

Tone at the Top and Internal Audit: Analysis of the SUS Governance Environment

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Edited by:
José Alves Dantas

Abstract

Objetivo: This research examines the perceptions of the internal audit staff of the Unified Health System (SUS), in relation to the governance structure and Tone at the Top (TaT) of the Ministry of Health (MS).

Method: A survey strategy was used. Data were collected through a survey applied to all employees working in the internal audit unit, AudSUS (formerly Denasus), and were divided into two dimensions: SUS control environment and audit and TaT, both at the federal level. Data collection resulted in 233 complete responses, representing 54% of the invitations sent. The dimensions were measured using multiple five-point scales. Several quantitative techniques were used for data analysis, including frequencies, percentages, means and deviations (for continuous variables), Cronbach's alpha, and Cramer V.

Results: From the respondents' point of view, weaknesses were observed in the performance of the roles of governance actors, as well as in the organizational control environment and in the independence and autonomy of internal audit. Also noteworthy is the low level of maturity of the integration between the internal audit unit and governance stakeholders. Our findings point to a misalignment between top management and internal audit, which affects communication and affects the autonomy and effectiveness of the internal audit unit's work.

Contributions: Our study contributes to the improvement of SUS governance and internal audit in the public sector, particularly in the Ministry of Health.

Keywords: Risk; Senior Management; Control environment.

How to cite:

Hohenfeld Macedo dos Santos, R., Demarche Minatti Ferreira, D., Martins Dias Maragno, L., & Mussoi Ribeiro, A. Tone from the Top and internal audit: Analysis of the SUS governance environment. *Advances in Scientific and Applied Accounting*, 236–247/248. <https://doi.org/10.14392/asaa.2023160209>

Submitted: 27 March 2023
Revisions Required: 8 May 2023
Accepted: 4 August 2023

Introduction

The term Tone at the Top (TaT) was first used in the 1987 report of the National Commission on Fraudulent Financial Reporting (NCFRR), whose primary objective was to analyze the financial reporting ecosystem in search of the causes, actors, systems, and characteristics associated with fraud and to understand its dynamics. The result of this report was a set of recommendations (principles) addressed to the actors involved in the production of financial reports. Among the NCFRR's recommendations for listed companies was the establishment of the TaT.

According to the Commission (1987), senior management has an obligation to set the tone that will influence the corporate environment in which financial reports are produced. This should include formally establishing a code of conduct and integrity, monitoring its application, and clearly defining a policy for the control environment. From the NCFRR's first recommendation in 1987 to today, the idea of TaT has remained the same. It should represent the voice of senior management and its position on matters of strategy, ethics and conduct, and serve as a reference point for shaping the organization's culture.

Over the years, TaT has been the subject of both academic research and technical work. For example, research conducted by Pyzoha et al. (2020) focused on understanding how TaT can affect the alignment of technical understanding between managers and auditors in the pursuit of business objectives related to complex accounting estimates. The authors found that auditors were more likely to agree with accounting estimates when the tone from the top was commercial than when it was not.

The study by Hayes et al. (2021) examined the effect of the TaT on whistleblowing intentions in anonymous and non-anonymous channels and concluded that a strong TaT contributes to a greater number of complaints in both perspectives. Finally, the work of Garrett et al. (2022) analyzed the effect of TaT on the pricing of audit services, concluding that a strong TaT contributes to the control environment and reduces auditors' perception of risk, thereby reducing the amount they charge even in more complex business environments.

On the technical side, highlights include the Committee of Sponsoring Organizations (COSO) Internal Controls (IC) 2013 and Enterprise Risk Management (ERM) 2017 frameworks, which serve as the basis for virtually all strategic risk management and internal control initiatives in the public and private sectors. COSO IC 2013 also provides objective recommendations on what an ideal TaT should look like to contribute to effective risk and control management.

Although COSO's recommendations were initially designed for private, publicly traded companies, they eventually gained prominence in the public sector, where controls and risk management make a difference in good governance practices. This recognition materialized in 2016 with the

joint normative instruction of the Comptroller General of the Union (CGU) and the Public Prosecutor's Office (MP) No. 01, which presented guidelines for public entities regarding internal controls, risk management, and governance within the federal executive branch. According to this regulation, the TaT should be materialized in the control environment that will serve as a reference for the entire architecture of the organization's control and risk management system, as provided for in the COSO IC Framework (2013).

This initiative of the federal government indicates a conceptual and normative maturation of the control institutions involved in governance, with the potential to be translated into more effective policies, actions and services for the population. However, important elements for the functioning of this system are the involvement and encouragement of senior management and other governance institutions for its effective implementation. According to COSO (2013), senior management and managers at all levels of the organization need to demonstrate the importance of integrity and ethical values through policies, actions, and behaviors to support the functioning of internal controls.

This is intended to induce ethical behavior and reduce the likelihood of misconduct in the organization, which favors the achievement of organizational goals (Hansen et al., 2009; Warren, 2015). According to Vaassen et al. (2009), a proper TaT is the most important contribution to shaping organizational culture, as a lack of coordination between governance actors can lead to inefficiencies and communication failures, which negatively affect the achievement of organizational goals (Bantleon et al., 2021).

Another highlight of the COSO IC (2013) framework is the organization's monitoring of the TaT. According to the organization, the TaT should be influenced by the operating style and personal behavior of managers and senior management. Their attitudes toward risk (conservative or aggressive) and the degree to which controls are formalized send important messages that guide the behavior of the organization's stakeholders. As these aspects are dynamic, the TaT needs to be continuously improved and adapted. It should also be periodically assessed for its effectiveness and appropriateness as a driver of the organization's internal control system.

The assessment of both the TaT and the internal control system of a private organization is usually performed by external and internal auditors, as this parameter is directly related to the planning and execution of audit work. The more effective the control environment, the lower the perceived risks of fraud, material error, and noncompliance (Pyzoha et al., 2020; Garrett et al., 2022).

In the executive branch, however, this responsibility is not always so clear-cut, as they are not subject to the scrutiny of traditional external audit and generally do not have a

related entity such as an internal audit function. According to The Three Lines Model of the Institute of Internal Auditors (IIA), the role of internal audit is to assist the entity in building its internal control systems and to periodically assess their effectiveness and efficiency. According to the IIA (2020), this model works across organizations to improve control and risk management by establishing responsibilities and flows between the management, governance, and audit levels.

Although there is still no legal requirement for an internal audit department or management in the public sector, some institutions, such as the Ministry of Health (MS), have structures such as AudSuS, which can serve as a reference for an internal audit system similar to The Three Lines Model. In these institutions, the TaT serves as an important guide for the planning and execution of their work, as risks are assessed and audits are conducted based on its effectiveness (Wang & Fargher, 2017).

Despite the fact that institutional regulations have matured and are a critical element in structuring and promoting the integrity of the internal environment, there is limited evidence on the perception of the TaT within Brazilian federal public organizations, particularly the Ministry of Health (MS). Recent studies have shown that internal controls and risk management partially capture the TaT in federal organizations, such as the Federal Government's Secretariat of the direct public administration (Montezano et al., 2019), federal social organizations linked to the Ministry of Science, Technology and Innovation (MCTI), the Ministry of Education and Culture (MEC) (Sousa et al., 2021), and military organizations (Kasai et al., 2022), thus increasing the need to delve deeper into the topic and seek new evidence.

Our research follows this line of study and discusses an evaluative view of the TaT from one of its main users: the internal audit of a public institution. Our main innovation lies in the fact that the subjects of the research are the Ministry of Health and AudSuS, one of the main references when it comes to auditing public resources. In addition, our research takes a deeper look at the structures and practices at the central level of Brazilian public health policy, which are part of the SUS. Thus, the guiding question of the research is 'What are the perceptions of the SUS internal audit employees regarding the governance structure and the Tone at the Top (TaT) of the Ministry of Health? Thus, our objective is to examine the perceptions of SUS Internal Audit staff regarding the governance structure and the tone at the top (TaT) of the Ministry of Health.

The answer to this question can shed light on the importance and impact of TaT in organizations, particularly in the public sector. Hansen et al. (2009) point out that internal auditors are in a position to improve and influence an organization's TaT through their assessment and advisory activities. This requires, on the one hand, explicit efforts on the part of senior management regarding integrity policies and controls to promote ethical behavior and reduce the likelihood of misconduct throughout the organization, which is reflected in its TaT. On the other hand, there must be structures and processes in place that enable the internal

audit unit to assess and contribute to the improvement of TaT and governance.

Moreover, as a contribution of this research, Souza et al. (2020) refer to the challenge of incorporating international models (COSO and IIA) in the implementation of policies and risk management in the federal government, given its environment and culture. In this context, it is important to conduct a separate analysis by region in order to evaluate the communication of the system as a whole. AudSuS is headquartered in the Federal District (DF), but its branches are present in all Brazilian regions. With the help of Cramer's V-association analysis, it was possible to deduce whether the communication and vision of the TaT is consistent even in locations far from the general headquarters. The obtained results confirm this relationship and show a cohesion in the system vision of the TaT, even in different regions. This is a strong indication that the communication of the TaT in the MS is relatively homogeneous from an internal audit perspective and can serve as an example for other government bodies in the implementation and communication of their control systems.

2. Literature Review

2.1 *Tone at the Top*

The term Tone at the Top (TaT) was first mentioned in the report of the National Commission on Fraudulent Financial Reporting (October 1987) (Warren et al., 2015), the first official document of the commission that gave rise to COSO and presented recommendations for detecting and preventing fraud in financial reporting. In this report, TaT is understood as a formal code of conduct defined by senior management that influences the organizational environment in which objectives and controls are exercised. In this way, TaT is a precursor or reinforcement of ethical culture or norms as the tone of the organization is set by the practices, policies, and procedures that value ethical behavior and reduce the likelihood of misconduct (Warren et al., 2015).

One of the responsibilities of senior management is to maintain a positive internal environment by establishing the TaT (COSO, 2013). This influences the internal environmental factors and the components of risk management; therefore, the tone provides the reference for identifying and managing risks, guided by integrity and ethical values. Thus, it is perceived that the TaT is measured by the adopted attitudes and actions related to the importance of controls.

The IIA (2012) complements this idea by referring to it as the "control environment," indicating that it is the responsibility of the board of directors and senior management to provide the discipline and structure necessary to achieve the objectives of the organization's internal control system, including: assigning authority and responsibility, defining the organizational structure, establishing the operating philosophy and style, establishing human resources policies and practices, fostering staff competence, and promoting integrity and ethical values. The latter, which is one of the main means of communicating the TaT, is done

through a code of ethics (Versteeg & Bertrand, 2019).

Across these elements, the authors show that the TaT is defined by the consistency between leaders' behavior and their statements, i.e., the more consistent this relationship is, the stronger the organizational culture. The IBE (2017) confirms this by stating that top leaders must lead by example, demonstrate commitment through their behavior, and foster an environment consistent with their organization's values and ethics. However, other factors and actors help to improve or strengthen the TaT, which Versteeg and Bertrand (2019) present as variables that have an impact on improving the TaT: establishing a code of conduct, structuring a corporate governance system, establishing an internal audit and internal control environment, establishing a supervisory board, and maintaining compliance with laws and regulations.

Warren et al. (2015) state that the modern work environment includes multiple organizations and multiple tops, which creates different ethical tones that can conflict with each other. The same authors explain that the concepts that present a single tone are inconsistent because there are different instances that weave the tone of the organization as a whole, such as the board of directors, chief executive officer, chief financial officer, head of senior management, client audit committee, regulatory organizations, among others.

The same authors present the following as sources of TaT: a) Leaders and managers who represent the upper echelon, including individuals or teams in influential organizational positions, executives and senior managers, and supervisors; b) Leaders of a client company: From an inter-organizational perspective, these represent the top echelon outside the organization, with a business relationship between organizations or a group of customers, where there is a risk of fraud and unethical behavior coming from this external environment, and; c) Board of Directors: in addition to the company's managers, these are members who play a leading role in corporate governance and voice on any changes in the organization, as there are practices with the use of committees that can decide, appoint and dismiss positions.

2.2 Governance of the Unified Health System (SUS)

In Brazilian public health, the governance is relevant because of its impact on the lives and well-being of citizens and the complexity of the levels of management involved (the agents), which are responsible for national policies down to local services, according to Law 8,080/1990, which created the SUS. Meanwhile, the World Health Organization (OMS, 2020) has presented a concept that contributes to this understanding. It states that governance refers to the orientation and formulation of rules carried out by governments and/or decision-makers in order

to achieve national health policy objectives leading to universal health coverage.

According to OMS (2020), governance involves balancing competing influences and demands and includes: maintaining strategic direction in policy development and implementation; identifying and correcting undesirable trends and distortions; articulating the case for health in national development; regulating the behavior of actors (funders and health service providers); and establishing transparent and effective accountability mechanisms.

Governance identifies the roles and limits of the institutions that make up the system and are responsible for establishing and communicating the TaT. Therefore, it is necessary to understand the difference between governance and management, which act interdependently. According to the Federal Court of Accounts (TCU, 2018), governance employ tools that reduce management risks, evaluates, directs and monitors management.

In the context of SUS, the relationship between the state, society and the market has been reoriented (Fleury & Ouverney, 2012), which represents a change in the way the state is constituted, as well as in the model of social protection and the way social policies are managed. Currently, the distribution of roles in the governance of the SUS has been presented by the TCU (2018), based on a national survey of governance and health management at the municipal and state levels, resulting in a system of governance of public health institutions and relationships between its instances.

The nature of health councils as a governing body is a controversial issue, with their function being that of a "governing body" and therefore higher than senior management. The TCU (2017) considers the health council to be equivalent to a corporate board of directors, while senior management (the health secretary and direct reports) is equivalent to management. The TCU states that leadership in health is exercised by the health council and senior management, who are responsible for the evaluation, direction and monitoring mechanisms, and are the senior actors responsible for the governance practices of the SUS.

Similarly, TCU (2018) notes that understanding this perspective points to challenges that councils must overcome, such as ensuring autonomy, training members, maintaining or providing physical facilities, and sufficient human and material resources.

In the latest edition of the 2020 Management Report (Brazil, 2021), the Ministry of Health presented a diagram of the positioning of governance and management actors (Figure 1), which reinforces the lack of unanimity in understanding the role of the Health Council.

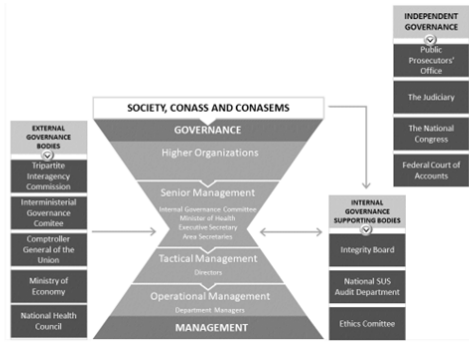


Figure 1 - Interaction and organization of the main actors in the governance and management of the MS
Source: Brazil (2021, p. 20)

There are different elements to those presented, with emphasis on the National Health Council (CNS) as an external body to the funnel of the higher governing bodies, unlike the management councils (CONASS and CONASEMS - state and municipal), positioned at a higher level and equivalent to that of society, where the citizen (principal) is located. In the same document, the council is treated in the same way as the other collegial bodies, as one of the stakeholders and external actors that deliberate on health-related issues, and on the other hand, it is also presented that its guidelines are considered as a source for the definition of strategic objectives.

Since the creation of the SUS, in accordance with Law 8080/1990, there has been a provision for the supervision and establishment of an audit system that follows a tripartite design, i.e., involving the three levels of government. Law No. 8689/1993 establishes the Federal Government as the central body of the National Audit System (SNA), through its unit currently known as the General Audit of the Unified Health System (AudSUS), regulated by Decree No. 1,651/1995 and Decree No. 11,098/2022.

It is noteworthy that at the end of this study, the unit was renamed AudSUS, so most references mention its previous name, the National Audit Department of the Unified Health System (Denasus), during the period of application of the questionnaire, when it was regulated by Decree No. 9,795/2019. Nevertheless, the survey was not affected, as it remained with the same attributions and regulation. In addition to this entity at the federal level and its own representations in the Brazilian states, the SNA is also composed of state and municipal SUS audit agencies, which are organized with AudSUS as a reference for their structure and operation.

2.3 The Three Lines Model and Audit

The TaT comes from the highest levels of management. Therefore, its processes and structures are designed to achieve organizational goals. Bantleon et al. (2021) state that The Three Lines Model (Figure 2) is an organizational

structure that reduces information asymmetries. This model considers the distribution of functions performed by different actors: risk management and ownership, supervision, and independent risk assessment. For the same authors, the different lines reduce information asymmetries between the organization's actors and its owners at the different hierarchical levels, thereby reducing the risk of poor decisions.

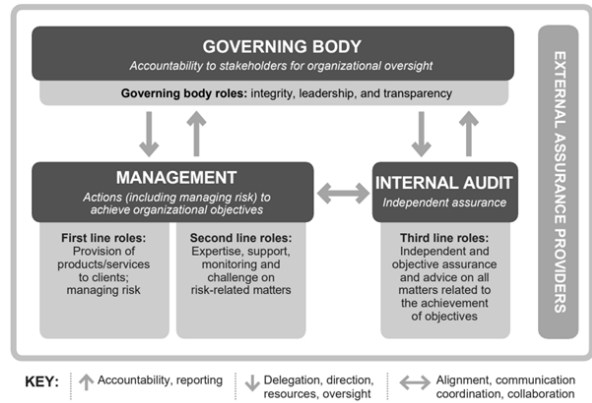


Figure 2: The IIA's Three Lines Model
Source: IIA (2020, p. 4)

The IIA (2018) states that internal audit identifies and eliminates risks that affect the organization's ability to operate. According to the IIA (2009), internal audit is an independent, evaluative, and advisory activity whose purpose, according to the IIA (2018), is to assist the organization in achieving its strategic, operational, financial, and compliance objectives. According to the IIA (2019b), its independence from management is a prerequisite for achieving its objectives, and it is necessary to establish a reporting line (a periodic report) to those responsible for governance, including senior management and executives, a recommendation in line with the Technical Reference for the Governmental Internal Audit Activity of the Federal Executive Branch (Brazil, 2017).

Hansen et al. (2009) argue that the role of internal audit goes beyond internal controls. The authors point out that it can improve governance processes by promoting ethics and values within the organization, as well as communicating risks and the adequacy of internal controls, elements that can directly influence the construction of the TaT.

This understanding is supported by the guidelines of the Technical Reference of the Governmental Internal Audit Activity of the Federal Executive Branch (BRASIL, 2017), when presenting the periodic report on the performance of the internal audit activity to both senior management and board of directors. According to Biscalquim and Vieira (2015), internal audit supports good corporate governance practices that seek responsible management with results, fairness, responsibility and accountability.

Marçola (2011) points out that internal audit is a tool to support and advise management, and should not be confused with an imposing or punitive activity. Gramling

and Schneider (2018) reinforce that, in addition to assessing internal control deficiencies in specific processes, internal audit has the potential to reach widespread deficiencies that may affect multiple processes.

Hansen et al. (2009) show that internal audit makes recommendations to improve the governance process by promoting ethics and values within the organization and by communicating the risks and internal controls assessed, thereby encouraging governance bodies to define an appropriate TaT.

In this way, the authors show that internal audit influences the improvement of the TaT. This is confirmed by Nakashima and Ziebart (2016), who state that the more effective the internal controls and the quality of the audit, the more positive the TaT. On the other hand, Gramling and Schneider (2018) argue that due to their hierarchical position, it is difficult for internal auditors to be candid in their reports when assessing the tone of senior management. Therefore, they should always be accounted for in terms of their reporting flow and functional distance from the audited management area, including their relationship with senior management, in order to maintain their independence.

3. Methodology

The data were collected by means of a questionnaire sent to all employees of AudSUS, which is attached to the Ministry of Health. AudSUS (formerly Denasus) operates in all Brazilian states through the Audit Sections (SEAUD) of the Superintendencies of the Ministry of Health and through its central unit in Brasilia. The research was submitted to the

Research Ethics Committee (CEP) and was approved under Opinion No. 5.242.160.

The invitation to access LimeSurvey was sent to a population of 434 employees between February and March 2022. Of the 284 responses received, 51 were discarded as incomplete. As a result, the survey sample consists of 233 complete responses, or 54% of the total, with a confidence level of 95% and a margin of error of 5%.

The questionnaire presents two dimensions: the control environment and audit and the TaT (in the federal sphere of the SUS). Questions on the demographic characteristics of the respondents were also included. Dimensions, surveyed items and references that supported the research are shown in Table 1.

The dimensions were measured using multiple scales with five levels of agreement from "totally disagree" to "totally agree" and the "I don't know" option.

Quantitative techniques were used to analyze the data (frequencies and corresponding percentages), as well as the means and standard deviations of the demographic data for the continuous variables, and Cronbach's Alpha and Cramer's V statistical techniques were used to analyze the statements. Cronbach's Alpha represents the internal consistency of the variables, that is, the measure of the degree of reliability (Fávero & Belfiore, 2017), with a value of 0.867, confirming the internal consistency of the responses. In addition, Cramer's coefficient V was used as an additional test to identify the strength of the associations between the responses at the level of TaT due to the geographical location and characteristics of the respondents.

Table 1. Research dimensions and related frameworks

Dimension	Topic	Assessment Items	Referências
SUS control environment at the federal level	Strategic management controls	Code of ethics/conduct	World Bank (2020); Braumann et al. (2020); IIA (2012); IIA (2018); IIA (2019); Versteeg e Bertrand (2019);
		Integrity/compliance program	
		Response plan for fraud and other irregularities	
		Active transparency channels	
		Listening channels	
		Leadership training and development	
		Leadership succession	
		Risk management	
	Relationship between governance and management bodies with the unit responsible for internal audit (3rd Line)	Internal control (2nd Line)	
		Internal audit conditions in strategic plans	
		Senior management and the communication of audit results	
		Managers and conclusions presented by internal audit	
		Council and strategic statements in support of internal audit	
		Council and the communication of audit results	
		Council and the independence and authority of internal audit	
		Relationship with the council	
		Statute of internal audit	
		Budget control	
Required resources			
Auditing and TaT in the federal sphere of the SUS	Internal audit's performance in the face of the tone issued by senior management	Audit's independent and objective assessment of the senior management's TaT	Hansen et al. (2009); IIA (2012); IIA (2020); Warren et al. (2015)
		Senior Management's TaT evaluation report	
	Performance of the internal audit in relation to the tone issued by the council	Audit's independent and objective assessment of the council's TaT	
		Council's TaT evaluation report	

4. Analysis of the Results

4.1 Profile of the respondents

The respondents work at AudSUS. 139 (60%) are female and 94 (40%) are male, with an average age of 47 (Table 2).

Table 2
Demographic data

	Frequency	Percentage (%)
Age (years)		
Mean	47,05	-
Standard Deviation	8,30	-
Gender		
Female	139	59%
Male	94	40%
Experience in the field (months)		
Mean	81,29	-
Standard Deviation	58,62	-
In which region do you work?		
Northern Region (AC, AM, AP, PA, RO, RR, TO)	40	17%
Northeast Region (AL, BA, CE, MA, PB, PE, PI, RN, SE)	38	16%
Center-West Region (GO, MS, MT)	20	8%
Central Unit (Brasília)	43	18%
Southeast Region (ES, MG, RJ, SP)	61	26%
Southern Region (PR, RS, SC)	31	13%

The average length of service in auditing was 7 years, ranging from newcomers to individuals with up to 35 years of experience, which may facilitate the context of lack of specific academic training. Finally, the respondents work in DenaSUS units, representing all internal audit units.

4.2 SUS Control Environment at the Federal Level

Responses indicated perceptions of minimum actions related to integrity factors, organizational structure, authority and responsibility assignment, human resources policies and practices, and staff competence (Table 3).

Four elements stand out positively: the establishment of a code of ethics and integrity program (70%, Cramer's $V = 0.1434$ $p = 0.511$), the existence of active data transparency mechanisms (66%, Cramer's $V = 0.2032$ $p = 0.008$), and the provision of a customer service and reporting channel (65%, Cramer's $V = 0.1931$ $p = 0.02$). Although these are relevant measures, the performance of the other items indicates weaknesses in the management of the control environment, with potential damage to the TaT issued to management to support its integrity.

Among the items with negative perceptions, the high rate of unawareness (32%) of institutional fraud response plans stands out, which together with total and partial disagreement (42%) accounted for 74% of the responses (Cramer's $V = 0.1459$ $p = 0.468$). This situation is similar to other institutions, Sousa et al. (2021) found no evidence of a risk response policy. However, there are benefits when fraud and/or risk response policies are in place, potential benefits are related to improving processes and achieving results with risk prevention measures (Montezano et al., 2019).

Table 3
Strategic management control practices

Q.	Statements	Frequencies				
		I don't know	TD	PD	PA	TA
Q1	The MS has a code of ethics/ conduct known to all staff, including criteria and tools to avoid conflicts of interest.	14 (6%)	17 (7%)	39 (17%)	109 (47%)	54 (23%)
Q2	The MS has an integrity/ compliance program in place that is known to all staff.	27 (12%)	28 (12%)	57 (24%)	91 (39%)	30 (13%)
Q3	The MS has a response plan for fraud and irregularities describing the main principles and methods of investigation.	74 (32%)	49 (21%)	50 (21%)	51 (22%)	9 (4%)
Q4	The MS has a transparency portal or other channels to promote transparency of its data and operations, which is updated in a timely manner and contains information that is easy to understand.	20 (9%)	18 (8%)	40 (17%)	119 (51%)	36 (15%)
Q5	The MS has an appropriate and known channel(s) for interested parties to report suspected irregularities, compliments, complaints and suggestions.	15 (6%)	14 (6%)	53 (23%)	96 (41%)	55 (24%)
Q6	The MS has measures in place to train and develop the professional leadership profiles of its units, including potential leaders.	16 (7%)	66 (28%)	69 (30%)	69 (30%)	13 (5%)
Q7	The MS has established leadership succession practices that reduce the disruption associated with leadership transitions.	25 (11%)	140 (60%)	39 (17%)	26 (11%)	3 (1%)
Q8	The MS has a risk management policy that is known, adequate, and internalized.	37 (16%)	80 (34%)	66 (28%)	46 (20%)	4 (2%)
Q9	The MS has a central internal control unit (2nd line) that is formalized, structured, properly positioned and active.	39 (17%)	40 (17%)	66 (28%)	63 (27%)	25 (11%)
Q10	The central internal control unit or its equivalent (2nd line) carries out monitoring practices regarding the compliance, efficiency and effectiveness of the execution of public policies in order to reduce risks and increase organizational integrity.	59 (25%)	59 (26%)	42 (18%)	61 (26%)	12 (5%)
Q11	In case of fraud or embezzlement, it is the practice of the central internal control unit or correspondent (2nd line) to initiate an investigation.	66 (28%)	53 (23%)	27 (11%)	60 (26%)	27 (12%)

Note: Scale applied to all questions.

TD = Totally Disagree; PD = Partially Disagree; PA = Partially Agree; SA = Totally Agree; Q. = Question.

There was disagreement about the existence of leadership succession initiatives (71%, Cramer's $V = 0.1935$ $p = 0.021$). In situations of high turnover, there may be gaps in knowledge and consequently risks. According to COSO (2013), the organization must demonstrate its commitment to retaining individuals who are aligned with its objectives. According to Article 21 of INC 1 of 2016, leadership is a principle of good governance and must be developed at all levels of management.

Subsequently, the perception of the risk management policy was verified, where 62% (Cramer's $V = 0.1158$ $p = 0.898$) partially/totally disagreed and 16% said that it is known, appropriate and internalized. According to Montezano et al. (2019), there are difficulties in adopting risk management policies such as: limitations of risk management policies, lack of employee engagement,

structural limitations for risk management and lack of support from senior management. Braumann et al. (2020) add that it is important to create a risk culture, and that awareness is a fundamental component of this culture.

An appropriate TaT establishes the values defended by senior management with respect to risk management (Braumann et al., 2020). In this sense, the institution issued Order GM/MS No. 1,185 of June 9, 2021, which establishes the Risk Management Policy within the framework of the MS. Its recent publication, in turn, may indicate a low level of knowledge or maturity in the application of risk management structures while demonstrating the commitment of top management to their implementation. Versteeg and Bertrand (2019) warn that such values have a positive impact on the improvement of the TaT.

Perceptions of the strategic engagement of senior management and health council in the effectiveness of internal audit activities are shown in Table 4.

Tabela 4
Relacionamento entre instâncias de governança e gestão e a auditoria interna

Q.	Afirmativas	Frequências				
		Não sei	DI	DP	CP	CI
Q12	Os planos estratégicos do órgão (exemplo: PNS e planejamento estratégico organizacional) costumam prever, reconhecer ou declarar sobre as condições necessárias para que o DenoSUS prospere.	41 (18%)	69 (30%)	55 (23%)	59 (25%)	9 (4%)
Q13	A alta administração do órgão (Ministro e Secretários) costuma promover esforços que garantem que os resultados das auditorias sejam transmitidos às partes interessadas e que quaisquer melhorias ou ações corretivas recomendadas sejam tratadas ou resolvidas.	19 (8%)	62 (27%)	65 (28%)	65 (28%)	22 (9%)
Q14	As áreas de gestão e supervisão do órgão (MS) demonstram esforços para compreender as conclusões apresentadas pelo DenoSUS e para que as ações corretivas recomendadas sejam tratadas ou resolvidas.	27 (12%)	57 (24%)	65 (28%)	72 (31%)	12 (5%)
Q15	O conselho (CNS) costuma reconhecer e declarar as condições necessárias para que o DenoSUS prospere por meio dos planos estratégicos aprovados (PNS) e de seus demais atos.	73 (31%)	62 (27%)	49 (21%)	43 (18%)	6 (3%)
Q16	O conselho (CNI) costuma promover esforços que garantem que os resultados das auditorias sejam transmitidos às partes interessadas e que quaisquer melhorias ou ações corretivas recomendadas sejam tratadas ou resolvidas.	76 (33%)	66 (28%)	43 (18%)	41 (18%)	7 (3%)
Q17	Caso o conselho (CNS) aprovasse as decisões referentes à nomeação e desligamento do chefe máximo do DenoSUS, a unidade teria uma maior estabilidade, manutenção e garantia da autonomia e autoridade, necessários aos seus deveres perante a alta administração (Ministro e Secretários) e demais níveis de gestão.	53 (23%)	60 (26%)	30 (13%)	65 (28%)	25 (10%)
Q18	Caso o conselho (CNS) aprovasse os planos estratégicos de auditoria, esta relação contribuiria para uma maior independência, eficiência e eficácia das ações do DenoSUS perante a alta administração (Ministro e Secretários) e demais níveis de gestão.	37 (16%)	56 (24%)	22 (9%)	78 (34%)	40 (17%)

Questions Q12, Q13, Q15 and Q16 indicate that the majority of respondents are unaware of the issue, indicating a lack of TaT related to the promotion of auditing, which is

a weakness (Hansen et al., 2009). The statistical results of Cramer's V showed no significant associations due to the geographical location of the respondents.

Regarding the perception that the organization's management and supervisory areas (MS) strive to understand and correct the findings of the internal audit report (Q14), the majority (52%) partially/completely disagrees. Note that the IIA's new Three Lines Model (2020) is designed to better identify and structure the interactions and responsibilities of management, internal audit, and those responsible for governance to achieve alignment, cooperation, accountability, and effective objectives (Tysiac, 2020).

There is a high level of unawareness when it comes to the council, indicating a gap between internal audit practices and the health council, as identified by Pinto et al. (2019). Despite this, there is a positive perception (51%) that linking the council to the approval of its strategic plans would strengthen and give independence to the fulfillment of its obligations to management and senior management, thus contributing to governance (Q18).

4.3 Relationship Between SUS Audit Activities and the TaT at the Federal Level

Table 5 shows respondents' perceptions of the internal audit's work in the context of The Three Lines Model and the TaT issued by senior management.

Tabela 5
Auditoria interna frente ao Tom emitido pela Alta Administração

Q.	Afirmativas	Frequências				
		Não sei	DI	DP	CP	CI
Q19	O DenoSUS realiza, com independência e objetividade, a avaliação do conjunto de práticas, políticas e procedimentos em prol da integridade e controles do órgão adotado pela Alta Administração (Ministro e Secretários).	27 (12%)	43 (18%)	42 (18%)	94 (40%)	27 (12%)
Q20	O conjunto de práticas, políticas e procedimentos em prol da integridade e controles do órgão adotado pela Alta Administração (Ministro e Secretários) tende a melhorar substancialmente caso seja avaliado pelo DenoSUS.	17 (7%)	7 (3%)	15 (6%)	80 (35%)	114 (49%)
Q21	As avaliações sobre o conjunto de práticas, políticas e procedimentos em prol da integridade e controles do órgão adotado pela Alta Administração (Ministro e Secretários) é reportado apenas à própria alta administração sem representar redução da independência quanto aos achados, assim como da efetividade das conclusões e recomendações emitidas.	34 (15%)	66 (28%)	47 (20%)	66 (28%)	20 (9%)
Q22	O resultado das avaliações sobre o conjunto de práticas, políticas e procedimentos em prol da integridade e controles do órgão adotado pela Alta Administração (Ministro e Secretários) tende a obter maior efetividade quanto às suas conclusões e recomendações caso seja reportado diretamente ao conselho (CNS).	46 (20%)	20 (9%)	25 (11%)	92 (39%)	50 (21%)

Regarding the perception that the internal audit unit independently and objectively evaluates the set of practices, policies and procedures adopted by senior management for the integrity and controls of the institution (Q19), 52% partially/totally agree (Cramer's V = 0.1757 p = 0.092). At the same time, 84% of respondents indicated (Cramer's V = 0.1941 p = 0.019) that senior management's TaT improves when evaluated by Internal Audit, indicating a willingness to contribute to the TaT. This

finding is important because a lack of support from senior management creates difficulties in the implementation of risk management (Montezano et al., 2019).

There is a perception that it is not enough to report these assessments of their performance to senior management. For this purpose, their results are presented to the council and it is up to other internal/external actors to share them, ensuring autonomy and independence.

As shown in Table 6, in addition to the perceptions regarding the tone issued by senior management, the TaT issued by the council was also assessed.

Tabela 6
Atuação da auditoria interna frente ao Tom emitido pelo Conselho de Saúde

Q.	Afirmativas	Frequências				
		Não sei	DT	DP	CP	CT
Q23	O Denasus realiza, com independência e objetividade, avaliações sobre as ações e diretrizes emitidas pelo conselho (CNS) em prol da integridade e controles do órgão (MS).	86 (37%)	43 (19%)	30 (13%)	59 (25%)	15 (6%)
Q24	As ações e diretrizes emitidas pelo conselho (CNS) em prol da integridade e controles do órgão (MS) melhoraram, caso sejam avaliadas pelo Denasus.	40 (17%)	7 (3%)	14 (6%)	107 (46%)	65 (28%)
Q25	O resultado das avaliações sobre as ações e diretrizes emitidas pelo conselho (CNS) em prol da integridade e controles do órgão (MS) pode ser reportado ao próprio conselho sem representar redução da independência quanto aos achados, assim como da efetividade das conclusões e recomendações emitidas.	68 (29%)	19 (8%)	33 (14%)	70 (30%)	43 (19%)

The perception that the audit unit carries out independent and objective assessments of the measures and guidelines issued by the Council for the benefit of the integrity and control of the institution (Q23) showed that 70% (Cramer's V = 0.1985 p = 0.013) were not aware or partially/ totally disagreed. Thus, there is a discrepancy between the internal audit and the council.

Regarding the improvement of the actions and guidelines issued by the Council for the benefit of the integrity and control of the institution, when evaluated by the internal audit unit (Q24), the respondents partially/totally agree (74%, Cramer's V = 0.1638 p = 0.202). Finally, there is a perception (49% partially/totally agree) that the results of the evaluations on actions and guidelines issued by the Council can be reported to the Council itself without compromising independence (Q25). This effectiveness of the issued conclusions and recommendations may indicate greater neutrality and less risk to the independence and autonomy of internal audit.

5. Conclusion

Despite the existence of a code of ethics, an integrity program, active data transparency mechanisms and a customer service channel at the federal level of the SUS,

other elements that indicate an adequate TaT for the internal control environment showed shortcomings within the management environment. In particular, there is a lack of knowledge about the existence of a fraud response plan, measures to manage institutional risks, leadership management, and the structuring and performance of a central internal control that oversees management. This finding corroborates Sousa et al. (2021) and is contrary to the recommendations of COSO (2017), indicating that there may be deficiencies in risk mitigation strategies, which may indicate a lack of definition of risk tolerance.

As an independent body operating in a governance and management environment, the integration between internal audit and governance actors is not very mature. As a model, internal audit must report functionally to the health council and administratively to senior management to ensure the effectiveness of its work. The existence of shortcomings in its performance, in addition to compromising evaluations that have a positive impact on organizational objectives, also undermines one of the main vectors influencing the improvement of the TaT, which could maximize the correction of deviations in the pursuit of public interest.

In addition, there are difficulties in the relationship between governance and internal audit, as well as in ensuring greater autonomy and capacity for the audit unit to operate, which represents a weakness for the organization (Hansen et al., 2009). Our results show that the audit staff is not aware of the practices of the health council, indicating a lack of alignment with the institution that should be actively collaborating with its practices. These results corroborate the findings of Pinto et al. (2019) on the relationship between municipal health councils and SUS auditors. There is also a lack of high-level strategic action on behalf of the council and senior management to facilitate the role of internal audit.

Therefore, our findings imply the need to: ensure the conditions for internal audit in strategic plans; involve senior management and the council in communicating audit results to managers as well as controlling their analysis; raise managers' awareness of the importance of analyzing and internalizing the conclusions presented by internal audit; issue strategic statements that support and encourage the work of internal audit on behalf of the council; and manage the council's relationship with internal audit in a way that strengthens its independence, autonomy, and authority.

Given the nature of the methodology employed, it is necessary to acknowledge the inherent limitations of this research. For example, the survey instrument is limited to respondents' perceptions. The fact that respondents were aware of the code of ethics does not necessarily imply appropriate behavior. Similarly, the existence of a fraud response plan does not translate into risk mitigation.

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