https://doi.org/10.47822/bn.v11i2.466
ISSN 2526-6349 *On-line version*
ISSN 2175-1943 *Print version*

Original Article

Analysis of spontaneous notifications of incidents that occurred in a teaching hospital

Análise das notificações espontâneas dos incidentes ocorridos em um hospital de ensino

Rafael Gomes Sousa[1], Frederico Andrade Marques[1], Mirela Lopes Figueiredo[1], Kênia Alencar Fróes Esteves[1], Simone Guimarães Teixeira Souto[1], Annie Victória Souza Soares[1] e Charles Caldas Silva[2].

[1]*Montes Claros State University (Unimontes), Montes Claros-MG, Brazil.*
[2]*FUNORTE University Center, Montes Claros-MG, Brazil.*

Abstract

Objective: to evaluate the occurrences of spontaneously reported incidents in a teaching hospital in Minas Gerais. **Materials and Method:** retrospective, descriptive, quantitative study, carried out in a teaching hospital in Minas Gerais. The sample consisted of 375 incidents reported between 2017 at 2019. **Results:** the prevalence of incidents was 12.2 per 1000 admissions, with a higher frequency in the respective sectors: Internal Medicine, Diagnostic and Imaging Services and Neonatal ICU. There was a higher occurrence of notifications related to failure in care and medications. The main causes were attributed to human factors. **Conclusion:** there was a slight increase in the number of general notifications over the years. Despite this, the cultural change regarding patient safety is still a challenge and requires time in the institution's routine.
Keywords: Patient safety. Quality management. Notification. Nursing.

Resumo

Objetivo: avaliar as ocorrências de incidentes notificados espontaneamente em um hospital de ensino de Minas Gerais. **Materiais e Métodos:** estudo retrospectivo, descritivo, quantitativo, realizado em um hospital mineiro de ensino. A amostra foi composta por 375 incidentes notificados entre 2017 a 2019. **Resultados:** a prevalência foi de 12,2 por 1000 internações, tendo sido evidenciada maior frequência nos respectivos setores: Clínica Médica, Serviços Diagnósticos e Imagem e Unidade de Terapia Intensiva Neonatal. Houve maior ocorrência de notificações relacionadas à falha na assistência e nos medicamentos. As principais causas foram atribuídas a fatores humanos. **Conclusão:** houve um leve aumento no número de notificações gerais ao longo dos anos. Apesar disso, a mudança cultural acerca da segurança do paciente ainda constitui um desafio e requer tempo na rotina da instituição.
Palavras-chave: Segurança do paciente. Gestão da qualidade. Notificação. Enfermagem.

Corresponding author: Rafael Gomes Sousa | rafaelgsjp@gmail.com
Received: 07|17|2022. **Approved:** 11|22|2022.
How to cite this article: Sousa RG, Marquies FA, Figueiredo ML, Esteves KAF, Souto SGT, Soares AVS, et al. Analysis of spontaneous notifications of incidents that occurred in a teaching hospital. Bionorte. 2022 jul-dez;11(2):285-296. https://doi.org/10.47822/bn.v11i2.466

Introduction

The World Health Organization (WHO) defines patient safety as reducing the risk of unnecessary harm to an acceptable minimum. In 2004, the "World Alliance for Patient Safety" was established, which aims to raise awareness for the improvement of care security, in addition to creating policies and strategies in health care[1,2]. In Brazil, the National Patient Safety Program coordinates some health care safety goals. Promoting the implementation of patient safety initiatives in different areas of care is one of the objectives of the program[3].

Avoiding the occurrence of incidents with adverse events is a challenge for improving quality in hospital institutions. The consequences of its occurrence range from losses to patients, increased hospitalization time to complications in the clinical state that can lead to death. In addition to the damage caused directly to the patient, they impose economic consequences, since they increase hospital costs and expenditures[4].

It is known that the care process is complex and depends on the interaction between various sectors of the hospital service. One of the strategies adopted by several countries and health organizations to measure the degree of patient safety is the notification of adverse events by health professionals. These systems can be computerized or manual and local notification consists of recording the occurrence of incidents to the responsible sector in the health service. Such notification can contribute to the prevention of similar incidents, through learning from frailty[5,6].

Training and updating of professionals are essential as to the importance of reliable and complete registration in health information systems. Periodic revaluations of information systems are also necessary in order to constitute effective mechanisms for measuring the performance and quality of the services offered. Therefore, the simple act of registering demonstrates that health professionals recognize and identify the incident in order to adopt preventive measures[7].

This study aimed to evaluate the incidents reported spontaneously in a teaching hospital in Minas Gerais.

Materials and Methods

Design and site

This is a retrospective and descriptive study, with a quantitative approach, conducted in a teaching hospital, located in the city of Montes Claros - Minas Gerais. The institution is a reference to the north of Minas Gerais and south of Bahia in the care of high-risk pregnant women, accidents caused by poisonous animals, among others. It has 151 beds for public service. The institution has

been working with quality management since 2008 and, since then, composes, in its administrative organization, the Quality Management[8].

Incident notifications are performed spontaneously and can be anomalous, through the occurrence management system inserted in the MV Soul System. They can be performed by any server of the institution, provided that it registers in the mentioned system. Upon receipt of the notification, Risk Management, linked to the quality sector, classifies the type of incident, assigns a responsible for monitoring, sets a date for analysis and manages compliance with deadlines for implementing barriers. Usually, the person in charge is the supervisor or manager of the industry where the incident occurred.

Data were collected from December 2020 to February 2021.

Participants

In this research, 375 spontaneous notifications of incidents recorded between 2017 and 2019 were analyzed. We chose not to include the 2020 data due to the pandemic context that affected the number of hospital notifications. The stratified random sampling method with proportional sharing was adopted. The criteria for inclusion of notifications were: incidents occurred in the hospital between January 2017 and December 2019 and classified as adverse events by Risk Management. The exclusion criteria concern the absence of detailing, incomplete completion and closure by the Quality Office for not being in the sector. With this, it was necessary to exclude 15 notifications, resulting in 375 in the final sampling.

Study protocol

For a better understanding of the study, some information on the variables is required:

a) Notified Sector: Support/Administrative Service (Transfusion Agency, Pharmacy, Physiotherapy, Social Service, Material and Sterilization Center – MSC and Warehouse), Surgical Block, Obstetric Block, Diagnostic Services (Endocosphere, Laboratory of Clinical Analysis - LCA, Laboratory of Pathological Analysis - LPA, Radiology, Tomography, Ultrasound), Medical Clinic (Psychiatric Clinic and Medical Clinic), Pediatric Clinic, Surgical Clinic, Maternity, Emergency Room, Intensive Care Unit - Adult ICU and Intensive Care Unit – Neonatal ICU.

b) Shift: Morning – 7 hours to 12 hours 59 minutes; Evening – 13 hours to 18 hours 59 minutes; Night - 19 hours to 6 hours 59 minutes.

c) Severity of damage: No damage - an event that occurred to a patient but did not actually result in damage. Mild damage - mild symptoms, loss of function or minimal damage. Moderate damage - symptomatic patient, in need of intervention, with increased length of hospitalization. Severe damage - symptomatic patient, need for intervention for life support, causing decreased life expectancy.

d) Types of incidents: aggression; aspiration (bronchoaspiration); surgical (cancellation, related to the procedure, related to complications); transfusion (exchange of blood components); evasion; examination (sample loss, delay/failure to perform the examination, failure in the report/result); failure in care (related to medical evaluation, related to nursing procedure, non-compliance with protocols/institutional norms, related to diet, death); phlebitis; incorrect identification of the patient; infections related to health care; injury (pressure injury, burn); accident with biological material; medication (administration, checking, prescription, dispensing, return, drug complications, preparation); loss of device (catheters, probes, tubes/ cannulas) and fall.

e) Causes: The considered causes recorded in the MV Soul System were thirteen types of factors: absence of procedure/protocol, non-compliance with procedure, inadequate staffing, discontinuity of care, work overload, lack of training, ineffective communication, tumultuous environment, overcrowding, human factor, absence/failure of preventive maintenance, insufficient number of equipment and patient complexity.

Data coleection and procedures of analysis

The data collection occurred through the reading of the occurrences in the Management System of MV Soul and transferred to a spreadsheet of the program Excel® prepared for the study. After this step, the data were exported to the software Statistical Package for the Social Sciences (SPSS) version 24.0, in which the analyzes were performed by descriptive statistics.

Ethical aspects

The ethical procedures complied with the regulations of Resolution 466/2012 and the research project was approved by the Research Ethics Committee of the State University of Montes Claros (Unimontes), on November 16, 2020, under opinion consubstantiated number 4.402.078.

Results

The sample analyzed was composed of 375 incidents reported spontaneously in the period from 2017 to 2019 in that university hospital. The prevalence reached 12.2 occurrences per 1,000 hospitalizations. It was observed that the number of notifications increased over the years, and 2017 corresponds to 105 (28%) of the sample, 2018 to (n=130) 34.7% and 2019 to (n=140) 37.3%; these numbers represent an average of 4.65% of annual growth in notifications. The most reported types of incidents were related to failure in care (n=126; 33.6%), followed by drugs (n=95; 25.3%) and tests (n=68; 18.1%), as shown in Table 1.

Table 1 – Types of incidents according to year of occurrence, Montes Claros, Minas Gerais, Brazil, 2021.

Type of Event	2017 n (%)	2018 n (%)	2019 n (%)	Total n (%)
Assistance failure	42 (40)	48 (36.9)	36 (25.7)	126 (33.6)
Medicine	29 (27.6)	28 (21.5)	38 (27.1)	95 (25.3)
Exam	18 (17.1)	28 (21.5)	22 (15.7)	68 (18.1)
Device loss	0 (0.0)	7 (5.4)	16 (11.4)	23 (6.1)
Surgical	7 (6.7)	2 (1.5)	2 (1.4)	11 (2.9)
Lesion	2 (1.9)	3 (2.3)	4 (2.9)	9 (2.4)
Fall	0 (0.0)	3 (2.3)	4 (2.9)	7 (1.9)
Evasion	1 (1.0)	3 (2.3)	3 (2.1)	7 (1.9)
Infection	1 (1.0)	1 (0.8)	4 (2.9)	6 (1.6)
Transfusion	0 (0.0)	3 (2.3)	3 (2.1)	6 (1.6)
Aspiration	1 (1.0)	1 (0.8)	4 (2.9)	6 (1.6)
Phlebitis	1 (1.0)	2 (1.5)	2 (1.4)	5 (1.3)
Biological material	1 (1.0)	1 (0.8)	1 (0.7)	3 (0.8)
Patient identification	1 (1.0)	0 (0.0)	1 (0.7)	2 (0.5)
Aggression	1 (1.0)	0 (0.0)	0 (0.0)	1 (0.3)
Total	105 (28.0)	130 (34.7)	140 (37.3)	375 (100.0)

The failure in the assistance and medicines represent together more than half of the total sample (n=221; 58.9%). The occurrences and situations involving these categories can be analyzed separately in Table 2, in which failures related to nursing procedures (n=76; 60.3%) stand out as the majority in the assistance sector. In situations related to drug incidents, failures during administration stand out (n=48; 50.5%).

Table 2 – Specific occurrences of care and medication failure incidents, Montes Claros, Minas Gerais, Brazil, 2021.

Notified occurrence/situation	2017 n (%)	2018 n (%)	2019 n (%)	Total n (%)
Related to service failure				
Related to nursing procedure	36 (85.7)	31 (64.5)	9 (25.0)	76 (60.3)
Failure to comply with institutional protocols/norms	0 (0.0)	11 (22.9)	17 (47.2)	28 (22.2)
Related to medical evaluation	4 (9.5)	5 (10.4)	8 (22.2)	17 (13.4)
Death	2 (4.7)	0 (0.0)	1 (2.7)	3 (2.3)
Diet related	0 (0.0)	1 (2.0)	1 (2.7)	2 (1.5)
Total	42 (33.3)	48 (38.1)	36 (28.5)	126 (100.0)
Drug related				
Administration failure	22 (75.8)	8 (28.5)	18 (47.3)	48 (50.5)

Dispensing failure	3 (10.3)	13 (46.4)	7 (18.4)	23 (24.2)
Prescription failure	3 (10.3)	3 (10.7)	10 (26.3)	16 (16.8)
Drug complications	0 (0.0)	2 (7.1)	1 (2.6)	3 (3.1)
Check failure	0 (0.0)	0 (0.0)	2 (5.2)	2 (2.1)
Preparation failure	1 (3.4)	1 (3.5)	0 (0.0)	2 (2.1)
Return failure	0 (0.0)	1 (3.5)	0 (0.0)	1 (1.1)
Total	29 (30.5)	28 (29.4)	38 (40.0)	95 (100.0)

The units of hospitalization of the Medical Clinic had a higher number of notifications, with 94 (25.1%), followed by the Diagnostic and Imaging Services, with 47 (12.5%) and the Neonatal ICU with 46 (12.3%). It was verified the notification period, not the incident, since the occurrences did not contain this information; 235 (62.7%) of the incidents were reported in the morning period, 95 (25.3%) in the evening shift and 45 (12%) in the night period. The incidents generated mainly no damage (n=211; 56.3%), followed by moderate damage (n=54; 14.4%), minor damage (n=50; 13.3%) and incidents whose damages were not classified (n=38; 10.1%). These results are presented in Table 3.

Table 3 - Annual characteristics of incidents according to place of occurrence, shift and severity of notification, Montes Claros, Minas Gerais, Brazil, 2021.

Features/categories	2017	2018	2019	Total
	n (%)	n (%)	n (%)	n (%)
Place of occurrence				
Medical clinic	37 (35.2)	30 (23.1)	27 (19.3)	94 (25.1)
Diagnostic and Imaging Services	10 (9.5)	26 (20.0)	11 (7.9)	47 (12.5)
NICU	1 (1.0)	16 (12.3)	29 (20.7)	46 (12.3)
Emergency Room	9 (8.6)	17 (13.1)	19 (13.6)	45 (12.0)
Support/Administrative Services	18 (17.1)	11 (8.5)	11 (7.9)	40 (10.7)
Maternity	5 (4.8)	4 (3.1)	16 (11.4)	25 (6.7)
Pediatric Clinic	8 (7.6)	11 (8.5)	6 (4.3)	25 (6.7)
Surgical Clinic	7 (6.7)	3 (2.3)	11 (7.9)	21 (5.6)
Adult ICU	5 (4.8)	7 (5.4)	2 (1.4)	14 (3.7)
Obstetric Block	4 (3.8)	3 (2.3)	6 (4.3)	13 (3.5)
Surgical Block	1 (1.0)	2 (1.5)	2 (1.4)	5 (1.3)
Total	105 (28.0)	130 (34.7)	140 (37.3)	375 (100.0)
Notification shift				
Morning	50 (47.6)	82 (63.1)	103 (73.6)	235 (62.7)
Evening	34 (32.4)	33 (25.4)	28 (20.0)	95 (25.3)
Night	21 (20.0)	15 (11.5)	9 (6.4)	45 (12.0)
Total	105 (28.0)	130 (34.7)	140 (37.3)	375 (100.0)
Incident severity				
No Damage	51 (48.6)	86 (66.2)	74 (52.9)	211 (56.3)
Moderate Damage	8 (7.6)	21 (16.2)	25 (17.9)	54 (14.4)
Light Damage	7 (6.7)	14 (10.8)	29 (20.7)	50 (13.3)
Not Classified	34 (32.4)	3 (2.3)	1 (0.7)	38 (10.1)
Serious Damage	5 (4.8)	6 (4.6)	11 (7.9)	22 (5.9)
Total	105 (28.0)	130 (34.7)	140 (37.3)	375 (100.0)

Table 4 reveals the causes raised for the notified incidents. The main origins were related to the human factor (n=26; 6.9%) and non-compliance with the procedure (n=17; 4.5%). It is pertinent to clarify that 67.2% (n=252) of the notifications were not analyzed by the managers, thus they did not contain a description of the cause or a proposal for control action for the incident.

Table 4 - Causes identified for incidents after analysis by managers, Montes Claros, Minas Gerais, Brazil, 2021.

Causes	n	%
Incidents not analyzed	252	67.2
Human factor	26	6.9
Noncompliance with Procedure	17	4.5
Discontinuity of Care	16	4.3
Patient complexity	13	3.5
Absence/Failure of Preventive Maintenance	11	2.9
Lack of Training	10	2.7
Absence of Procedure/Protocol	7	1.9
Work overload	7	1.9
Ineffective communication	7	1.9
Inadequate staff sizing	3	0.8
Insufficient Number of Equipment	3	0.8
Tumultuous environment	2	0.5
Over crowded	1	0.3
Total	375	100.0

Discussion

The data reflect an average of 125 incident notifications per year. Incidents with adverse care events are underreported in Brazil, considering national estimates of the incidence of events. Among the reasons for this reality are: the time required to notify, fear of the consequences of your notification, lack of feedback, uncertainty about what is notified, lack of results and effective changes. In the hospital studied, it is noticed that, over the years, the number of notifications were getting a slight growth. This behavior reveals that, despite being a mild growth, gradual adherence to notification systems can be observed[9]. Adherence to notification is associated with the maturity of professionals and acculturation of security policy, through a non-punitive culture management and systemic approach to the occurrence[10].

When characterizing the most reported types of incidents, the failure in care is identified as the most significant and, among the most cited occurrences of this category, the incidents involving nursing procedures stand out. Some reasons may be pointed out for the greater involvement of this category, for example: professionals with greater direct contact with the patient; the overload of procedures and long working times[11]. The work performed by the nursing team is extremely important for the patient, directly influencing their recovery and prevention of hospital infections.

When there are failures in this process or the procedures are not performed, such as dressings and change of position, the patient is exposed to unsafe care practices, in addition to delaying hospital discharge, the return to activities of daily life and consequently, an increase in hospital costs[12].

Incidents related to the drug chain also obtained significant numbers in notifications. In the literature, there are ratifications in which they mention that medication errors are responsible for worrying findings: they are present in 16.7% of all incidents, being the second most frequent[7]. In the context of this study, it was observed that the stage of medication in which most failures occur is during its administration. Knowledge of the stages of medication in which errors are prevalent is fundamental for the improvement of institutional processes. However, there is evidence that professionals do not know all medication errors, which leads to high incidence and low notification[12].

As for the most reported sectors, the hospitalization unit of the Medical Clinic, the Diagnostic and Imaging Services and the Neonatal ICU stand out. The percentages of the Medical Clinic and Diagnostic Services are explained by the sectors with the highest number of beds and daily visits of the institution, respectively. There is a higher frequency, high flow and patient turnover and, consequently, the highest number of patients hospitalized and treated in these places, which justifies these numbers[4]. In response to this statement, the Clinical Hospital of the Faculty of Medicine of Botucatu pointed out the Medical Clinic as the sector with the highest frequency of reports of adverse events and number of occurrences (12.8%)[13].

Regarding incidents that occur in Neonatal ICU, it is known that these are influenced by several factors, including conditions related to the severity of neonatal patients and the need for urgent and highly complex decisions[14]. In addition, there is specificity of intensive neonatal care, permeating excessive handling by the multiprofessional team and, especially, regarding drug use. The preparation of the drug to be administered to the patient is complex, requires the right dosage, daily adjustment with weight gain or loss, with metabolic maturity and excretory function of each newbornborn, rigorous intervals of medicines and narrow therapeutic margin[15].

In the analysis of the period of the day in which the notifications were made, there was a difference between the proportions of morning notifications compared to other shifts. The isolated morning shift presented two times more notifications than the evening shift and five times more than the night shift. These data are in accordance with the National Health Surveillance Agency, whose report indicates that 58.9% of the notifications made in its official system of occurrences were reported during the day[16]. Another similar finding reports that the morning is related to the

period in which various actions are performed, such as consultations, procedures, care, examinations and medical and nursing visits; it is also related to the greater number of professionals in the units, mainly nurses for working in greater numbers during the day and being responsible for a large part of the notions[17].

Concerning the severity of incidents, it was evidenced that most of the classified notifications were not associated with occurrences whose severity caused some damage. However, a percentage of 32.6% of the reported occurrences that presented mild to severe damages is added; in addition to the unclassified occurrences, there is still an unknown as to the severity of these incidents. In this sense, it is confirmed that the hospital environment still presents numerous risks to patients' health, which can aggravate their health state[18].

Despite the limitation regarding the lack of data from most analyses, there are some causes for the incidents that had their analysis completed. They point to the causes of human factor and non-compliance with procedure as the main resulting incidents. Managers of human resources and quality management should be in continuous contact with hospital employees, with a view to obtaining information on patient safety as well as training and team management[11,19,20].

Therefore, to perform a quality assistance, it is necessary that the work processes are reviewed and the professionals are trained and trained through permanent education, it is also important that the institution provides technologies that can favor this improvement. After all, cultural change is a challenge and takes time in the routine of hospitals[21,22].

The results should be considered in the light of certain limitations. This is a retrospective data analysis study, in which underreporting represents a fact to be considered. In terms of variables, the lack of information was frequent, which may have hindered a more reliable knowledge of the studied reality. The sample, although representative, was restricted to a single hospital, which makes it difficult to generalize the results.

This study can contribute to the advancement of knowledge related to quality in health, patient safety and risk management. It is hoped that this work can sensitize professionals about the culture of notification, including in non-hospital environments, such as primary care[23].

Conclusion

There was a gradual increase in the number of notifications over the years, the result of a gradual adherence of professionals about the culture of notifications in the institution. The failure in nursing care procedures reveals a reality that requires special attention to this class, with work

involving training and continuing education. Drug chain incidents reaffirm the complexity of the medication system and the need for strategies to make it safer. This situation indicates the need to implement effective actions of different natures that ensure patient safety.

Authors' contributions

All authors approved the final version of the manuscript and declared themselves responsible for all aspects of the work, including ensuring its accuracy and completeness.

Conflict of interests

The authors declare that there are no conflicts of interest.

References

1. World Health Organization (WHO). The International Classification for Patient Safety (ICPS): taxonomy – more than words. Geneva: WHO, 2009.

2. Magalhães-Costa E, Lobão W, Ribas C, Passos N. Segurança do paciente em serviços de saúde: uma análise na cidade de Salvador, Bahia. Rev **SOBECC**. 2020 abr;25(1):17-24. Available from: <https://revista.sobecc.org.br/sobecc/article/view/536>.

3. Brasil. Ministério da Saúde. Portaria nº 482, de 1o de abril de 2014. Institui o Programa Nacional de Segurança do Paciente (PNSP). Diário Oficial da União. 2013;2(1):1-4. Available from: <http://bvsms.saude.gov.br/bvs/saudelegis/gm/2014/prt0482_01_04_2014.html>.

4. Furini A, Nunes A, Dallora M. Notificação de eventos adversos: caracterização dos eventos ocorridos em um complexo hospitalar. Rev Gaúcha Enf. 2019;40(1):18-28. Available from: https://doi.org/10.1590/1983-1447.2019.20180317 .

5. Reis G, Hayakawa L, Murassaki A , Matsuda L, Gabriel C, Felix de Oliveira M, *et al*. Implantação das estratégias de segurança do paciente: percepções de enfermeiros gestores. Texto Contexto - Enferm. 2017;26(2)35-42. Available from: https://doi.org/10.1590/0104-07072017000340016.

6. Alves M, Carvalho D, Albuquerque G. Motivos para a não notificação de incidentes de segurança do paciente por profissionais de saúde: revisão integrativa. Ciênc Saúde Colet. 2019;24(8):2895-908. Available from: https://doi.org/10.1590/1413-81232018248.23912017.

7. Figueiredo M, Oliveira e Silva C, Brito M, D'Innocenzo M. Análise da ocorrência de incidentes notificados em hospital-geral. Rev Bras Enferm. 2018;71(1):111-9. Available from: https://doi.org/10.1590/0034-7167-2016-0574.

8. Universidade Estadual de Montes Claros, Unimontes. Sobre o Hospital. 2019. Available from: http://unimontes.br/unidades/hospital-universitario/.

9. Maia C, Freitas D, Gallo L, Araújo W. Notificações de eventos adversos relacionados com a assistência à saúde que levaram a óbitos no Brasil, 2014-2016. Epidemiol Serv Saúde (Online) 2018;27(2):201-16. Available from: https://doi.org/10.5123/S1679-49742018000200004.

10. Ferezin T, Ramos D, Caldana G, Gabriel C, Bernardes A. Análise da Notificação de Eventos Adversos em Hospitais Acreditados. Cogit. Enferm. (Online). 2017;22(2):21-34. Available from: <https://revistas.ufpr.br/cogitare/article/view/49644>.

11. Silva A, Alves M, Sanches R, Terra F, Resck Z. Assistência de enfermagem e o enfoque da segurança do paciente no cenário brasileiro. Saúde debate 2016;40(11):292-301. Available from: https://doi.org/10.1590/0103-1104201611123.

12. Duarte S, Stipp M, Silva M, Oliveira F. Eventos adversos e segurança na assistência de enfermagem. Rev Bras Enferm (Online). 2015;68(1):144-54. Available from: https://doi.org/10.1590/0034-7167.2015680120p.

13. Silva L, Terra F, Macedo F, Santos S, Maia L, Batista M. Notificação de eventos adversos: caracterização de eventos ocorridos em uma instituição hospitalar. Rev Enferm UFPE on line. 2014;8(9):1-10. Available from: https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/10020 .

14. Souza J, Vituri D. Notificações de incidentes relacionados à segurança do paciente como ferramenta de gestão para a mudança da cultura organizacional. REAS. 2019;17(237):1-10. Available from: https://acervomais.com.br/index.php/saude/article/view/237.

15. Lanzillotti L, Seta M, Tavares Andrade C, Mendes Junior W. Eventos adversos e outros incidentes na unidade de terapia intensiva neonatal. Ciênc Saúde Colet (online). 2015;20(3):937-946. Available from: https://doi.org/10.1590/1413-81232015203.16912013.

16. Brasil. Ministério da Saúde. Agência Nacional de Vigilância Sanitária. Boletim Segurança do Paciente e Qualidade em Serviços de Saúde nº 15: Incidentes relacionados à assistência à saúde - 2016. Brasília (DF): Ministério da Saúde; 2017.

17. Munhoz O, Andolhe R, Souza Magnado T, Dalmolin G, Pasa T. Perfil dos pacientes e dos incidentes em unidade de clínica cirúrgica. Rev. enferm. UFPE on line. 2018;12(2)416-23. Available from: https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/230813.

18. Göttems L, Gomes dos Santos M, Carvalho P, Amorim F. Estudo dos casos notificados como incidentes em um hospital público de 2011 a 2014. Rev Esc Enferm. 2016;50(5):861-7. Available from: https://doi.org/10.1590/S0080-623420160000600021.

19. Neto A, Antunes F, Oliveira Lima G, Nóbrega T,Cortez de Sena B, Medeiros R. Análise das notificações de eventos adversos em um hospital privado. Enf Global [Internet]. 2019;18(3):314-43. Available from: https://revistas.um.es/eglobal/article/view/325571 .

20. Pena M, Melleiro M. Eventos adversos decorrentes de falhas de comunicação: reflexões sobre um modelo para transição do cuidado. Rev Enferm UFSM. 2018; 8(3):416-23. Available from: https://periodicos.ufsm.br/reufsm/article/view/25432.

21. Novaretti M, Santos E, Quitério L, Daud-Gallotti R. Sobrecarga de trabalho da Enfermagem e incidentes e eventos adversos em pacientes internados em UTI. Rev Bras Enferm. 2014;67(5):692-9. Available from: https://doi.org/10.1590/0034-7167.2014670504.

22. Araujo M, Lunardi Filho W, Silveira R, Souza J, Barlem E, Teixeira N. Segurança do paciente na visão de enfermeiros: uma questão multiprofissional. Rev Enf Foc. 2017;8(1):52-6. Available from: https://doi.org/10.21675/2357-707X.2017.v8.n1.984.

23. Amaro M, Bohomol E. Notificação de eventos near miss na atenção primária à saúde. Rev Enf Foc. 2021;11(5):172-8.