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https://doi.org/10.22239/2317-269x.02196

Patient Safety Centers: descriptive study on the structure and processes developed in state hospitals in Espírito Santo

Núcleos de Segurança do Paciente: estudo descritivo sobre a estrutura e os processos desenvolvidos em hospitais estaduais do Espírito Santo

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Received: May 03, 2023
Approved: Sep 18, 2023

How to cite: Coslop S, Caldas BN, Lima EFA, Portugal FB. Patient Safety Centers: descriptive study on the structure and processes developed in state hospitals in Espírito Santo. Vigil Sanit Debate, Rio de Janeiro, 2023, v.11: e02196. https://doi.org/10.22239/2317-269X.02196

ABSTRACT

Introduction: In 2013, the National Health Surveillance Agency established guidelines for the Health Services Establishments to promote patient safety, including the mandatory creation of Patient Safety Centers. **Objective:** To identify characteristics of the structure and processes of public state hospitals in the State of Espirito Santo. **Method:** Descriptive study with quantitative approach carried on at Patient Safety Centers in public hospitals of the State of Espirito Santo. Data collected between November 2020 and January 2021 using a validated tool. **Results:** Members of Patient Safety Centers of 8 hospitals were part of this study. 62.5% of them are in the metropolitan area. Seven Centers (87.5%) indicated having multiprofessional teams; three (37.5%) indicated having fully implemented most processes and three (37.5%) indicated having partially implemented most processes. The processes indicated as most implemented are "Patient Identification" and "Hands Hygiene" (87.5%). "Effective Communication" process was implemented by one Center (12.5%) and 'Incentive for patients and family members to get involved in their own security' by 2 Centers (25.0%). **Conclusions:** Most NSPs showed partial results regarding the implementation of patient safety processes. Additional actions by state level policymakers and hospital managers should be added to national level efforts to optimize PNSP implementation.

KEYWORDS: Patient Safety; Public Hospitals; Safety Management; Quality of Health Care; Health Policy

RESUMO

Introdução: Em 2013, o Programa Nacional de Segurança do Paciente (PNSP) estabeleceu ações para promoção da segurança do paciente, como a estruturação de Núcleos de Segurança do Paciente (NSP) nos serviços de saúde. **Objetivo:** Conhecer as características relacionadas à estrutura e processos dos NSP de hospitais públicos estaduais do Espírito Santo. **Método:** Estudo transversal e descritivo, com abordagem quantitativa e dados coletados entre novembro de 2020 a janeiro de 2021 por meio de instrumento validado. **Resultados:** Oito hospitais participaram, sendo 62,5% situados na região metropolitana. Sete (87,5%) informaram possuir equipes multiprofissionais; três (37,5%) indicaram a implantação total da maioria dos processos e três a predominância de processos parcialmente implantados. Os protocolos mais prevalentes foram o de identificação do paciente e higiene de mãos (87,5%). O protocolo de comunicação efetiva e o de incentivo ao envolvimento de paciente e familiares foram implantados por um e dois NSP, respectivamente. Apenas um hospital referiu notificar os eventos adversos no sistema nacional. **Conclusões:** A maioria dos NSP apresentaram resultados parciais sobre a implantação dos processos de segurança do paciente. Ações adicionais da parte de gestores do sistema e dos diretores dos hospitais devem ser somadas aos esforços no nível nacional para otimizar a implementação do PNSP.

PALAVRAS-CHAVE: Segurança do Paciente; Hospitais Públicos; Qualidade da Assistência à Saúde; Gestão de Segurança, Políticas de Saúde

INTRODUCTION

Over the years and with the increasing complexity of health care, patient safety has become an important dimension of the quality of care, and initiatives to promote it have intensified[1,2]. In Brazil, over the last few decades, several actions with this objective have been carried out (for example, Collegiate Board Resolution (RDC) No. 63 of November 25, 2011), with the main milestone being the Brazilian Patient Safety Program (PNSP) established in 2013, which aims to contribute to the qualification of care in all services in the country[3]. The design of the PNSP, at the level of health services, combines a focus on specific clinical issues (such as safe surgery) and the strengthening of organizational capacity for patient safety, based on the creation of safety management and risk management teams - the Patient Safety Centers (NSP) - and the strengthening of the safety culture[4]. In the same year, in line with the PNSP, the RDC of the Brazilian National Health Surveillance Agency (Anvisa) No. 36, of July 25, 2013, instituted actions for patient safety in all health services – excluding individual offices, clinical laboratories, mobile, and home services[5].

The requirements introduced by the Anvisa regulations include the establishment of an NSP in each service, whose team must coordinate the implementation of the PNSP with responsibility for drawing up a local patient safety plan for the hospital and reporting incidents to the national system[5]. The NSP is also responsible for supporting the hospital's care teams to implement risk reduction protocols, including the six basic protocols: safe hand hygiene, safe patient identification, pressure ulcers prevention, fall prevention, safe surgery, and safe prescribing, dispensing and administration of medicines[6,7].

NSPs must be registered with Anvisa. This registration allows NSPs access to the Health Surveillance Notification System (Notivisa), a computerized system used by professionals, citizens or health establishments to report incidents, adverse events (AEs), and technical complaints related to products,[8] and to the VigiMed (exclusively for reporting events related to medicines and vaccines)[9].

The degree to which NSPs are able to implement patient safety plans, support care teams in implementing protocols and strengthen the safety culture depends on organizational factors such as senior management leadership, adequate staffing and training, and the maturity of the quality improvement system[10,11,12]. However, a recent literature review points to a challenging scenario for improving patient safety in Brazilian hospitals, with material, symbolic, and relational barriers to the performance of safety management teams[13]. Weaknesses related to the organizational structure and the activities carried out by the centers were highlighted[14,15,16], in addition to issues that hinder the implementation of patient safety strategies in health services, such as a shortage of professionals and low support from management.[17,18]

The implementation of the PNSP in Espírito Santo's hospitals has been slow. Eight years after the program was created, of the 106 hospitals in the state (public, philanthropic, and private)[19], only 68 had an NSP registered with Anvisa[20]. In the period from April 2020 to March 2021, the hospitals located in Espírito Santo were responsible for reporting 3,620 incidents, most of them with minor harm or no harm to patients[21].

State public hospitals play an important role in Espírito Santo's health services network. However, to date, little is known about how the NSPs, which are so important for managing and implementing patient safety actions, are structured in these hospitals, nor which processes, as provided for in the PNSP regulations[1,2], they have managed to implement. Using a questionnaire filled in by hospital representatives, this study aimed to identify characteristics related to the structure and processes of the NSPs of state public hospitals in Espírito Santo.

METHOD

This is a descriptive study, with a quantitative approach, carried out in state public hospitals in Espírito Santo. The 13 hospitals (out of a total of 18) that had an NSP registered with Anvisa in 2019 were invited to take part in the survey. To answer the questionnaire, one member of the NSP per institution was asked to take part. Initial contact was made with the management of each hospital, who directed the researcher to contact the NSP professionals indicated to take part in the survey. Contact was made by telephone and e-mail. After three months of trying, those who did not respond were considered to have refused.

Data was collected from November 2020 to January 2021. Data was collected using a validated NSP self-assessment instrument[22]. The instrument has a topic on the structure of the NSP: I. Human and Material Resources (seven items); and five topics on Process: II. Implementation of the NSP (seven items); III. Main NSP activities (13 items); IV. Sentinel Event prevention guidelines and actions (seven items); V. Risk management strategies and actions (17 items); VI. Professional training (14 items)[22]. The instrument was filled in by the professional indicated in each hospital and was made available via Google Forms®. In addition, data was collected on the profile of the participants (e.g. experience and training in the area) and the conformation of the NSP (e.g. date of creation and professionals who made up the NSP).

The data was analyzed descriptively using Microsoft Excel®. The study was approved by the Research Ethics Committee (CEP) of the Health Sciences Center (CCS) of the Federal University of Espírito Santo (UFES), Certificate of Submission for Ethical Appraisal (CAAE) 26495419.8.0000.5060, opinion No. 4.335.066.

RESULTS

Of the 13 hospitals invited, 12 initially agreed to take part in the survey but only eight completed the instrument (one said it

didn't have a structured NSP and three were considered refusals because they didn't reply to subsequent emails). In total, five (62.5%) hospitals in the metropolitan region and three (37.5%) in the countryside took part. Six (75.0%) hospitals were large (over 150 beds), one (12.5%) medium-sized (51 to 150 beds), and one (12.5%) small (less than 50 beds).

Most of the professionals (62.5%) were unable to say when the NSP was initially set up, while the others were created between 2013 and 2016. As for the characteristics of the respondents, 62.5% (n = 5) had been working in the area for at least two years and had no experience in the area of quality before working at the NSP. It should also be noted that seven respondents had attended a course in the area of safety and quality and only four were professionals working exclusively at the center.

Regarding team structure, 87.5% reported having multi-professional teams, of which doctors and nurses were present in the majority of centers (100.0% and 87.5%, respectively), and pharmacists in 75.0%. One center reported having only one member, a doctor. Only one center reported the participation of the hospital management. One center (12.5%) lacked its own physical area, internet access, a printer, and human resources (Table 1).

Table 1. Structure of participating Patient Safety Centers, Espírito Santo, 2020-2021.

Structure	Yes		No	
	%	n	%	n
Physical area	87.5	7	12.5	1
Computer	100.0	8	0.0	0
Printer	87.5	7	12.5	1
Telephone	100.0	8	0.0	0
Internet access	87.5	7	12.5	1
Office supplies	100.0	8	0.0	0
Human resources	87.5	7	12.5	1

Source: Prepared by the authors, 2023.

Of the NSPs studied, only 37.5% reported that most processes were fully implemented (NSP 1, 2, and 6). There was a predominance of partially implemented processes in three NSP (NSP 3, 5, and 8). Two centers (NSP 4 and 7) reported a predominance of processes still being planned for implementation (Table 2).

Regarding the processes related to the implementation of the centers (Table 3), all of them reported implementing (totally or partially) strategies for the prevention of AE in conjunction with managers and strategies for reporting risks and events that have occurred, as included in the Patient Safety Plan (PSP). Only one center (12.5%) reported having fully implemented strategies for disseminating results to teams. In addition, one NSP (12.5%) had not implemented any strategy or action to avoid individual liability and two (25.0%) did not use quality tools to manage AE risks.

As for the activities carried out by the centers (Table 3), there was a greater prevalence of actions for multi-professional integration, identification, and analysis of AEs, monitoring of actions linked to the PSP and filing of reports (62.5%). Only one center (12.5%) reported full implementation of AE reporting to Notivisa.

Regarding risk management strategies, there was a higher prevalence of actions aimed at patient identification and hand hygiene (87.5%). One center (12.5%) reported implementing strategies for effective communication and two (25.0%) for encouraging patients and their families to get involved in their own safety. Regarding actions with sentinel events, five NSPs (62.5%) reported implementing them to prevent events in surgical procedures (62.5%), and four (50.0%) in care management and the use of products and devices. The least implemented guidelines were for the prevention of potential criminal events (n = 2; 25.0%) and one NSP (12.5%) reported that this guideline will not be implemented (Table 4).

Regarding educational activities, all the centers reported carrying out training, with a predominance of those on NSP (75.0%). Only one center reported training on safety culture (Table 5).

Table 2. Processes implemented by participating Patient Safety Centers, Espírito Santo, 2020-2021.

Implementing processes	I		PIM		PLI		NSI		NSA	
	%	n	%	n	%	n	%	n	%	n
NSP 1	87.9	51	12.1	7	0.0	0	0.0	0	0.0	0
NSP 2	87.9	51	12.1	7	0.0	0	0.0	0	0.0	0
NSP 3	6.9	4	55.2	32	37.9	22	0.0	0	0.0	0
NSP 4	12.1	7	29.3	17	55.2	32	1.7	1	1.7	1
NSP 5	32.8	19	50.0	29	17.2	10	0.0	0	0.0	0
NSP 6	98.3	57	0.0	0	0.0	0	0.0	0	1.7	1
NSP 7	10.3	6	31.0	18	39.7	23	0.0	0	19.0	11
NSP 8	32.8	19	58.6	34	6.9	4	0.0	0	1.7	1

Source: Prepared by the authors, 2023.
I: Implemented; PIM: Partially implemented; PLI: Plans to implement; NSI: Will not be implemented; NSA: Not applicable.

Table 3. Distribution of the main processes and activities developed by the Patient Safety Centers, Espírito Santo, 2020-2021.

	I		PIM		PLI		NSI		NSA	
	%	n	%	n	%	%	n	%	n	%
Implementation of the NSP										
Structured NSP	87.5	7	12.5	1	0.0	0	0.0	0	0.0	0
Senior management participates in and supports safety culture strategies	62.5	5	25,0	2	12.5	1	0.0	0	0.0	0
Uses quality tools to manage AE risks	62.5	5	12.5	1	25.0	2	0.0	0	0.0	0
There are strategies for reporting risks and events covered by the PSP	62.5	5	37.5	3	0.0	0	0.0	0	0.0	0
There is an AE prevention strategy articulated with other managers	50.0	4	50.0	4	0.0	0	0.0	0	0.0	0
There are strategies and actions to avoid individual liability	37.5	3	37,5	3	25.0	2	0.0	0	0.0	0
Promotes Risk Management actions	37.5	3	62.5	5	0.0	0	0.0	0	0.0	0
There are strategies for disseminating the results to the teams	12.5	1	62.5	5	25.0	2	0.0	0	0.0	0
NSP's main activities										
Develops actions for multi-professional integration	62.5	5	37.5	3	0.0	0	0.0	0	0.0	0
Identifies and evaluates existing AE in processes and procedures	62.5	5	25.0	2	12.5	1	0.0	0	0.0	0
Follows up on actions linked to the PSP	62.5	5	25.0	2	12.5	1	0.0	0	0.0	0
Prepares, implements, disseminates, and updates the PSP	50.0	4	25.0	2	25.0	2	0.0	0	0.0	0
Develops, implements, and monitors patient safety training programs	50.0	4	25.0	2	25.0	2	0.0	0	0.0	0
Analyzes and evaluates data on incidents and AEs resulting from the care provided	50.0	4	37,5	3	12.5	1	0.0	0	0.0	0
Promotes Risk Management actions	37.5	3	62.5	5	0.0	0	0.0	0	0.0	0
Implements patient safety protocols and monitors their indicators	37.5	3	50.0	4	12.5	1	0.0	0	0.0	0
Establishes an accident prevention barrier	37.5	3	37.5	3	25.0	2	0.0	0	0.0	0
Discloses the results of the analysis of AEs and incidents to management and professionals	37.5	3	37.5	3	25.0	2	0.0	0	0.0	0
Follows up on health alerts and other risk communications	37.5	3	37.5	3	25.0	2	0.0	0	0.0	0
Reports AE to the National Health Surveillance Service	12.5	1	50.0	4	37.5	3	0.0	0	0.0	0

Source: Prepared by the authors, 2023.
I: Implemented; PIM: Partially implemented; PLI: Plans to implement; NSI: Will not be implemented; NSA: Not applicable; NSP: Patient Safety Centers; PSP: Patient Safety Plan; AE: Adverse events.

DISCUSSION

Espírito Santo's 18 state public hospitals provide medium and high complexity care in various specialties, representing approximately 26.5% of the supply of general and specialized beds (2,686 out of 10,142) and 37.8% of the supply of intensive care beds (adult, pediatric, and neonatal) (880 out of 2,216) in the state[19]. The group is made up of units of different sizes, seven large hospitals (over 150 beds), seven medium-sized hospitals (51 to 150 beds), and four small hospitals (less than 50 beds); and management mechanisms - four hospitals are managed by Social Organizations (OS) under contract with the Espírito Santo State Health Department (SESA-ES). Most of the hospitals are located in the state's Metropolitan Health Region (11 hospitals), two hospitals are located in the Southern Health Region, and four in the Central/Northern Region[19].

In July 2019, 13 state public hospitals had NSPs registered with Anvisa. In addition to NSP registration, Anvisa seeks to monitor adherence to patient safety practices by hospitals with intensive care beds by promoting an annual self-assessment[23]. Of the state public hospitals with this profile, only three showed high adherence in the assessment carried out in 2019; high adherence was maintained by two hospitals in the assessment carried out in 2020, when new assessment criteria were introduced.[24]

By identifying important characteristics regarding the structuring of NSPs in state hospitals in Espírito Santo and the processes

they have managed to implement, this study provides information for managers and policymakers, while also contributing to the literature on the subject. Despite not covering all state hospitals, the number of participating NSPs proved to be representative of large state hospitals located in the metropolitan region. The findings are similar to those of studies carried out in other states of the country, such as those related to adequate physical structure, but with limitations in terms of human resources[14,15,25], for example, insufficient numbers of professionals who accumulate the function of the NSP with other functions and, most of the time, with little experience and training in the area of quality and safety. The implementation profile of the patient safety protocols of the NSP participating in the research is also similar to that of other studies, since the protocols of patient identification, hand hygiene, fall prevention, control of healthcare-related infections, and safe surgery are among the protocols implemented most frequently, and effective communication[26,27,28] and patient involvement in their safety[27,28] among those implemented by a smaller number of NSP[14,16,25,27,28].

The study presents an initial diagnosis of the structuring and work of NSPs in state hospitals in Espírito Santo. It can be considered an initial diagnosis, as it studies "what" the NSPs do but not "how" they do it, nor what difficulties they encounter in this work. In order to do an effective job of reducing the risks and harms resulting from health care, hospitals must be

Table 4. Presentation of the risk management strategies developed by the Patient Safety Centers, Espírito Santo, 2020-2021.

	I		PIM		PLI		NSI		NSA	
	%	n	%	n	%	n	%	n	%	n
Guidelines for preventing sentinel events										
Surgical procedures	62.5	5	25.0	2	0.0	0	0.0	0	12.5	1
Products and devices	50.0	4	12.5	1	25.0	2	0.0	0	12.5	1
Care management	50.0	4	25.0	2	25.0	2	0.0	0	0,0	0
Environmental events	37.5	3	12.5	1	37.5	3	0.0	0	12.5	1
Radiological events	37.5	3	0.0	0	37.5	3	0.0	0	25.0	2
Patient protection	25,0	2	37.5	3	37.5	3	0.0	0	0.0	0
Potential criminal events	25,0	2	0.0	0	37.5	3	12.5	1	25.0	2
Risk management strategies and actions										
Patient identification	87,5	7	0.0	0	12.5	1	0.0	0	0.0	0
Encouraging hand hygiene	87,5	7	12.5	1	0.0	0	0.0	0	0.0	0
Safe surgery	62.5	5	25.0	2	12.5	1	0.0	0	0.0	0
Safety in the prescription, use and administration of blood components	62.5	5	12,5	1	25.0	2	0.0	0	0.0	0
Prevention of patient falls	62.5	5	25.0	2	12.5	1	0.0	0	0.0	0
Prevention and control of AE, including care-related infection	62.5	5	37.5	3	0,0	0	0.0	0	0.0	0
Safety in the prescription, use and administration of medicines	50.0	4	37.5	3	12.5	1	0.0	0	0.0	0
Pressure ulcers prevention	50.0	4	37.5	3	12.5	1	0.0	0	0.0	0
Implementation of the protocols established by the Ministry of Health	50.0	4	25.0	2	25.0	2	0.0	0	0.0	0
Records the use of orthoses and prostheses, when used	50.0	4	12.5	1	12.5	1	0.0	0	25.0	2
Actions to encourage a safe environment	50.0	4	12.5	1	25.0	2	0.0	0	12.5	1
Safety when using equipment and materials	37.5	3	50.0	4	12.5	1	0.0	0	0.0	0
Identifying, analyzing, monitoring and communicating risks	37.5	3	37.5	3	25.0	2	0.0	0	0.0	0
Integration of the different Risk Management processes developed in the service	37.5	3	25.0	2	25.0	2	0.0	0	12.5	1
Safety in the prescription, use and administration of enteral and parenteral nutritional therapies	37.5	3	25.0	2	25.0	2	0.0	0	12.5	1
Encourages patients and their families to be involved in their own safety	25.0	2	62.5	5	12.5	1	0.0	0	0.0	0
Effective communication	12.5	1	62.5	5	25.0	2	0.0	0	0.0	0

Source: Prepared by the authors, 2023.
I: Implemented; PIM: Partially implemented; PLI: Plans to implement; NSI: Will not be implemented; NSA: Not applicable; AE: Adverse events.

Table 5. Training carried out by the Patient Safety Centers, Espírito Santo, 2020-2021.

	R		PR		PLR		NSR		NSA	
	%	n	%	n	%	n	%	n	%	n
Training professionals										
Patient Safety Center	75.0	6	12.5	1	12.5	1	0.0	0	0.0	0
Patient safety protocols	50.0	4	25.0	2	12.5	2	0.0	0	0.0	0
Patient Safety Plan	50.0	4	25.0	2	12.5	2	0.0	0	0.0	0
Reporting system and AE	50.0	4	25.0	2	12.5	2	0.0	0	0.0	0
Quality and patient safety	37.5	3	50.0	4	12.5	1	0.0	0	0.0	0
Basic principles of patient safety	37.5	3	50.0	4	12.5	1	0.0	0	0.0	0
Types of healthcare-related AE	37.5	3	37.5	3	12.5	2	0.0	0	0.0	0
Strategies for improving quality and safety	37.5	3	25.0	2	12.5	2	0.0	0	12.5	1
Investigation of AE	37.5	3	50.0	4	12.5	1	0.0	0	0.0	0
Root cause analysis	37.5	3	25.0	2	12.5	3	0.0	0	0.0	0
Failure Modes and Effects Analysis	37.5	3	12.5	1	12.5	3	0.0	0	12.5	1
Patient safety indicators	25.0	2	50.0	4	12.5	2	0.0	0	0.0	0
Risk Management	25.0	2	50.0	4	12.5	2	0.0	0	0.0	0
Safety culture	12.5	1	37.5	3	12.5	4	0.0	0	0.0	0

Source: Prepared by the authors, 2023.
R: Performed; PR: Partially performed; PLR: Plans to perform; NSR: Will not be performed; NSA: Not applicable; AE: Adverse events.

able to establish virtuous cycles in which the learning generated from the failures identified guides changes in practices at the level of the organization and the care teams[10,29]. For this to happen, cooperative working relationships between safety management teams (who organize learning) and management and care areas (responsible for changes at the organizational and departmental level, respectively) are a *sine qua non* conditions. However, the findings indicate little interaction between the NSPs and senior management and clinical leaders (for example, only one participant reported having strategies for disseminating the results to the teams, and three participants reported disseminating the results of the analysis of AEs and incidents to management and professionals), suggesting that the majority of state public hospitals in ES have not yet established such cycles.

The results also indicate situations that can compromise the development of patient safety strategies. In this sense, the strengthening of strategies that include the involvement of senior management[30], the engagement of teams[31], the minimization of the punitive culture within organizations[32], and the continuous development of educational strategies[33], which are still little explored by the NSPs studied, represent ways to advance the work of the NSPs.

More than seven years after the establishment of the PNSP, not all public hospitals in the state of Espírito Santo had established NSPs. Of those with NSP, many were still implementing most of the processes and, from what the findings suggest, it is likely that few have established organizational learning processes that strengthen the safety culture. This shows how challenging it is to effectively implement large-scale patient safety programs such as the PNSP. Additional actions on the part of system managers and hospital directors should be added to efforts at the national level (such as offering training courses and establishing a system for monitoring adherence to safety practices) to optimize the implementation of the PNSP. A recent study suggests that optimizing the implementation of the PNSP in public hospitals in order to strengthen the safety culture involves addressing structural issues (e.g. limited management capacity, inadequate staffing and training, and lack of resources to invest in improvements), developing local leadership capacity for patient safety, and avoiding monitoring of a bureaucratic nature that promotes checking items rather than understanding problems[11].

Managers of health systems with hospitals under their direct or indirect administration must ensure that NSPs have exclusive professionals with access to the necessary training and education. Adequate staffing and training of care teams should also be a concern[34]. In addition to human resource issues, material issues directly influence the ability of NSPs and care teams to put safety protocols into practice, such as supplies for pressure ulcers prevention and environmental changes to prevent falls (e.g. grab bars in bathrooms and non-slip floors), and should be prioritized by health system managers and hospital directors, demonstrating a commitment to safety and facilitating the implementation of safety practices[35,36].

The fundamental role of leadership in patient safety is consolidated in the literature[35]. Health departments can support hospitals by promoting training actions for leadership in patient safety

and establishing a network of learning and interaction between peers. Local safety leaders support the effective implementation of the PNSP by being present in local safety initiatives, participating in the development of safety plans and guaranteeing resources to carry out actions[11].

Finally, health departments can optimize the implementation of the PNSP in hospitals by establishing a monitoring dynamic that focuses on learning in order to understand and support management at the hospital level[35]. The action to monitor the implementation of the PNSP in hospitals consists of an annual assessment of adherence to safety practices, carried out by Anvisa, in partnership with the state health surveillance[23]. It is only carried out in hospitals with intensive care units. This evaluation provides objective information on practices but has little capacity to assess how the actions are actually being developed or what difficulties the local safety management teams have encountered in putting the PSP into practice. In this sense, health surveillance agencies could develop actions to get to know this panorama, in order to help health departments with improvement actions.

This study has some limitations. No data was obtained on the outcome of the NSP's work. Thus, findings on structure and processes are not associated with outcome measures. In addition, the appointment of respondents to the survey by hospital management may have resulted in a more optimistic picture than the real one. Data collection was carried out during the COVID-19 pandemic, with additional limitations. The impact of the pandemic on services, with an increase in workload and a reduction in staff due to the disease affecting professionals and/or their families, may have reduced the number of participating hospitals. Due to the restricted circulation in hospitals, data collection was adapted to self-completion on a digital form; difficulties in accessing the internet may have limited participation. Self-completion did not allow for a better understanding of the practice (for example, how could "Safety in the prescription, use, and administration of enteral and parenteral nutritional therapies" not apply in a hospital?).

CONCLUSIONS

This study presents an initial diagnosis of the structuring and functioning of NSPs in state public hospitals in Espírito Santo and points to ways of optimizing their functioning. The findings of our research are in line with those of similar studies carried out in other regions of the country, suggesting that this is a national profile/trend. More in-depth studies on the work carried out by NSPs could provide additional information on the challenges faced by these teams. Comprehensive studies, including evaluation of processes and results, are needed to understand whether the implementation of the PNSP has made healthcare safer.

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Authors' contributions

Coslop S - Conception, planning (study design), acquisition, analysis, data interpretation, and writing of the work. Portugal FB - Conception, planning (study design), analysis, data interpretation, and writing of the work. Caldas BN - Analysis, data interpretation, and writing of the work. Lima EFA – Writing of the work. All the authors approved the final version of the work.

Conflict of Interest

The authors inform that there is no potential conflict of interest with peers and institutions, political or financial, in this study.