Overview of Patient Safety Notifications in Bahia: Adverse Events and Never Events (2018–2023)

Panorama das Notificações de Segurança do Paciente na Bahia: Eventos Adversos e Never Events (2018–2023)
Panorama de las Notificaciones de Seguridad del Paciente en Bahía: Eventos Adversos y Nunca Eventos (2018–2023)

RESUMO
Objetivo: Analisar o perfil das notificações de eventos adversos e never events no Estado da Bahia entre 2018 e 2023, com base nos dados públicos da Anvisa. **Método:** Estudo documental, descritivo e retrospectivo, a partir dos boletins anuais de segurança do paciente da Bahia. Os dados foram analisados por estatística descritiva, com foco no número de notificações, tipos de eventos, grau de dano, faixa etária e perfil do serviço. **Resultado:** Observou-se um crescimento expressivo das notificações no período. Lesões por pressão, falhas na assistência e quedas foram os eventos mais recorrentes. Hospitais concentraram 97% dos registros, com maior vulnerabilidade nos extremos de idade (recém-nascidos e idosos). Lesões por pressão em estágios avançados lideraram os never events. **Conclusão:** Os dados indicam avanços na cultura de notificação, mas revelam fragilidades assistenciais persistentes, fornecendo subsídios para estratégias de prevenção e qualificação do cuidado nos serviços de saúde baianos.
DESCRITORES: Evento Adverso; Notificação; Segurança do Paciente.

ABSTRACT
Objective: To analyze the profile of adverse event and never event notifications in the State of Bahia between 2018 and 2023, based on public data from Anvisa. **Method:** Documental, descriptive, and retrospective study, based on Bahia's annual patient safety bulletins. Data were analyzed using descriptive statistics, focusing on the number of notifications, types of events, degree of harm, age group, and service profile. **Result:** A significant increase in notifications was observed during the period. Pressure injuries, assistance failures, and falls were the most recurrent events. Hospitals concentrated 97% of the records, with greater vulnerability at the extremes of age (newborns and the elderly). Pressure injuries in advanced stages led the never events. **Conclusion:** The data indicate advances in the notification culture but reveal persistent care fragilities, providing subsidies for prevention strategies and qualification of care in health services in Bahia.
DESCRIPTORS: Adverse Event; Notification; Patient Safety.

RESUMEN
Objetivo: Analizar el perfil de las notificaciones de eventos adversos y never events en el Estado de Bahía entre 2018 y 2023, con base en los datos públicos de Anvisa. **Método:** Estudio documental, descriptivo y retrospectivo, a partir de los boletines anuales de seguridad del paciente de Bahía. Los datos fueron analizados por estadística descriptiva, con foco en el número de notificaciones, tipos de eventos, grado de daño, grupo de edad y perfil del servicio. **Resultado:** Se observó un crecimiento expresivo de las notificaciones en el período. Lesiones por presión, fallas en la asistencia y caídas fueron los eventos más recurrentes. Los hospitales concentraron el 97% de los registros, con mayor vulnerabilidad en los extremos de edad (recién nacidos y ancianos). Las lesiones por presión en etapas avanzadas lideraron los never events. **Conclusión:** Los datos indican avances en la cultura de notificación, pero revelan fragilidades asistenciales persistentes, proporcionando subsidios para estrategias de prevención y calificación del cuidado en los servicios de salud bahianos.
DESCRIPTORES: Evento Adverso; Notificación; Seguridad del Paciente.

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INTRODUCTION

Patient safety is an indispensable component of quality healthcare, a principle that dates back to the practices of Florence Nightingale in the 19th century and gained global prominence with the 1999 report "To Err is Human." This document warned of the alarming mortality resulting from healthcare failures, prompting the creation of policies and strategies to mitigate risks[1]. Since then, the issue of patient safety has been widely discussed and incorporated into public health agendas around the world, with the aim of improving the quality and reliability of healthcare systems. The World Health Organization (WHO) estimates that 134 million preventable adverse events (AEs) occur annually in low- and middle-income countries, resulting in 2.6 million deaths, which prompted the launch of the Global Action Plan for Patient Safety (2021–2030)[2] .

AEs are defined as unwanted occurrences that result in harm to the patient and can be classified from mild to fatal[3] . Understanding and classifying these events is essential for identifying patterns and implementing effective preventive measures. Among them are never events, serious and unacceptable incidents that, in theory, should never occur, such as the retention of a foreign body after surgery or performing a procedure in the wrong location[4] . The very name "never events" underscores the seriousness and preventability of these incidents, requiring special attention from health systems to eradicate them.

In Brazil, the National Patient Safety Policy (PNSP), established in 2013, establishes mandatory reporting of these events as one of its pillars, aiming to monitor and prevent their recurrence[5]. The PNSP represents an important milestone in the structuring of a safer healthcare system by promoting a culture of safety, risk management, and continuing education for professionals. Notifications are managed by the National Health Surveillance Agency (Anvisa) through the Notivisa system, which consolidates the data sent by the Patient Safety Centers (NSP) of each health service and publishes periodic bulletins[6].

This data is vital for epidemiological surveillance and for the formulation of public policies aimed at patient safety. Although these reports provide a national overview, local and regional analyses are essential for guiding improvement actions. The specificity of each region, with its demographic, socioeconomic, and health infrastructure particularities, directly influences the occurrence and profile of adverse events. In the state of Bahia, which ranked eighth in the number of notifications in the country in 2021, understanding the profile of these incidents is important for strengthening the culture of safety[6] .

Identifying the areas of greatest vulnerability and the most prevalent types of events in the Bahian context can support more assertive and effective interventions, optimizing resources and saving lives. In this regard, this study aimed to analyze the profile of adverse event and never event reports in the state of Bahia between 2018 and 2023, identifying the main weaknesses in care and providing input for the development of more effective prevention strategies.

This was an observational[7] , descriptive, exploratory, and retrospective study that followed the recommendations of the *Strengthening the Reporting of Observational Studies in Epidemiology* (STROBE) tool[8] .

The study was developed based on the analysis of Patient Safety and Quality in Health Services Bulletins, made available by the Brazilian Health Regulatory Agency (Anvisa) for the State of Bahia, from 2018 to 2023. This is a documentary research study, which enables the understanding of past phenomena and the investigation of processes of social and cultural transformation through the systematic analysis of secondary sources, such as official texts, institutional reports, administrative records, and newsletters[9].

The documents were obtained in PDF format from the official Anvisa website, in the open data section. Six complete annual reports were included, excluding the 2024 report as it contained only partial data. Data collection took place in April 2025. The study setting was the state of Bahia, located in northeastern Brazil, with an estimated population of 14.8 million inhabitants in 2024 and the seventh largest economy in the country[10] .

The variables analyzed included: annual number of adverse event reports; most frequent types of AE; degree of harm (mild, moderate, severe, death); age group of patients (newborns, infants, children, adolescents,

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young adults, adults, and the elderly); health service profile (hospital, outpatient, urgent/emergency care, clinics, hemodialysis, among others); and incidence of never events, according to the Notivisa classification. The data were tabulated in spreadsheets and analyzed using descriptive statistics, using absolute frequencies and percentages. The findings were interpreted through narrative synthesis.

With regard to ethical aspects, as this was a study using public and aggregated data, without individual identification, the research was exempted from approval by the Research Ethics Committee (CEP), in accordance with Resolutions No. 510/2016 and No. 466/2012 of the National Health Council. The researchers undertook to collect and analyze the data in an ethical and responsible manner.

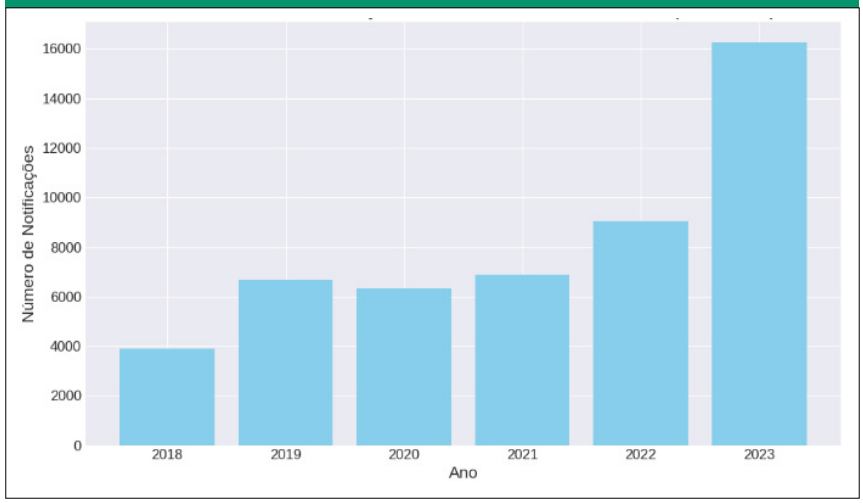
RESULTS

The study analyzed six Patient Safety and Quality in Health Services Bulletins from the State of Bahia, covering the period from 2018 to 2023. No bulletins prior to 2018 were found, which may indicate a delay in the implementation of Patient Safety Centers (NSP) and in the culture of reporting in the state.

Annual number of adverse event reports

There was an upward trend in the number of adverse event (AE) reports over the period analyzed. In 2018, 3,903 reports were recorded, while in 2023 this number reached 16,256, totaling 49,129 reports in six years. This increase reflects a maturing patient safety culture and greater adherence to reporting systems. Graph 1 illustrates this evolution.

Graph 1: Annual number of adverse event reports in Bahia (2018-2023). Ilhéus, Bahia, Brazil, 2026.



Source: Adapted from Anvisa Bulletins (2018-2023).

Most frequent types of adverse events

The ranking of AE recurrence revealed that pressure injuries (PI) were the most frequently reported type, with 11,544 records in the period, followed by failures during healthcare (8,771 reports) and failures involving venous catheters (6,863 reports). Other significant events included failures involving catheters (5,677), patient falls (4,876), and patient identification failures (2,898). The persistence of these events indicates weaknesses in care processes, especially in relation to the prevention of PIs and the handling of invasive devices. Table 1 shows the main types of adverse events reported.

Tabela 1: Ranking de recorrência dos principais eventos adversos notificados na Bahia (2018-2023). Ilhéus, Bahia, Brasil, 2026.

Rank	Type of Adverse Event	Total for the period (2018-2023)
1°	Pressure injury	11.544
2°	Failures during healthcare	8.771
3°	Errors involving venous catheters	6.863
4°	Failures involving probes	5.677
5°	Patient falls	4.876
6°	Failure to identify patients	2.898

Source: Adapted from Anvisa Bulletins (2018-2023).

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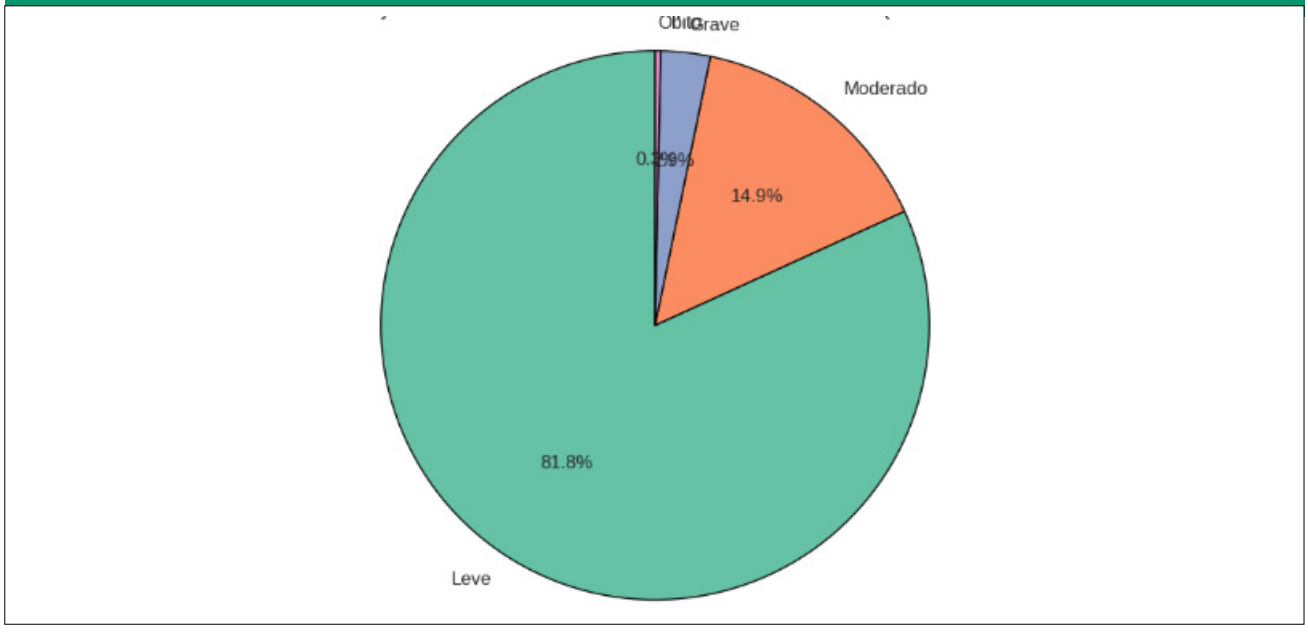
Degree of harm caused by adverse events

The classification of AEs by degree of harm (mild, moderate, severe, and death) showed that mild harm was the most frequent, with 27,092 reports. Moderate harm totaled 4,950 cases, while severe harm totaled 966. Although AE-related deaths were the least numerous (106 records), their increase from 8 cases in 2018 to 35 in 2023 is a critical indicator of the need for more effective interventions. The increase in reports in all categories suggests an improvement in the identification and recording of incidents, but also the persistence of events with serious outcomes. Figure 2 illustrates the distribution by degree of harm.

Graph 2: Reporting of adverse events by degree of harm (2018-2023). Ilhéus, Bahia, Brazil, 2026.

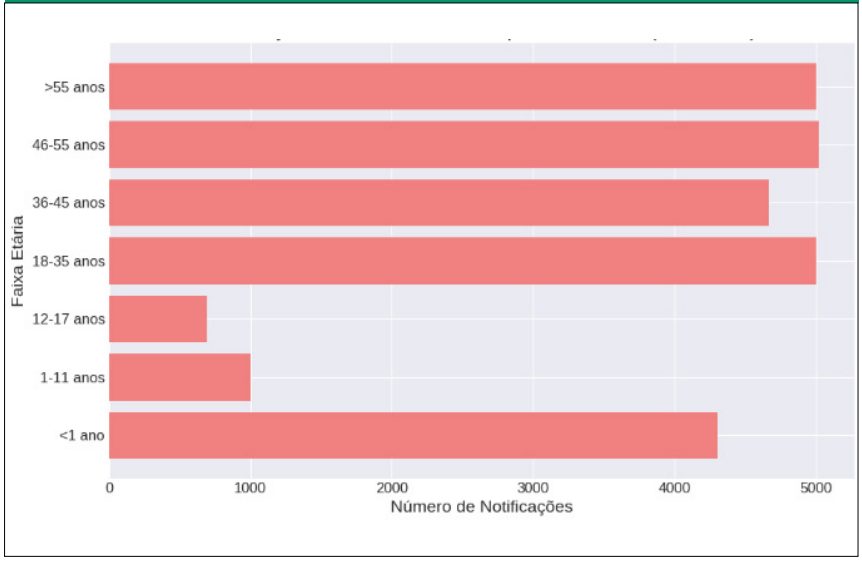


Source: Adapted from Anvisa Bulletins (2018-2023).

Profile of reports by age group

Analysis by age group revealed that the extremes of age are the most vulnerable. Newborns and infants (under 1 year of age) accounted for more than 4,300 reports, due to their high vulnerability and the complexity of neonatal and pediatric care. Among adults, the 46-55 age group recorded the highest absolute number of notifications (5,022 cases), reflecting the overlap of chronic diseases and the greater demand for health procedures in this group. Older adults (over 60 years of age) also had a high incidence of AD, especially falls and LP, due to frailty and comorbidities. Graph 3 illustrates the distribution of reports by age group.

Graph 3: Notification of adverse events by age group (2018-2023). Ilhéus, Bahia, Brazil, 2026.



Source: Adapted from Anvisa Bulletins (2018-2023).

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Profile of reports by type of health service

Hospitals accounted for the vast majority of reports, representing 97.27% of the total (49,632 of 51,024 records). This predominance is attributed to the complexity of the cases, the large number of invasive procedures, and the severity of the patients treated in a hospital setting. Outpatient, urgent/emergency, and clinic services had significantly lower percentages. However, there was a progressive increase in notifications in hemodialysis services from 2022 onwards, indicating greater attention to safety practices in this context.

Reported Never Events

Never events also showed an upward trend, rising from 3,903 reports in 2018 to 16,256 in 2023, totaling 49,129 records. The most frequent types were stage III pressure injuries (NE.09), with 352 occurrences, and stage IV (NE.10), with 63 records, highlighting failures in the prevention of avoidable injuries. Mental health-related events, such as suicide or attempted suicide (NE.14), totaled 28 notifications, with an increase from 2020, possibly influenced by the COVID-19 pandemic. Surgical failures, such as foreign body retention (NE.6) and procedures on the wrong site or patient (NE.2, NE.3, NE.5), were also identified, reinforcing the need for surgical safety protocols. Table 2 details the main never events reported.

Table 2: Main never events reported in Bahia (2018-2023). Ilhéus, Bahia, Brazil, 2026.

Code	Never Event Description	Total (2018-2023)
NE.09	Stage III pressure injury	352
NE.10	Stage IV pressure injury	63
NE.14	Suicide, attempted suicide, or self-inflicted injury	28
NE.6	Unintentional retention of foreign body after surgery	13
NE.3	Surgical procedure performed on the wrong side of the body	4
N3.2	Surgical procedure performed on the wrong part of the body	1
NE.5	Performing the wrong surgery on a patient	1

Source: Adapted from Anvisa Bulletins (2018-2023).

In summary, the results show a dynamic scenario in patient safety in Bahia, marked by a significant increase in reports of adverse events and never events. Pressure injuries, failures in care, and incidents related to invasive devices remain central challenges, with greater vulnerability observed at the extremes of age and in hospital settings. Detailed analysis of these data provides a solid basis for discussing the implications and developing intervention strategies.

DISCUSSION

The significant increase in reports of adverse events and never events in Bahia between 2018 and 2023, although it may suggest a higher occurrence of incidents, is predominantly a positive reflection of the strengthening of the patient safety culture and the improvement of reporting systems[11] . This evolution is indicative that healthcare institutions in the state are more engaged in promoting a safe care environment, encouraging reporting as an essential tool for risk management. Professional awareness and the implementation of Patient Safety Centers (PSCs) contribute to a more transparent environment, where incidents are reported not for punishment, but as opportunities for learning and continuous improvement[12] . The transition from a culture of blame to a culture of just safety, where the focus is on systemic analysis of failures, is critical to the success of these initiatives.

The high prevalence of pressure injuries (PI) as the most frequently reported adverse event and as the main never event (stages III and IV) is a critical indicator of the quality of care. PI is often preventable, and its occurrence is linked to failures in basic preventive measures, such as repositioning and risk assessment. The implementation of standardized protocols, the use of risk assessment scales, and the education of patients and their caregivers are proven effective strategies in reducing the incidence of PI. The persistence of these events highlights the need for continuous training of teams and strict adherence to prevention protocols, especially in vulnerable patients, such as the elderly and those with reduced mobility[13-15]. Attention to these details can significantly impact

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patients' quality of life and the costs associated with treating complications.

Errors during healthcare and those related to invasive devices (catheters and probes) also stand out, pointing to technical challenges and the need for professional training. The handling of invasive devices requires skill and technical knowledge, and a lack of adequate training or work overload can compromise patient safety. The complexity of care in hospital settings, combined with high patient turnover and the use of advanced technologies, increases the likelihood of errors. Ineffective communication between teams is a significant contributing factor to these incidents, underscoring the importance of clear and efficient communication protocols. Strategies such as structured handover (transfer of care responsibility) and the use of standardized communication tools can minimize noise and ensure continuity of care[(16-21)].

The concentration of reports in hospitals (97.27%) is expected, given the complex and high-risk nature of the procedures performed in these environments[(222)]. The high density of critically ill patients, the multiplicity of interventions, and the diversity of professionals involved make hospitals conducive to adverse events. However, the increase in reports in hemodialysis services suggests greater vigilance and the need for specific protocols for these contexts, where patients are particularly vulnerable due to the frequency of care and the use of high-risk medications. The implementation of patient safety programs adapted to the specificities of hemodialysis is crucial to protect this population. The absence of reports in Primary Health Care (PHC) may indicate underreporting and the need to expand the culture of safety to this level of care[(24)] PHC, as the gateway to the health system, plays a key role in disease prevention and health promotion, and the integration of patient safety at this level is essential for comprehensive care.

Never [events]related to mental health, such as suicide and attempted suicide, are concerning and reflect the impact of the COVID-19 pandemic on the mental health of the population. The vulnerability of patients with mental disorders in healthcare settings requires extra attention, with the creation of safe environments and constant vigilance to identify signs of risk. Addressing these events requires a multidisciplinary approach and the implementation of risk protocols that integrate psychosocial assessment into the care routine[(3,21)]. Surgical errors, although less frequent, are unacceptable and reinforce the importance of the WHO safe surgery checklist and effective communication between teams to prevent errors in location, side, or patient. Strict adherence to these protocols, including laterality verification and surgical time-out, is a pillar of patient safety in invasive procedures.

The limitations of this study include the time frame, which did not allow for the analysis of data prior to 2018, and the impact of the COVID-19 pandemic, which may have led to underreporting. In addition, the aggregation of data at the state level made regionalized analysis impossible, limiting the identification of good local practices and the dissemination of effective strategies.

CONCLUSION

The results of this research demonstrate a scenario of increasing reporting of adverse events and never events in the state of Bahia between 2018 and 2023, indicating progress in patient safety culture and transparency in health systems. However, the persistence of events such as pressure injuries, care failures, falls, and incidents related to invasive devices, especially in hospitals and among the very young and very old, reveals weaknesses that require ongoing attention.

The high incidence of never events, such as advanced pressure injuries and events related to mental health and surgical failures, underscores the urgency of strengthening prevention protocols, professional training, and inter-team communication. The analysis by type of service and age group provides valuable insights for the development of more targeted and effective patient safety strategies, aiming to improve the quality of care and reduce preventable harm in Bahia.

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References

1. Kohn LT, Corrigan JM, Donaldson MS. To err is human: Building a safer health system [Internet]. PubMed. 2020 [cited 2025 Apr 10]. Available from: https://doi.org/10.17226/9728

2. World Health Organisation. Global Patient Safety Action Plan 2021-2030 [Internet]. www.who.int. 2021 [cited 2025 Apr 24]. Available from: https://www.who.int/publications/i/item/9789240032705

3. Oliveira NPG, Fassarella CS, Gallasch CH, Camerini FG, Hnerique DM, Pinto SMO. Ocorrência de eventos adversos associados às práticas de enfermagem: revisão integrativa. Enferm Bras [Internet]. 2023 [cited 2025 Apr 10];22(1):103–17. Available from: https://doi.org/10.33233/eb.v22i1.5143

4. Zaslow J, Fortier J, Garber G. The problem with "never events." BMJ Qual Saf [Internet]. 2024 [cited 2025 Apr 10];33(9):613-16. Available from: https://doi.org/10.1136/bmjqs-2023-016981

5. Brasil. Ministério da Saúde. Portaria nº 529, de 1º de abril de 2013. Institui o Programa Nacional de Segurança do Paciente (PNSP). Diário Oficial da União. 2013 Apr 2; Seção 1. [Cited 2025 Apr 20]. Available from: https://bvsms.saude.gov.br/bvs/saudelegis/gm/2013/prt0529_01_04_2013.html

6. Brasil. Ministério da Saúde. Agência Nacional de Vigilância Sanitária (Anvisa). Boletins de Segurança do Paciente e Qualidade em Serviços de Saúde [Internet]. Brasília: Anvisa; [cited 2025 Apr 24]. Available from: https://www.gov.br/anvisa/pt-br/assuntos/servicosdesaude/seguranca-do-paciente/publicacoes

7. Hess DR. Observational Studies. Respir Care [Internet]. 2023 [cited 2025 Apr 20];68(11):1585-1597. Available from: https://doi.org/10.4187/respcare.11170

8. Von Elm E, Altman DG, Egger M, Pocock SJ, Gotzsche PC. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. J Clin Epidemiol [Internet]. 2008 [cited 2025 Apr 20];61(4):344-349. Available from: https://doi.org/10.1016/j.jclinepi.2007.11.008

9. Grazziotin LS, Klaus V, Pereira APM. Pesquisa documental histórica e pesquisa bibliográfica: focos de estudo e percursos metodológicos. Pro-Posições [Internet] 2022 [cited 2025 Apr 10];33: e20200141. Available from: https://doi.org/10.1590/1980-6248-2020-0141

10. IBGE – Instituto Brasileiro de Geografia e Estatística. Panorama Bahia [Internet]. Rio de Janeiro: IBGE; [cited 2025 Apr 21]. Available from: https://cidades.ibge.gov.br/brasil/ba/panorama

11. Melgarejo CRV, Mastroianni PC, Varallo FR. Promoção da cultura de notificação de incidentes em saúde [Internet]. São Paulo: Editora UNESP; 2019 [cited 2025 Apr 10]. 117p. Available from: https://doi.org/10.7476/9788595463370

12. Mello LR, Christovam BP, Rebustini F, Moreira AP, Moraes EB, Paes GO. Instrumento brasileiro para investigação de eventos adversos na saúde: estudo de validação. Acta Paul Enferm [Internet]. 2024[cited 2025 Apr 10];37:eAPE001125. Available from: http://dx.doi.org/10.37689/acta-ape/2024AO0001125

13. Teixeira AO, Brinati LM, Toledo LV, Silva Neto JF, Teixeira DLP, Januario CF, Neto LMS, Salgado PO. Fatores associados à incidência de lesão por pressão em pacientes cr[iticos: estudo de coorte. Rev Bras Enferm [Internet]. 2022[cited 2025 Apr 10];75(6):e20210267. Available from: https://doi.org/10.1590/0034-7167-2021-0267pt

14. Dourado Júnior FW, Moreira ACA, Salles DL, Silva MAM. Intervenções para prevenção de quedas em idosos na Atenção Primária: revisão sistemática. Acta Paul de Enferm [Internet]. 2022 [cited 2025 Apr 05];35: eAPE02256. Available from: https://doi.org/10.37689/acta-ape/2022AR022566

15. Francisco PMSB, Assumpção D, Bacurau AGM, Silva DSM, Malta DC, Borim FSA. Multimorbidade e uso de serviços de saúde em idosos muito idosos no Brasil. Rev Bras Epidemiol [Internet]. 2021 [cited 2025 Apr 10];24(suppl 2):e210014. Available from: https://doi.org/10.1590/1980-549720210014.supl.2

16. Spironello RA, Cuman RKN. Caracterização de eventos adversos em uma unidade de terapia intensiva neonatal. Revista Recien [Internet]. 2019[cited 2025 Apr 05]; 9(28):131-136. Available from: https://doi.org/10.24276/rrecien2358-3088.2019.9.28.131-136

17. Sousa GC, Ribeiro AMN, Silva FMD, Oliveira EFP, Oliveira PHQ, Almeida SLM, Amorim MSR, Pinto CFS, et al. A comunicação efetiva como pilar para a segurança e qualidade no atendimento à saúde. Contrib Cienc Soc [Internet]. 2024 [cited 2025 Apr 10];17(13):1-11. Available from: https://doi.org/10.55905/revconv.17n.13-551

18. Castro JVR, Amaro MOF, Mendonça ET, Siman AG, Zanelli FP, Carvalho CA. A comunicação efetiva no alcance de práticas seguras: concepções e práticas. Rev Enferm Atenção Saúde [Internet]. 2023 [cited 2025 Apr 05];12(1):e202359. Available from: https://doi.org/10.18554/reas.v12i1.5153

19. Maximiano LCS, Araújo MES, Vieira AN, Dantas LAL, Oliveira LC, Rodrigues HB. Aplicações do Modified Early Warning Score pelo enfermeiro em hospitais. Res Soc Dev [Internet]. 2022 [cited 2026 Jan 10];11(2):e19411225463. Available from: https://doi.org/10.33448/rsd-v11i2.25463

20. World Health Organization. Patient safety: surgical safety checklist (second edition) [Internet]. Geneva: World Health Organization; 2009 [cited 2025 May 10]. Available from: https://www.who.int/publications/i/item/9789241598590

21. Brasil. Agência Nacional de Vigilância Sanitária (Anvisa). Gestão de Riscos e Investigação de Eventos Adversos Relacionados à Assistência à Saúde [Internet]. Brasília: Anvisa; 2025 [cited 2026 Jan 10]. 122 p. Available from: https://www.gov.br/anvisa/pt-br/centraisdeconteudo/publicacoes/servicosdesaude/manuais/copy2_of_infecc_qualidade_cad_7_completo_web_20250915_final2.pdf

22. Couto JF, Machado WCA, Costa EM, Tyrrel MAR, Calegaro KMS, Oliveira LS, et al. A teoria Nightingaleana e seu legado na prevenção das infecções cirúrgicas no Brasil: testando tecnologia. Res Soc Dev [Internet]. 2021 [cited 2026 Jan 10];10(1):e15310111587. Available from: https://doi.org/10.33448/rsd-v10i1.11587

23. Santos AC, Torres VSF, César ESR, Ferreira JDL, Oliveira RC, Morais CAC. Fatores que influenciam a segurança do paciente em hemodiálise: revisão integrativa. Saúde Colet (Barueri) [Internet]. 2021 [cited 2025 Apr 05]11(65):6334–39. Available from: https://doi.org/10.36489/saudecoletiva.2021v11i65p6334-6345

24. Facchini LA, Tomasi E, Dilélio AS. Qualidade da Atenção Primária à Saúde no Brasil: avanços, desafios e perspectivas. Saúde Debate [Internet]. 2025 [cited 2025 Apr 20];42(esp):208–23. Available from: https://saudeemdebate.org.br/sed/article/view/763

25. Oliveira WR, Oliveira SR, Anunciação TPC, Marconato EL, Sales SCCM, Corrêa OMS, Zampieri TNP. Segurança do paciente no centro cirúrgico: revisão de literatura. Rev Cient Multidiscip Núcleo Conhec[Internet]. 2024 [citado 2026 Jan 10];29(141):e10202412311032. Available from: https://doi.org/10.69849/revistaft/cs10202412311032

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