promover segurança do paciente: da identificação dos riscos às práticas baseadas em evidências. *Esc. Anna Nery.* 2014; 18(1): 122-9.

18. Ques AAM, Hueso Montoro C, Gálvez González G. Fortalezas e ameaças em torno da segurança do paciente segundo a opinião dos profissionais de enfermagem. *Rev. Latino-Am. Enfermagem* [Internet]. 2010; 18(3). [acesso em 21 nov 2014]. Disponível: <http://dx.doi.org/10.1590/S0104-11692010000300007>

19. Miceli C. Supply chain, information systems play important role in patient safety. *Biomed Instrum Technol* 2014; 48(3): 191-3.

20. Flink M, Hesselink G, Pijnenborg L, Wollersheim H, Vernooij-Dassen M, Dudzik-Urbaniak E, et al. The key actor: a qualitative study of patient participation in the handover process in Europe. *BMJ Qual Saf.* [Internet] 2012; 21(Suppl 1) [acesso em 14 mai 2014]. Disponível: <https://dx.doi.org/10.1136/bmjqs-2012-001171>

21. Weingart SN, Zhu J, Chiappetta L, Sherri O, Stuver SO, Schneider EC, Epstein AM, et al. Hospitalized patients' participation and its impact on quality of care and patient safety. *Int. J Qual Health Care.* 2011; 23(3): 269-77.