

*ADVERSE EVENTS AND SAFE NURSING CARE IN PRIMARY HEALTH CARE:  
INTEGRATIVE REVIEW*

**EVENTOS ADVERSOS E O CUIDADO SEGURO DE ENFERMAGEM NA ATENÇÃO  
PRIMÁRIA À SAÚDE: REVISÃO INTEGRATIVA**

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**ABSTRACT**

**Aim:** To map what scientific production addresses about adverse events related to Brazilian nursing professional practice in primary health care. **Methodology:** This is an integrative literature review study in the Virtual Health Library, using the descriptors “Adverse events”, “Patient safety”, “Nursing” and “Primary Health Care”, from January 2011 to September 2020. Of the 675 eligible publications analyzed, ten were included for meeting the objective. **Results:** From the analysis of the articles, four categories emerged, namely: Types of adverse events; Factors related to adverse events; Notification of adverse events; Management Strategies in the face of adverse events. **Conclusion:** Adverse events are present in primary health care and their notification must be reinforced. It is necessary to invest in management strategies, support professional training, effective communication and a culture of patient safety to minimize adverse events that permeate health care.

**Keywords:** Adverse Events; Primary Health Care; Patient Safety; Nursing.

**RESUMO**

**Objetivo:** Mapear o que a produção científica aborda sobre eventos adversos relacionados à prática profissional de enfermagem brasileira na atenção primária à saúde. **Metodologia:** Trata-se de um estudo de revisão integrativa da literatura na Biblioteca Virtual em Saúde, através dos descritores “Eventos adversos”, “Segurança do paciente”, “Enfermagem” e “Atenção Primária à Saúde”, realizada no período compreendido entre janeiro de 2011 e setembro de 2020. Das 675 publicações elegíveis analisadas, dez foram incluídas por atenderem ao objetivo. **Resultados:** Da análise dos artigos emergiram quatro categorias, a saber: Tipos de eventos adversos; Fatores relacionados aos eventos adversos; Notificação de eventos adversos; Estratégias de gestão frente aos eventos adversos. **Conclusão:** Os eventos adversos estão presentes na Atenção Primária à Saúde e sua notificação deve ser reforçada. Faz-se necessário investir em estratégias de gestão, apoiar a capacitação profissional, a comunicação efetiva e a cultura de segurança do paciente, para minimizar os eventos adversos que permeiam a assistência à saúde.

**Palavras-Chave:** Eventos Adversos; Atenção Primária à Saúde; Segurança do Paciente; Enfermagem.

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## INTRODUCTION

Patient safety has been considered one of the pillars that support the levels of quality of health services, being identified as having a great impact in discussions involving the quality of care. The risks of adverse events (AE) exist in different care settings, with a greater emphasis in the scientific literature for the hospital area<sup>(1-3)</sup>, probably due to the risk of the occurrence of AE being associated with the level of complexity of the health service (4), since the greater and more complex the health services offered are, the greater the risks of errors and AE<sup>(5)</sup>.

A study carried out in nursing teaching institutions, regarding the perception of AEs, signaled that the work overload and the demand for care contribute to the risk of occurrence of any AE<sup>(6)</sup>. Professional practice reveals little discussion about AEs in Primary Health Care (PHC), which favors that such events go unnoticed and, at times, not notified. However, not all errors culminate in AE and not all AEs are the result of errors<sup>(5)</sup>. In this sense, patient safety is closely related to the excellence sought in the development of nursing care and in the health services provided to the Brazilian population, especially in the public health network.

Researchers who investigated the reasons for the non-notification of patient safety incidents by health professionals,

signal for the occurrence of underreporting due to the fear of notifying, as well as the lack of knowledge of the procedures required for notification, in addition to the centralization of notification in the professional nurse and notifications focused on more serious events. Although AEs are sometimes associated with human error, one must consider the structural and organizational conditions involved in work activities, as well as professional qualification<sup>(7)</sup>.

It is important to consider that the notification tools promote quality and safety culture, always aiming at learning to guarantee the promotion and prevention of the population's health and serving as an important health surveillance tool for the management of health services, in order to strengthen decision-making in the face of incidents related to patient safety<sup>(8-9)</sup>.

Nursing professionals, together with the unit manager, have an understanding of the real need for training, qualifications, permanent education and team meetings, in order to ensure the prevention of injuries and qualify health care<sup>(4)</sup>.

Despite advances in patient safety, the lack of understanding and knowledge of professionals in the face of error is highlighted in social media news, causing great social impact, requiring efforts, from the entire health system, to provide assistance. with participatory and attentive professionals

in the identification and prevention process, thus ensuring lower AE rates <sup>(5)</sup>.

Therefore, the actions and attitudes towards AEs should provide for the mitigation of damages and risks inherent to the patient, since the increase in resilience in the organizational scope guarantees a safer care process for the patient <sup>(9)</sup>.

In view of the above, considering the importance of recognizing AEs and their contributing factors, as well as management strategies in primary health care to mitigate the occurrence of AE, the question arises: what does Brazilian scientific production address about adverse events related to nursing practice in PHC? Therefore, it was sought, through research, to map what scientific production addresses about adverse events related to the Brazilian nursing professional practice in PHC.

## MATERIAL E METHODS

It is an integrative literature review, a method that gathers, evaluates and synthesizes the results of research on a specific theme. In this study, the following steps were taken: <sup>(1)</sup> definition of the research theme with elaboration of the guiding question; <sup>(2)</sup> definition of the inclusion and exclusion criteria for studies; <sup>(3)</sup> definition of the information to be extracted from the selected studies; <sup>(4)</sup> analysis of the studies with

decoding and categorization of the findings; <sup>(5)</sup> analysis and interpretation of results; <sup>(6)</sup> presentation of the research report <sup>(10-11)</sup>.

For the elaboration of the research question, the PICO strategy was used, which represents an acronym for: (P) Patient, (I) Intervention, (C) Comparison, and (O) “Outcomes” (outcome). The use of these four components makes it possible to formulate the research question, in addition to the identification of keywords that assist in locating primary studies in the databases <sup>(12)</sup>. Thus, the delimited research question was: what does Brazilian scientific production address about adverse events related to professional nursing practice in primary health care? In it, the first element of the strategy (P) consists of the PHC nursing professional in Brazil; the second (I), the EA; and the fourth element (O) what type of AE occurs in PHC, related factors, notifications and management strategies in relation to AEs in PHC. It is noteworthy that, depending on the review method, not all elements of the PICO strategy are used, which justifies not using the third element (C - comparison) in this review.

The search for primary studies took place between October 24 and 26, 2020, held at the Virtual Health Library (VHL), which includes the databases of Latin American and Caribbean Literature in Health Sciences (LILACS), Medical Literature Analysis and

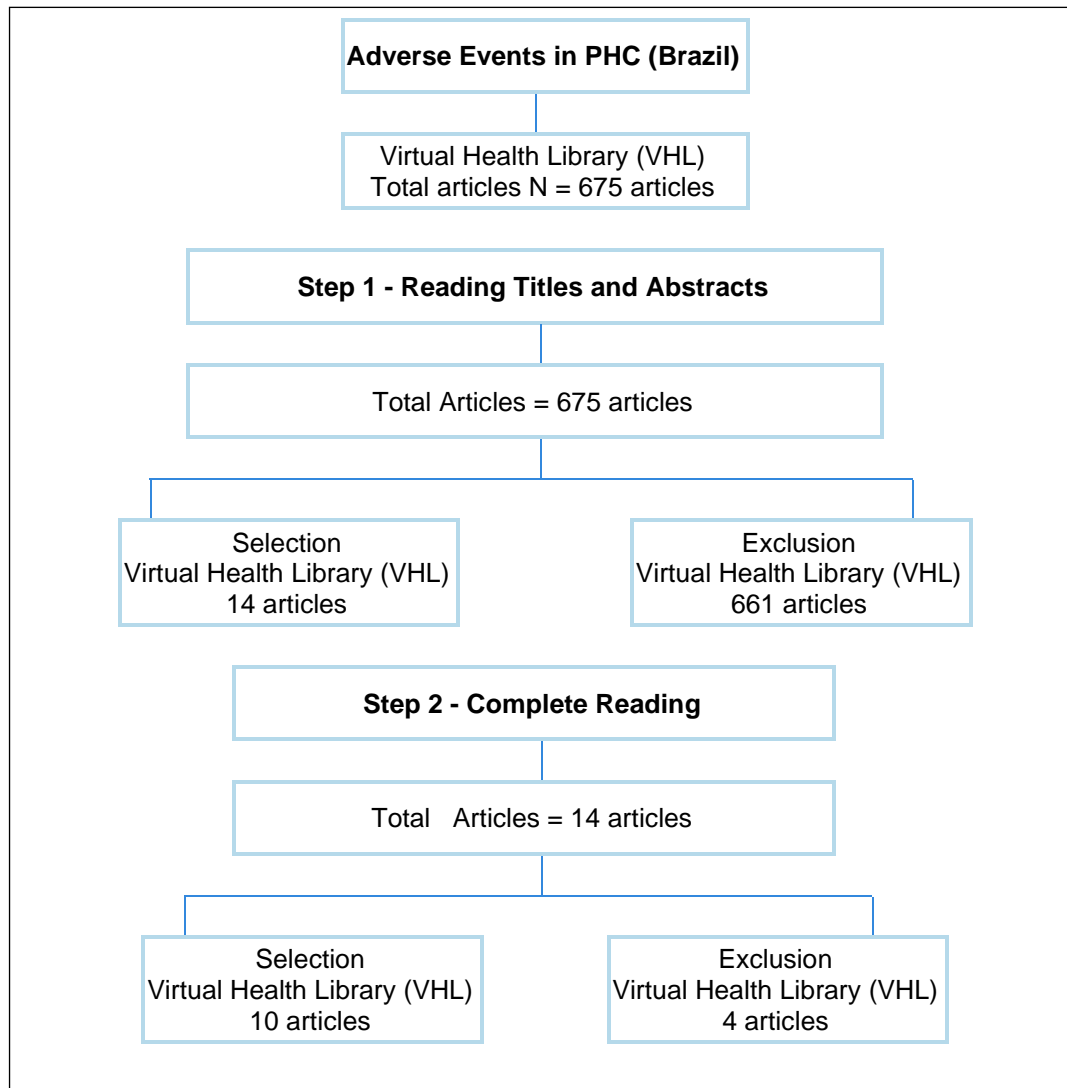
Retrieval System Online (MEDLINE) and Database in Nursing (BDENF), among others, using the association of health descriptors (<http://decs.bvs.br>), or uniterm in two specific intersections: “Adverse events” AND “Primary Health Care” and, “Adverse events” AND “Nursing”, with the assistance of the Academical Program<sup>(13)</sup>.

The inclusion criteria of the studies were considered: original articles that addressed the AE related to professional nursing practice in PHC in Brazil, available in full format, electronically, published in the period between the months of January 2011 and September 2020, written in Portuguese, English and Spanish. Studies of literature reviews, secondary studies, such as systematic review, letter-response, reflections and editorials, duplicate articles and articles involving AE of specific medications were excluded. Data collection was carried out in October 2020.

As search strategies were applied the filters of: temporality, language and availability of articles in full text; and using

the intersections of descriptors and keywords in the Portuguese language, 675 eligible articles were identified, which were imported into Academical software. Through the Academical Program, it was possible to extract the number of articles per database available in the VHL, being: LILACS (227 articles), MEDLINE (315 articles), BDENF (46 articles) and IBECs (50 articles). This followed the careful reading of titles and abstracts, applying the previously defined selection criteria, with 661 articles being excluded, so that 14 articles went on to the second stage, to read the entire text. In this step, two articles were excluded due to duplicity, one article because it is a study in the hospital area and one article that had a scenario from another country. Thus, ten articles made up this integrative review, according to the flowchart generated by the Academical Program<sup>(13)</sup> and shown in figure 1.

Figure 1 - Flowchart for the selection of articles generated by the Academical Program.  
Concórdia - SC, Brazil, 2020

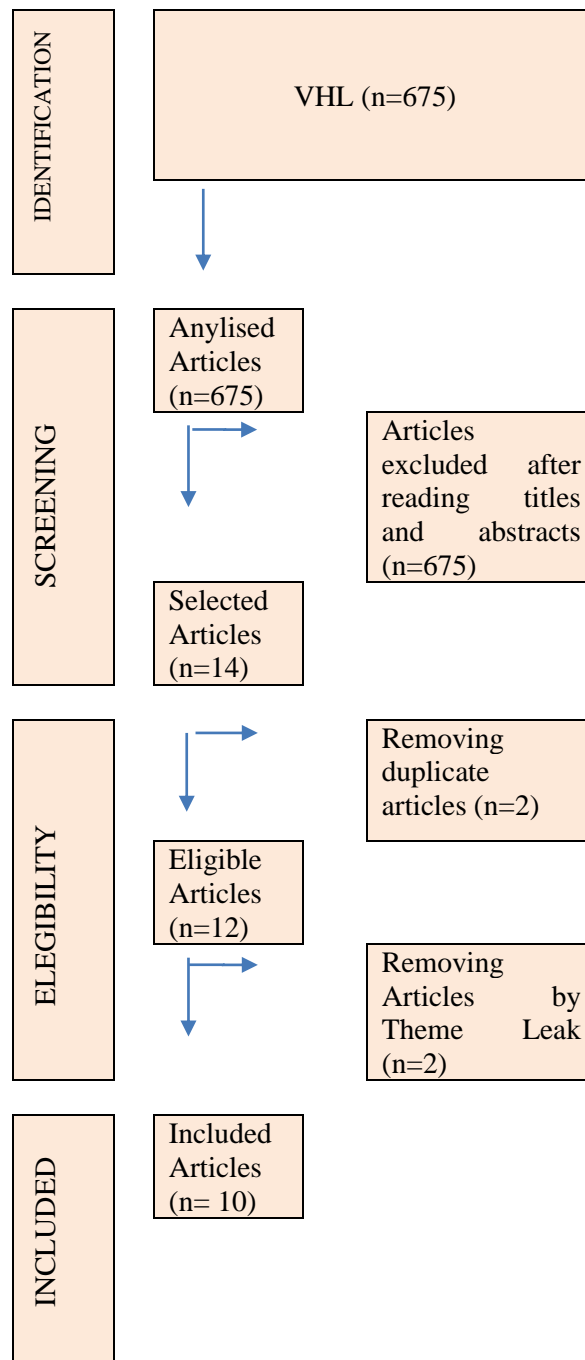


Source: Academical Program, October 2020.

Figure 2 shows the flowchart of the article selection process for an integrative review, according to PRISMA, following the

identification, screening, eligibility and inclusion criteria<sup>(14)</sup>.

Figure 2 - Flowchart of the selection process according to PRISMA. Concórdia - SC, Brazil 2020.



Source: Authors' database (2020), based on Moher (2009) <sup>(14)</sup>.

The analysis of the studies included in the review was performed by filling out a specific form for the interpretation of the data. For the presentation of the results, simple



statistics were used and the data were described from the integrative review table (Table 1). Then, the articles were analyzed using the Thematic Analysis technique, proposed by Bardin <sup>(15)</sup>, which is composed of three distinct stages: pre-analysis; exploration

of the material and treatment of the results, inference and interpretation. The analysis process gave rise to four thematic categories, which are: Types of AE; Causal factors related to AS; EA notification; Management strategies vis-à-vis the AE.

## RESULTS

Based on bibliometrics, that is, that quantifies, describes and provides prognoses related to the communication and writing process <sup>(16)</sup>, the quantitative aspects of studies that addressed information about AE related to professional nursing practice in PHC were

analyzed, with the sample The final is represented by ten<sup>(10)</sup> articles, which were identified with the letter “A” in the article, followed by a sequential Arabic number from 01 to 10 and referenced by superscript Arabic numbering, as shown in Table 1.

Table 1 - Characterization of scientific production about adverse events in primary health care in the period from 2011 to 2020, Concórdia - SC, Brazil, 2020.

#	Title	Aim	Authors	Base	Publication	Periodical	Level of Evidence
A01 <sup>(17)</sup>	Characteristics of adverse events in primary health care in Brazil	Assess the occurrence of incidents in health care for patients in primary care in Brazil.	Marchon SG, Mendes Junior WV, Pavão ALB	LILACS	2015/11	Health Public Chain	4
A02 <sup>(18)</sup>	Post-vaccination adverse events: permanent education for the nursing team	Carry out Permanent Education actions to nursing professionals in the city of Guarapuava - PR, aiming at reducing errors in the administration of vaccines and possible adverse events after vaccination.	Ternopolski CA, Baratieri T, Lenstck MH	LILACS	2015/12	Espaç. Saúde (Online)	4

A03 <sup>(19)</sup>	Occurrence of adverse events after vaccination in the elderly	Analyze the occurrence of Post-Vaccination Adverse Events in the elderly, in Brazil, from 2004 to 2013.	Linheira-Bisetto LH, Ciosa SI, Cordeiro TLR, Boing MS	LILACS	2016/12	Cogitare enferm	4
A04 <sup>(20)</sup>	Care provided by the nursing team in meeting adverse post-vaccination adverse events	Identify the care provided by the nursing team in meeting adverse events post-vaccination (AEFI).	Oliveira ES de A, Casarin ST, Ceolin T, Soares DC	BDENF	2016/04	Rev. Enferm. UFPI	4
A05 <sup>(21)</sup>	Perception of Family Health Teams about the notification of adverse drug events	Assess whether health professionals from the family health team recognize the notification of adverse drug events (AME) as a way of promoting Patient Safety and the possible barriers to its implementation.	Pereira LB, Jobim L, Bueno D	LILACS	2018/08	Saúde Redes	4
A06 <sup>(22)</sup>	Adverse events caused by nursing care: reported by the media	Characterize information from audiovisual documents available on YouTube about adverse events caused by nursing care in Brazil and reported by television media.	Moura R dos S, Saraiva FJC, Santos RM dos, Santos RF de M dos, Rocha KR da SL, Virgem MRC da	BDENF	2018/06	Rev. Enferm. UFPE on line	4
A07 <sup>(23)</sup>	Nursing practice in the face of adverse events after vaccination.	Identify post-vaccination adverse events, the focus of nursing practice, in the Event Information System database  Post-vaccination Adverse and discuss the role of nurses in their surveillance.	Bisetto LHL, Cubas MR, Malucelli A	MEDLINE	2011/10	Rev Esc Enferm USP	4



A08 <sup>(24)</sup>	Management of adverse events after vaccination by the nursing team: challenges for care	Analyze how the nursing staff of a specialty center develops care practices related to the management of mild, moderate and severe AEFIs among children up to one year old.	Alves H, Domingos LMG	LILACS	2013/12	Rev. Enferm. UERJ	4
A09 <sup>(25)</sup>	Analysis of youtube videos on adverse health events	Analyze YouTube videos on adverse health events, identifying relationships with patient safety.	Salvador PTC de O, Martins CCF, Alves KYA, Costa TD da, Santos VEP	LILACS	2014/12	REME rev. enferm	4
A10 <sup>(26)</sup>	Analysis of the occurrence of adverse events after vaccination due to immunization error	Analyze the occurrence of Adverse Post-Vaccination Event (AEFI) due to immunization error, in Paraná, from 2003 to 2013.	Bisetto LHL, Ciosak SI	LILACS	2017/02	Rev. Brás. Enferm	4

Source: Authors' database, 2020.

When analyzing the characteristics of the articles, it was found that the largest number of articles were published in the years 2015<sup>(17-18)</sup>, 2016<sup>(19-20)</sup> and 2018<sup>(21-22)</sup> and no article was selected in the years 2012, 2019 and 2020. Publications were also identified in the years 2011<sup>(23)</sup>, 2013<sup>(24)</sup>, 2014<sup>(25)</sup> and 2017<sup>(26)</sup> with one publication per year. The studies were published in different journals: *Caderno de Saúde Pública*<sup>(17)</sup>, *Revista Espaço para a Saúde*<sup>(18)</sup>, *Cogitare Enfermagem*<sup>(19)</sup>, *Revista de Enfermagem da UFPI*<sup>(20)</sup>, *Saúde em Redes*<sup>(21)</sup>, *Revista de Enfermagem da UFPE*<sup>(22)</sup>, *Revista da Escola de Enfermagem*

*da USP*<sup>(23)</sup>, *Revista de Enfermagem da UERJ*<sup>(24)</sup>, *Revista Mineira de Enfermagem*<sup>(25)</sup> and *Revista Brasileira de Enfermagem*<sup>(26)</sup>, representing one article per journal.

According to the geographic location of the studies, it was found that the largest number of studies are from the South of the country (60%), four from Paraná<sup>(18-19,23,26)</sup> and two from Rio Grande do Sul<sup>(20-21)</sup>, followed by the Southeast region (20%), with two studies from the state of Rio de Janeiro<sup>(17,24)</sup> and the Northeast region (20%), covering the states of Alagoas<sup>(22)</sup> and Rio Grande do Norte



<sup>(25)</sup>. It is noteworthy that four studies addressed national reference data<sup>(19,22-23,25)</sup>.

Regarding the language, all articles were found in the Portuguese language<sup>(21,23)</sup>, although some were published bilingual (70%) - Portuguese / English<sup>(17,19,25,23)</sup>.

As for the level of scientific evidence, it is possible to draw a classification according to the methodological approach used in the studies, following a hierarchical pattern. In the present IR study, the evidence level classification was used as follows: 1 - evidence from systematic review or meta-analysis of all randomized controlled clinical trials or from clinical guidelines based on systematic reviews of randomized controlled clinical trials; 2 - evidence derived from at least one well-designed randomized controlled clinical trial; 3 - evidence obtained from well-designed clinical trials without randomization; 4 - evidence from well-designed cohort and case control studies; 5 - evidence originating from a systematic review of descriptive and qualitative studies; 6 - evidence derived from a single descriptive or qualitative study and 7 - evidence from the opinion of authorities and / or report from expert committees<sup>(27)</sup>.

From that, it was possible to verify that, of the articles included in this review, there were no classified according to the level of evidence 1, 2, 3, 5 and 7, with three

journals classified in the level of evidence 4<sup>(17-19)</sup> and seven with evidence level 6<sup>(20-26)</sup>.

From the thematic analysis of the articles, four categories emerged, namely: Types of AE; Factors related to AE; AE notification; Management strategies vis-à-vis the AE.

### **Types of AE**

It is observed that 90% of the studies addressed some type of AE. Two studies related to medication (20%)<sup>(21-22)</sup>, mostly associated with the administration of medication by the wrong route and the wrong drug, such as, for example, “the administration of enteral diet by the parenteral route”<sup>(22)</sup> or “acid administration instead of sedative”<sup>(22)</sup>, among these, it is possible to mention the error of insertion of peripheral catheter for medication administration<sup>(22)</sup>.

In this sense, a study that characterized the information in audiovisual documents available on YouTube about the AE caused by nursing care

in Brazil and reported by television media, it signaled that the video titles were impactful, despite not revealing knowledge about the conceptual difference between error and AE, reaching 76,307 hits<sup>(22)</sup>. Still, there was an inability to recognize medication-related errors in nearly 40% of study participants who assessed whether PHC health professionals recognize notification of

medication-related EVs as a way of promoting patient safety<sup>(21)</sup>.

Only one study addressed errors of diagnosis or incorrect diagnosis that caused AE and evolved into complications and worsening of the patient's clinical condition, mostly related to the professional's carelessness in not performing the physical examination correctly, delay in obtaining information, interpretation of laboratory findings and disregard of exams<sup>(17)</sup>.

It is noteworthy that half of the studies in this review are related to vaccine administration<sup>(18-19,23-24,26)</sup>, prevailing local and systemic manifestations, by viral and bacterial vaccines<sup>(18)</sup>, with the most cited vaccines: BCG<sup>(24,26)</sup>, yellow fever<sup>(19,24)</sup>, diphtheria and tetanus, hepatitis B, pneumococcal 23 valent, influenza<sup>(19)</sup>, Triple Viral, Tetravalent and Viral Double<sup>(24)</sup>.

Among the local manifestations caused by vaccines were local abscess<sup>(24)</sup>, hot and cold subcutaneous abscess, suppurated regional lymphadenopathy<sup>(26)</sup>, unsuppurated lymphadenomegaly, induration, generalized rash<sup>(23-24)</sup>, nodule<sup>(19,23)</sup>, pain, heat and flushing, prevalent in influenza (42.64%) and diphtheria, tetanus (39.64%) vaccines, and the dT vaccine was responsible for the highest percentages of Arthus reaction (70%), induration (53, 57%), difficulty in walking (52.94%), nodule (51.85%), pain, heat and redness (49.95%) and other local reactions

(edema and others) (44.44%)<sup>(19)</sup>, there were also hypersensitivity reactions after 2h<sup>(19,24)</sup>, with a higher prevalence in the application of the Influenza vaccine<sup>(19)</sup>, in addition to these, generalized urticaria and systemic reactions such as: fever > 38°C, fever ≥ 39.5 °C, anaphylactic shock<sup>(24)</sup> and fever <39.5 °C<sup>(23)</sup>.

It was found that an article addressed more specific AE in the hospital area, but listed some that are present in PHC, being: AE due to complications resulting from falls and AE to medications<sup>(25)</sup>.

### **Causal factors related to AEs**

Considering that health services are provided in complex environments, several factors can contribute to the occurrence of AE in PHC. Failures in communication with the patient, interprofessional communication and communication in the care network are the most common factors for the occurrence of AE due to difficulties in the “good relationship of the team, differences of opinion, professional vision, academic background, culture of patient safety, behavior, education, professional hierarchy, and accountability to the patient”<sup>(17: 2326)</sup>.

Among the management failures addressed in the studies, are those related to the lack of medicine in the pharmacy and appropriate prescription, delay in the delivery of exams, lack of resources to purchase medicines, among others<sup>(17)</sup>.

Another factor mentioned is work overload, associated with the nursing professional's salary gap and the inappropriate physical environment for professional practice, as they culminate in AE and unsafe patient care<sup>(22)</sup>.

The causal factors of AE related to vaccination were present in four studies, mostly associated with the vaccine, the vaccinees, the form of administration<sup>(20)</sup>, or due to the prescription or indication of an immunobiological<sup>(19)</sup>. This is due to some factors, such as the deviation from good vaccination practices and the increase in post-vaccination AE surveillance (AEFI), the concern at the time of vaccination, especially by children, and the lack of knowledge of some professionals about the types immunobiologicals and the amount of doses applied to children under five years of age, which leads to higher AEFI rates<sup>(26)</sup>.

Another important factor is the lack of technical skills and handling of immunobiologicals by some vaccinators<sup>(18,26)</sup>, as well as the lack of knowledge of some professionals about AEFV<sup>(18)</sup>. It is also necessary to consider the organizational structure and the environment, factors that contribute to the occurrence of AE, since, when these do not present safety to users, they interfere in guaranteeing a safe vaccination<sup>(26)</sup>.

In this sense, the studies signaled relevant aspects for the prevention of AE,

especially related to vaccination, such as the implementation of good care practices and the monitoring and assistance in cases of AE.

### **AE notification**

Factors related to AE notification and underreporting were present in more than half of the IR studies (70%). Among the factors related to the notification of AEs, it can be noted the low adherence to this practice due to different barriers, such as: lack of confidence, fear of exposure due to bad practice, fear of loss of reputation, overwork and the little time available to perform the notification<sup>(21)</sup>, in addition to the lack of knowledge of some professionals regarding the notification of incidents<sup>(17)</sup>.

Although the literature has addressed that the notification of AEFI is very important for safe vaccination<sup>(19)</sup>, there are still cases of underreporting<sup>(19,24,26)</sup>. The reasons for underreporting include the lack of experience, which can make it difficult to clarify the case, leading to underreporting of AEFI<sup>(26)</sup>, and weaknesses in epidemiological surveillance actions and the mismanagement of AEFIs by the nursing staff, especially in relation to childhood vaccination<sup>(24)</sup>.

In one study, professionals consider it important to notify only the most severe AEFIs and that the notifications do not need to be monitored<sup>(18)</sup>. However, in another study, professionals find it necessary to

improve surveillance under notification of incidents as a means of preventing such incidents from evolving into real AE<sup>(25)</sup>. However, it should be considered that the incentive for AE notifications in the service, in an educational manner and without punishment, can contribute significantly to the strengthening of the patient safety culture, as well as to support strategies for the implementation of preventive measures of new AE.

### **Management strategies vis-à-vis the AE**

It is noticed that most of the studies analyzed presented management strategies in face of the occurrence of AE. One of the studies suggests the strengthening of the culture of safety and teamwork among professionals and the patient's involvement in professional education, in addition to mitigating the punitive culture, thus ensuring the quality and humanization of the services provided, and the implementation of protocols, so that the team feels confident in making clinical decisions and carrying out safe care practices<sup>(17)</sup>.

Other studies recognize the importance of training technicians and discussing with health service managers, strategies such as vaccination campaigns to qualify the epidemiological surveillance of AEFI<sup>(19,26)</sup>, in addition to suggesting

professional training programs and periodic evaluation on the subject such as AEFIs<sup>(18)</sup>.

Still, a study indicates the use of tools to promote patient safety at the time of vaccination, such as the implementation of guidelines for the vaccines that will be administered. The same study addresses the use of cold compresses in the first 24-48 hours to relieve local reactions, bathing and the use of medications to decrease body temperature<sup>(20)</sup>.

Another suggested strategy is the qualification, updating and development of clinical care protocols<sup>(24)</sup>. And the training of human resources, with the implementation of continuing education in health services<sup>(23)</sup>. In this sense, it is important that the professionals involved with the vaccine room keep up to date and follow the post-vaccination AE epidemiological surveillance conducts, recommended by the Ministry of Health, aiming to minimize the impacts on the population's health, since AE involving vaccination were the ones that stood out in this integrative review.

### **DISCUSSION**

In order to provide safe care to the patient, health services demonstrate to consider indicators that may interfere with the quality of care, with AEs being the most relevant indicator, because, although

undesirable, AEs are often observed in care practice, especially those related to health care. medication errors<sup>(28)</sup>, which could be avoided with care involving the prescription, storage, dispensing and administration of the medication<sup>(29)</sup>.

The highest occurrence of AE is related to vaccination, constituting an increasingly constant concern when associated, for the most part, with the similarities regarding the format and the reduced size of the labels among most immunobiologicals, which conditions the professional to error<sup>(29)</sup>.

The causal factors of AE associated with vaccination are mostly related to the vaccine, to those vaccinated, the form of administration, or due to the prescription or indication of an immunobiological agent. A study presents equivalent data, which reports AE due to the inadequacy in the indication of the immunobiological, inadequate interval between doses, incorrect administration technique, those related to the type of immunobiological used, administration in the wrong way, among other errors that contributed to the occurrence of AE<sup>(30)</sup>.

Among the reasons why professionals do not perform AE notification are the little recognition of patient safety and the importance of reporting an incident<sup>(9)</sup>.

However, the insufficient knowledge of a small number of professionals about the

notification system, overwork, pressure and the absence of feedback, are limitations felt by professionals from health institutions in the face of the occurrence of AE<sup>(31)</sup>.

The literature points out that the failures in communication with the patient, in interprofessional communication and in the care network, contributed to the occurrence of AE<sup>(17)</sup>, and that professionals fail to maintain effective communication and favor teamwork, which compromises patient safety<sup>(32)</sup>.

Overwork, deficits in physical structure and dissatisfaction with wages and excessive working hours can have a positive and negative impact on the quality of care provided, and, if associated with inappropriate working conditions and management, hinder effectiveness of the PHC service<sup>(33)</sup>.

Promoting patient safety in the context of PHC highlights the quality of the care provided, and the manager is responsible for encouraging and training professionals for the prevention, notification and the correct management of possible risks during care delivery<sup>(9)</sup>.

Educational actions, such as team training, implementation of an AE notification system, working with interprofessional communication, improving resource management and motivating professionals to share doubts and events as a way of learning, are ways to help prevent the occurrence of AE<sup>(4)</sup>.



## CONCLUSION

The data show a predominance of adverse events involving medications and immunizations, having as causal factors the lack of communication, failures in infrastructure, in the dimensioning of personnel and in the execution of assistance, which contribute to the occurrence of underreporting. Managers are responsible for providing adequate resources and tools, encouraging the team to incorporate good practices in the care provided by nursing in PHC.

The notification of adverse events by professionals is permeated by fear, the result of a punitive culture that can be mitigated by the implementation of clinical protocols, dialogue between professionals and patients, permanent health education and professional qualification, making it possible to recognize and prevent adverse events in an environment favorable to better patient safety.

In this way, patient safety has been the main focus of health institutions, and the inclusion of this theme in health discussions is of utmost importance, especially among professionals who are part of the multiprofessional team, with a view to qualifying assistance and,

consequently, minimize the occurrence of errors and / or AE.

Further studies on the theme of this integrative review are recommended, involving the implementation of instruments for the recognition and notification of AE by the PHC health services and the multidisciplinary team, favoring the dialogue between professionals in the search for a positive safety culture. and not punitive in the face of the phenomenon.

## REFERENCES

1. Duarte SCM, Stipp MAC, Silva MM, Oliveira FT. Eventos adversos e segurança na assistência de enfermagem. *Rev. Bras. Enferm* [Internet]. 2015 Feb [acesso em 23 Out 2020]; 68(1):144-54. Disponível em: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0034-71672015000100144&lng=en](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672015000100144&lng=en). DOI : <https://doi.org/10.1590/0034-7167.2015680120p>.
2. Figueiredo ML, Oliveira e Silva CS, Brito MFSF, D’Innocenzo M. Analysis of incidents notified in a general hospital. *Rev Bras Enferm* [Internet]. 2018 [acesso em 23 Out 2020]; 71(1):111-9. Disponível em: [https://www.scielo.br/pdf/reben/v71n1/pt\\_0034-7167-reben-71-01-0111.pdf](https://www.scielo.br/pdf/reben/v71n1/pt_0034-7167-reben-71-01-0111.pdf). DOI: <https://doi.org/10.1590/0034-7167-2016-0574>.
3. Lanzoni GMM, Goularte AF, Koerich C, Reisdorfer E, Miotello M, Meirelles BHS. Eventos adversos e incidentes sem dano em unidades de internação de um hospital especializado em cardiologia. *Rev Min Enferm* [internet]. 2019 [acesso em 23 out 2020]; 23:e-1184. Disponível em: <https://cdn.publisher.gn1.link/reme.org.br/pd>

f/e1184.pdf. DOI: 10.5935/1415-2762.20190032.

4. Santos PVM, Mendes PM, Abreu IM, Sá AGS, Ramos JV, Avelino FVSD. Conhecimento de enfermeiras sobre evento adverso na atenção primária à saúde. *Revista enfermagem atual* [internet]. 2019 [acesso em 05 Nov 2020]; 89(27):01-07. Disponível em: <https://revistaenfermagematual.com.br/index.php/revista/article/view/459/475>.
5. Lemos GC, Azevedo C, Bernardes MFVG, Ribeiro HCTC, Menezes AC, Mata LRF. A Cultura de Segurança do Paciente no Âmbito da Enfermagem: Reflexão Teórica. *Revista de Enfermagem do Centro-Oeste Mineiro*. [internet]. 2018 [acesso em 14 Nov 2020]; 8:e2600: 01-10. Disponível em: <http://www.seer.ufsj.edu.br/index.php/recom/article/view/2600/1880>. DOI: <https://doi.org/10.19175/recom.v7i0.2600>.
6. Machado NCB, Morais EM, Fontana RT, Rodrigues AP, Barros M, Krebs EM. Percepção de discentes, docentes e técnicos em enfermagem a respeito dos eventos adversos. *Rev. Enferm. UFSM* [internet]. 2020 [Acesso em 29 Out 2020]; 10e:1-18. DOI: <https://doi.org/10.5902/2179769233486>.
7. Alves MFT, Carvalho DSD; Albuquerque GSCD. Motivos para a não notificação de incidentes de segurança do paciente por profissionais de saúde: revisão integrativa. *Ciênc. saúde coletiva* [Internet]. 2019 [acesso em 29 Out 2020 ]; 24(8):2895-908. Disponível em: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S1413-81232019000802895&lng=en](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-81232019000802895&lng=en). DOI: <http://dx.doi.org/10.1590/1413-81232018248.23912017>.
8. Maia CS, Freitas DRC, Gallo LG, Araújo WN. Notificações de eventos adversos relacionados com a assistência à saúde que levaram a óbitos no Brasil, 2014-2016. *Epidemiol. Serv. Saúde* [Internet]. 2018 [acesso em 05 Nov 2020]; 27(2):e2017320. Disponível em: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S2237-96222018000200308&lng=en](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S2237-96222018000200308&lng=en). DOI: <http://dx.doi.org/10.5123/s1679-49742018000200004>.
9. Oliveira RM, Bandeira ES, Silva CR, Soares AML, Fonteles DB, Barboza FBM. Tomada de decisão de enfermeiros frente a incidentes relacionados à segurança do paciente. *Cogitare Enfermagem* [internet]. 2016 [acesso em 05 Nov 2020]; 21(3):01-10. Disponível em: <https://revistas.ufpr.br/cogitare/article/view/45683/pdf>.
10. Ganong LH. Integrative Review of Nursing Research. *Res Nursing Health*, 1987. Febr; 10(1):1-11. DOI: 10.1002 / nur.4770100103.
11. Souza MT, Silva MD, Carvalho R. Revisão integrativa: o que é e como fazer. *einstein* (São Paulo). 2010 [acesso em 24 Out 2020]; 8(1):102-6. DOI: <https://doi.org/10.1590/s1679-45082010rw1134>.
12. Santos CMC, Pimenta CAM, Nobre MRC. A estratégia pico para a construção da pergunta de pesquisa e busca de evidências. *Rev Latino-am Enfermagem* [internet]. 2007 maio-junho [acesso em 29 Out 2020]; 15(3):1-04. Disponível em: [https://www.scielo.br/pdf/rlae/v15n3/pt\\_v15n3a23.pdf](https://www.scielo.br/pdf/rlae/v15n3/pt_v15n3a23.pdf).
13. Ponte RF, Pontes KCJR. *Academical. Academical Sistemas para Pesquisas Científicas Ltda*. Chapecó, 2019. Disponível em: <https://www.academical.com.br> [internet]. 2018 [Acesso em 26 Out. 2020] Disponível em: <https://app.academical.com.br/pesquisa/304/referencias/exportar/2>. DOI:



- <https://doi.org/10.5123/s1679-49742018000200004>.
14. Moher D, Liberati A, Tetzlaff J, Altman DG. The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *J Clin Epidemiol* [Internet]. 2009 [acesso em 24 Out 2020]; 62(10):1006-12. DOI: 10.1016/j.jclinepi.2009.06.005.
  15. Bardin L. Análise de conteúdo. São Paulo: Edições, 2011. Disponível em: <https://www.ets.ufpb.br/pdf/2013/2%20Metodos%20quantitativo%20e%20qualitativo%20-%20IFES/Livros%20de%20Metodologia/10%20-%20Bardin,%20Laurence%20-%20An%C3%A1lise%20de%20Conte%C3%BAdo.pdf>.
  16. Beuren IM, Souza JC. Em busca de um delineamento de proposta para classificação dos periódicos internacionais de contabilidade para o Qualis CAPES. *Rev Contab finanç* [Internet]. 2008 [acesso em 24 Out. 2020]; Jan/Apr; 19(46):44-58. DOI: 10.1590/S1519-70772008000100005.
  17. Marchon SG, Mendes Junior WV, Pavao ALB. Características dos eventos adversos na atenção primária à saúde no Brasil. *Cad. Saúde Pública* [internet]. 2015 [acesso em 24 Out 2020]; 31(11):2313-330. Disponível em: <https://www.scielo.br/pdf/csp/v31n11/0102-311X-csp-31-11-2313.pdf>. DOI: <http://dx.doi.org/10.1590/0102-311X00194214>.
  18. Ternopolski CA, Baratieri T, Lenstck MH. Eventos adversos pós-vacinação: educação permanente para a equipe de enfermagem. *Rev. Espaço para Saúde* [internet]. 2015 [acesso em 24 Out 2020]; out/dez; Londrina 16(4): 109-19. Disponível em: <http://espacoparasaude.fpp.edu.br/index.php/espacosaude/article/view/388/13>. DOI: <http://dx.doi.org/10.22421/1517-7130.2015v16n4p109>.
  19. Bisetto-Linheira LH, Ciosak SI, Cordeiro TLR, Boing MS. Ocorrência de eventos adversos pós-vacinação em idosos. *Cogitare Enferm.* [internet] 2016 [acesso em 24 Out 2020]; Out/dez; 21(4):01-10 Disponível em: <http://docs.bvsalud.org/biblioref/2016/12/827175/45682-190057-1-pb.pdf>. DOI: <http://dx.doi.org/10.5380/ce.v21i4.45682>.
  20. Oliveira ESA, Casarin ST, Coelin T, Soares DC. Cuidados prestados pela equipe de enfermagem no atendimento aos eventos adversos pós-vacinais. *Rev. de Enfermagem da UFPI* [internet]. 2016 [acesso em 24 Out 2020]; Abr-Jun; 5(2):32-40. DOI: <https://doi.org/10.26694/reufpi.v5i2.5275>.
  21. Pereira LB, Jobim L, Bueno D. Percepção de Equipes de Saúde da Família sobre a notificação de eventos adversos a medicamentos. *Saúde em Redes* [internet]. 2018 [acesso em 24 Out 2020]; 4(3):49-61. DOI: <https://doi.org/10.18310/2446-48132018v4n3.2207g298>.
  22. Moura RS, Saraiva FJC, Santos RM, Santos RFM, Rocha KRSL, Virgem MRC. Eventos adversos ocasionados pela assistência de enfermagem: noticiados pela mídia. *Revista de Enfermagem UFPE* [Internet]. 2018 [acesso em 24 Out 2020]; 12(6): 1514-23. Disponível em: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/231266>. DOI: <https://doi.org/10.5205/1981-8963-v12i6a231266p1514-1523-2018>.
  23. Bisetto LHL, Cubas MR, Malucelli A. A prática da enfermagem frente aos eventos adversos pós-vacinação. *Rev. esc. enferm. USP* [Internet]. 2011 [acesso em 24 Out 2020]; 45(5): 1128-34. Disponível em: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0080-62342011000500014&lng=en](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342011000500014&lng=en). DOI: <https://doi.org/10.1590/S0080-62342011000500014>.

24. Alves H, Domingos LMG. Manejo de eventos adversos pós-vacinação pela equipe de enfermagem: desafios para o cuidado. *Rev. Enfermagem UERJ* [internet]. 2013 [acesso em 24 Out 2020]; Rio de Janeiro, out/dez; 21(4):502-7. Disponível em: <https://www.e-publicacoes.uerj.br/index.php/enfermagemu erj/article/view/10022>.
25. Salvador PTC, Martins CCF, Alves KYA, Costa TD, Santos VEP. Análise de vídeos do youtube sobre eventos adversos em saúde. *Rev Min Enferm. REME* [internet]. 2014 [acesso em 24 Out 2020]; out/dez; 18(4): 830-37. DOI: 10.5935/1415-2762.20140061.
26. Bisetto LHL, Ciosak SI. Análise da ocorrência de evento adverso pós-vacinação decorrente de erro de imunização. *Rev. Bras. Enfermagem* [Internet]. 2017 [acesso em 24 Out 2020]; Fev; 70(1): 87-95. Disponível em: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0034-71672017000100087&lng=pt](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-71672017000100087&lng=pt). DOI: <https://doi.org/10.1590/0034-7167-2016-0034>.
27. Melnyk BM, Fineout-Overholt E. Making the case for evidence-based practice. In: Melnyk BM, Fineout-Overholt E. *Evidencebased practice in nursing & healthcare: A guide to best practice*. 2th ed. Philadelphia: Lippincot Williams & Wilkins; 2005. p. 3-24. [acesso em Mar. 2021];
28. Silva MFB, Santana JS. Erros na administração de medicamentos pelos profissionais de enfermagem. *Arquivos Catarinenses de Medicina* [Internet]. 2018 [Acesso em 05 Nov 2020]; 47(4):146-54. Disponível em: <http://www.acm.org.br/acm/seer/index.php/arquivos/article/view/359>.
29. Souza LM, da Silva MCS, Zavalhia SR, Coppola IS, da Rocha BP. Percepção de enfermeiros da Estratégia de Saúde da Família sobre segurança do paciente. *J. nurs. Health* [internet]. 2018 [acesso em 29 Out 2020]; 8(2):01-16. Disponível em: [file:///C:/Users/Admin/Desktop/Downloads/12721-50021-1-PB%20\(1\).pdf](file:///C:/Users/Admin/Desktop/Downloads/12721-50021-1-PB%20(1).pdf). DOI: <HTTPS://DOI.ORG/10.15210/JONAH.V8I2.12721>.
30. Barboza TC, Guimarães RA, Gimenes FRE, Silva AEBC. Retrospective study of immunization errors reported in an online Information System. *Rev. Latino-Am. Enfermagem* [Internet]. 2020 [acesso em 14 Nov 2020]; 28:e3303. Disponível em: [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S0104-11692020000100352&lng=en](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-11692020000100352&lng=en). DOI: <https://doi.org/10.1590/1518-8345.3343.3303>.
31. Lima SMS, Agostinho M, Mota L, Príncipe F. Percepção dos profissionais de saúde das limitações à notificação do erro/evento adverso. *Revista de Enfermagem Referência* [internet]. 2018 [acesso em Nov 2020]; out./nov./dez; Série IV(19) - Disponível em: <http://www.scielo.mec.pt/pdf/ref/vserIVn19/serIVn19a11.pdf>. DOI: <https://doi.org/10.12707/RIV18023>.
32. Nogueira JWS, Rodrigues MCS. Comunicação efetiva no trabalho em equipe em saúde: desafio para a segurança do paciente. *Ver. Cogitare Enfermagem* [internet]. 2015 [acesso em 05 Nov. 2020]; 20(3): 636-40. Disponível em: <https://revistas.ufpr.br/cogitare/article/view/40016/26245>.
33. Pires DEP, Machado RR, Soratto J, Scherer MA, Gonçalves ASR, Trindade LL. Cargas de trabalho da enfermagem na saúde da família: implicações no acesso universal. *Rev. Latino-Am. Enfermagem* [internet]. 2016 [acesso em 05 Nov 2020]; 24:e2677. Disponível em:



[https://www.scielo.br/pdf/rlae/v24/pt\\_0104-1169-rlae-0992-2682.pdf](https://www.scielo.br/pdf/rlae/v24/pt_0104-1169-rlae-0992-2682.pdf). DOI:  
<http://dx.doi.org/10.1590/1518-8345.0992.2682>.

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