

Original Research Article

Incentive policies for retention of physicians in the private health sector in Portugal

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Abstract: The high demand for quality healthcare services in Portugal is generating concerns about meeting the optimum number of healthcare professionals in the private sector, such as doctors and clinicians. Critical interventions are currently in progress, aiming to provide quality healthcare that will be accessible and sustainable through actionable retention strategies such as investing and developing human capital, introducing better conditions of service to attract and retain talent in the private healthcare sector, and prioritizing the needs of patients. The objective of this study is to understand which factors promote the migration of physicians from the public to the private sector according to the theoretical assumptions of incentives. In this context, a phenomenological study was carried out, using semi-structured interviews with fifteen physicians working in the private health network. Content analysis was done using NVivo 12. The results indicate that performance evaluation in the private sector exists but has no alignment with incentives. The condition makes the private healthcare sector include collective decision-making and strong labour relations advocacy for physicians in the private sector.

Keywords: human resource incentives; performance evaluation; private healthcare sector; physicians; physician satisfaction

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1. Introduction

The demand for healthcare in Portugal has been increasing year after year since 2010^[1], both in the public and private sectors^[2]. The increased demand from the private sector has led to an increase in supply, with an increase in the number of available units in Portugal. As a result, an increasing number of healthcare professionals divide their working time between the public and private sectors^[3].

In a survey conducted in 2015 regarding the National Health Service (NHS), 78.9% of respondents stated that their level of health was in the lowest 3 levels out of a possible 5. The private sector generated greater satisfaction in the different aspects under analysis. Despite this higher evaluation, 21.8% of the respondents considered that this sector should be restructured^[4].

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With increased demand, the private sector needs to transition to a paradigm where its focus is on valuebased health care, without neglecting the need for cost control. The strategy of organizations should focus on investing in the digital transition and in human capital, through the motivation and greater commitment of professionals to the best outcome for the patient^[5,6].

Physicians, as healthcare professionals, play a central role in the healthcare system. With this research, we intend to understand the motivational framework of these professionals in their relationships with private sector entities and how the need to keep health professionals motivated and committed is addressed.

Compared to the NHS, the private healthcare sector in Portugal is the target of fewer studies and research regarding human resources, especially medical professionals, representing an important gap in the literature. From their point of view, to enhance the focus on the patient and his/her satisfaction, we consider it necessary to understand which are the main factors of attraction for these professionals and which are the main factors of permanence motivation. This work aims to deepen the knowledge about the motivations of physicians in their transition to the private sector as well as the elements that lead them to stay, to characterize the practices currently adopted by organizations to keep physicians motivated, and what the consequences are for citizens and for the structure and nature of health care. The objective of this research is to understand what factors promote the migration of physicians from the public to the private sector in Portugal, according to the assumptions of the incentive theory. It is hoped that the results can indicate the current circumstances in which organizational policies and practices associated with incentives for retaining physicians in the private healthcare sector are situated.

2. Theoretical framework

2.1. Context of the Portuguese health system

The Portuguese health system is characterized by its universal nature, inspired by the Beveridge model, whose structural axis is the National Health Service (NHS). The NHS, of a universal and public nature, aims to provide quality health services to the entire population, regardless of their economic condition, tending to be free of charge^[5]. In coexistence with the NHS, other complementary entities have emerged in the Portuguese health system to provide health care, both public and private^[6,7]. With the coexistence of public and private providers, a mixed payment model has developed in the health system due to the different forms of payment: the NHS, funded through the State Budget; social insurance, funded by professional health funds, for example, the insurance created by the banking sector; voluntary insurance, funded individually; and, finally, direct payments^[8].

The 2022 data from the Organisation for Economic Co-operation and Development (OECD) reveal that, in Portugal, the main financing agent continues to be public, but private financing has been increasing its weight in current health expenditure^[9]. The weight of private financing is higher than the European average. Part of this amount is paid directly by the health care beneficiary and goes to the use of medical care provided by the private sector, medicines, dentistry, or NHS user fees^[10].

The private health sector in Portugal has also increased its activity, presenting itself as an alternative or complement to the NHS^[2,11]. This growth is supported by the activity of insurance and other public health subsystems—it benefits about 40% of the population^[12,13]. Despite this gradual growth of the private sector, File et al.^[14] suggest that the private business model should be rethought so that its sustainability is not only analyzed from a budgetary or financial perspective but that it encompasses the impact of its results. The system should be user-oriented rather than supply-oriented^[15].

2.2. Human resource management in the health sector in Portugal

The public sector management model is highly dependent on political power and geared towards meeting collective needs. The private sector evolves according to the market, guided by the objectives of each company^[11]. The first aspect to be compared between the two sectors is remuneration. This does not only reflect the salary for the provision of medical services, but also all the compensatory factors that the individual benefits from, such as bonuses, profit sharing, and benefits such as vouchers for children's education, health insurance, or food allowance, which can be perceived as incentives and have a boosting effect on employee motivation, commitment, and retention^[12].

The remuneration of health professionals in the private sector is considerably higher than the remuneration of the same professional categories in the NHS and is the main incentive for them to leave the private sector or to emigrate^[13].

Another important aspect is career management, which includes position promotions and salary reviews^[14,16]. Promotion in the private sector happens through organizational decisions and varies only with company decisions. In 2018, a study by the Portuguese Medical Association (PMA) revealed that 63.3% of NHS physicians were dissatisfied or very dissatisfied with their career progression^[16].

2.3. Material and non-material incentives

An incentive is something that motivates, directs behaviors, and influences a certain act. According to Kreps^[17], there are two types of incentives that influence people to make a certain decision: intrinsic and extrinsic. Intrinsic incentives are those that motivate a certain action based on the self-interest of the person performing it, without any external pressure or reward^[17]. Extrinsic incentives result from an external reward or the absence of a punishment (negative incentives), as is the case with disciplinary action as a result of doing something incorrectly. Material incentives are associated with a tangible reward and should be reflected in the employee's contract. Salary and payment per medical act are considered incentives and are estimated to account for half of the causes of turnover among healthcare providers^[11,18]. Non-material incentives can be the result of a set of performances or various positive actions by the employee and are valued by the professional, meaning that the organization recognizes the role and commitment of that employee^[19].

Rudmik et al.^[13,20] consider that wages or other forms of payment and the conditions offered for the employee's position and the work he or she does are defined as the basic incentives for any worker. This method of payment allows the provider to achieve stability by predicting the monthly amount they will receive and encourages quality through health promotion and disease prevention. On the other hand, it does not encourage an increase in the amount of health care, but it may promote the selection of less complex users and an increase in referrals^[21].

Another form of remuneration is the payment per medical act, capitation, or payment for performance, where the provider receives payment for each item of service provided and the amount received is dependent on the number of acts performed, which encourages the provider to perform as many acts as possible^[22]. In this context, there may be a risk of referring to less appropriate acts than what is needed^[23], a tendency to select healthier users, and a tendency to refer users^[24,25].

In the case of the medical professional, these play a major role in attraction, retention, and motivation and can be a benefit of a set of performances or various positive employee actions^[26] such as workload and schedule flexibility^[27], incentives such as education and training^[27,28].

In Portugal, the way in which human resources are paid varies according to the contract and the type of

institution with which they work. In the case of doctors working for the NHS, it is normal to have a salary associated with capitation payments and performance incentives. In the private sector, payment is most often made per medical act. It is common to have clinicians working in both the public and private sectors^[8]. Another type of incentive is for geographic mobility in deprived areas, where compensation is granted for travel expenses, ease of transferring children to another school, and increased vacation time^[29]. Regarding the private sector, there is no literature supporting the existing incentives and their impact, and it was not possible to obtain information from official sources from companies in the sector^[30,31]. In the health sector, the literature shows that hospital performance is significantly influenced by the involvement of medical staff, particularly regarding increasing organizational effectiveness^[14,32].

In the US, since the 1980s, performance-based incentive schemes—"Pay-for-Performance" (P4P)—have existed with increasing dissemination among North American healthcare institutions^[32] and gradually clinical indicators have been included with a focus on output and quality of care^[13]. The UK has a more uniform and centralized incentive scheme when compared to the variety of incentive schemes in the US. The reform implemented in 2004, "Quality and Outcomes Framework" (QOF), integrates three areas: clinical care, organizational practices, and user experience^[30]. To complete the incentive scheme, in 2010, indicators related to organizational practices had a weight of 16.75%, including education and training or medication management. The user experience, with a weight of 14.65%, was based on the duration of the consultation and a survey of users^[29]. France introduced CAPI (Contract d'Amélioration des Pratiques Individuelles) as an incentive policy. This model has an individual scope, with voluntary participation. The incentive scheme is based on a maximum value to be achieved in the preventive and prescription drug dimensions^[33].

3. Methodology

This study aims to understand which factors promote the migration of doctors from the public to the private sector, in Portugal, according to the assumptions of the incentives theory. Private healthcare networks are legal institutions that have their own medical agreements, with rules and values for payments made by users of Health Plans, regulated by the National Health Service (NHS). This is a phenomenological study in which semi-structured interviews were carried out with doctors who collaborate with various private health networks in Portugal. The questions were designed in open and closed question formats, considering the propositions formulated, based on the literature^[33]. For the sample selection, the business networks of interest for the study were identified and defined, considering the inclusion criteria presented in **Table 1**, according to the Economic Activity Code (EAC) of Portugal. In Portugal, there are 169 different private healthcare networks with inpatient and outpatient healthcare, however, five networks (n = 5) meet the eligibility criteria based on the study by Mateus et al.^[3]. In this context, all physicians from these five networks were invited to participate in the study, however, possibly due to the period of data collection occurring during the pandemic of COVID-19, only 15 specialists accepted the invitation and answered the interviews, 8 with activities exclusively in the private sector and 7 with activities between the public and private sectors (Table 2), reflecting in a limitation of this study. However, the number of informants is influenced by the specificity of the sample. Very specific samples require informants with very homogeneous characteristics, which leads to a smaller sample size. Consequently, this homogeneity can give access to interesting information in a concentrated form. Details about the survey and its objectives were not presented, to reduce bias in the answers of physicians.

Five private healthcare network groups of legal institutions were selected based on the study by Mateus et al.^[3] (Figure 1).

| Table 1. Inclusion criteria. | | |
|------------------------------|--|--|
| Criteria | | |
| Country of operation | Portugal | |
| Sector of operation | Private health care | |
| Activity | Inpatient and outpatient health care, cumulatively | |
| EAC | Submit cumulatively | |
| _ | -EAC 86100-Inpatient health care establishment activities | |
| _ | -EAC 86210-Activities of outpatient general medical practice | |
| _ | -EAC 86220-Outpatient specialist medical practice activities | |
| Dimension HR physicians | >600 physicians | |

Source: Elaborated by the authors, based on Mateus et al.^[3].

| Table 2. Distribution of respondents by type of activit | Table | 2. Distributio | n of respondents | by type of activity |
|--|-------|----------------|------------------|---------------------|
|--|-------|----------------|------------------|---------------------|

| Activity | Exclusive private activity for one group | Collaboration with 2 or more private groups | Total |
|--|--|---|-------|
| Exclusively private activity | 3 | 5 | 8 |
| Activity between public and private sector | 3 | 4 | 7 |
| Total | 6 | 9 | 15 |

Source: Elaborated by the authors.

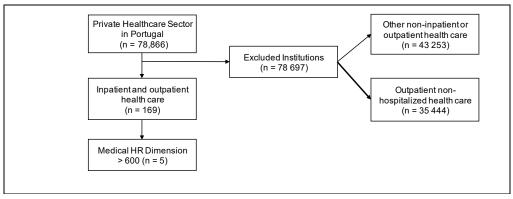


Figure 1. Inclusion criteria for health networks.

Source: Elaborated by the authors.

Based on the defined criteria, the following health networks were included: José de Mello Saúde (Fabril Union Company-FUC); Luz Saúde^[34]; Lusíadas Saúde^[35]; Trofa Saúde; and Grupo APH (Algarve Private Hospital). Considering the sample, the specialty, age, and gender of the physicians were randomized. The inclusion criteria for the study were as follows: to be the collaborator of one of the previously selected institutions and to exercise private activity, having more than 50% collaboration with a healthcare network. To maintain the anonymity of participation, each participant was randomly assigned a number between 1 and 15. The health networks were also anonymized, being assigned a letter from A to E. The interview script was developed around six main topics: practitioner context, current organization, alignment with goals, clinical practice, incentive scheme management, and commitment. The script, interviews, and report extracted from NVivo 12 are available and made available upon request. The objectives of each topic are presented in **Table 3**.

NVivo 12 allows grouping the information from all interviews and analyzing the text units with a view to categorizing them^[36,37]. Regarding the identification of the incentives that physicians benefit from in the private sector, a frequency analysis was performed. In addition, an integrated analysis was produced by NVivo 12 software to obtain information on the physicians' general view of the topics under study (**Figure 2**). Physicians directly identified the most relevant incentives that benefited them. The following phases were

followed: familiarization with the information received, coding of the information, categorization, definition, and naming of the categories, and production of the report^[38,39].

| Торіс | Objectives |
|----------------------|---|
| Background | To contextualize the physician's activity |
| | To understand the motivations for private practice |
| | To perceive the physician's opinion about incentives |
| Current organization | To evaluate the existence of structured incentive programs |
| | To identify the incentives used by organizations |
| | To identify the mechanisms of performance management used by health organizations |
| | To evaluate physicians' perception of the management of their performance by the organization |
| Alignment with | To analyse the alignment of individual goals with the overall goals of the company |
| objectives | To investigate the impact of incentives on deferred objectives and the change required to achieve them |
| Clinical practice | To describe the benefits of incentives on users, care and user needs |
| | To establish a relationship between incentives and clinical benefits |
| Incentive scheme | To identify organizational supports that promote the effectiveness of incentives |
| management | To structure the most effective methods for managing incentive schemes with respect to the physician relationship |
| Commitment | To assess how incentives can be related to organizational commitment |

Table 3. Objectives of the topics approached in the interviews.

Source: Elaborated by the authors.

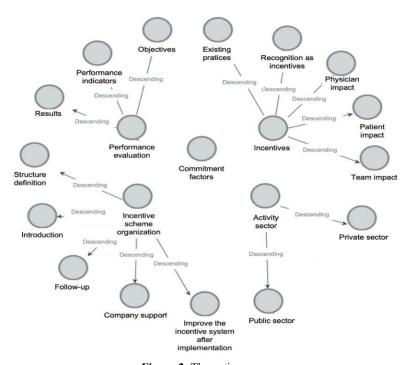


Figure 2. Thematic map.

Source: NVivo 12, based on the study data.

4. Results

As for the distribution of respondents by gender, 60% are male and 40% are female. **Table 3** shows the distribution by type of activity. Of the 15 participants, 8 have activities exclusively in the private sector, and 7 have activities between the public and private sectors.

Regardless of the type of division between the public and private sectors, 40% present exclusive activity for one group, within the private activity, and 60% of the interviewees present private activity divided between two or more groups. The existence of a base payment associated with the physician's work is observed. In this

study, two types of base payments were reported: labour contract (LC) and contract for services (CS). In the case of the contract for services, the contract presents three distinct forms of payment: (i) prior contracting of hours, (ii) payment per hour of work performed, and (iii) payment per act. The frequency of each type of incentive is shown in **Table 4**. In 60% of cases, the material incentive considered as the basis is the payment per act. The material incentive with the highest frequency is free parking (66.7% of respondents). The remaining incentives were presented by 33.3% of the respondents or less.

The non-material incentives listed were all identified by respondents. Among these, extra days off was the incentive identified less often, with a frequency of 4. With a relative frequency higher than 75%, they identified enjoying recognition in private (80%), flexibility of schedule (86.7%), and openness to suggestions (93.3%). Among the physicians presenting a base salary (20% in the sample), 2 of them had a direct contractual link with the company and, consequently, benefited from food allowance, vacation allowance, and a Christmas bonus. It is important to note that the same professional can award more than one type of incentive, regardless of whether it is material or non-material.

| Type of incentive | Incentive | Absolute frequency | Relative frequency |
|-------------------|--------------------------------------|--------------------|---------------------------|
| Material | Base salary | 3 | 20.00% |
| | Food allowance | 2 | 13.33% |
| | Vacation subsidy | 2 | 13.33% |
| | Christmas bonus | 2 | 13.33% |
| | Amount per medical act | 9 | 60.00% |
| | Hourly rate | 3 | 20.00% |
| | Extra performance payment | 1 | 6.67% |
| | Extra productivity payment | 4 | 26.67% |
| | Personal health insurance | 4 | 26.67% |
| | Family health insurance | 4 | 26.67% |
| | Life insurance | 0 | 0.00% |
| | Retirement savings plan | 0 | 0.00% |
| | Education support | 2 | 13.33% |
| | Public transportation support | 0 | 0.00% |
| | Travel payment | 3 | 20.00% |
| | Free parking | 10 | 66.67% |
| | Length of service bonus | 2 | 13.33% |
| | Housing support | 0 | 0.00% |
| | Meal voucher | 5 | 33.33% |
| | Extra remuneration for travel | 0 | 0.00% |
| | Extra remuneration for exposure/risk | 0 | 0.00% |
| | Other material | 5 | 33.33% |
| Non-material | Professional training | 8 | 53.33% |
| | Performance evaluation | 6 | 40.00% |
| | Private recognition | 12 | 80.00% |
| | Public recognition | 8 | 53.33% |
| | Career development | 6 | 40.00% |
| | Position promotion | 5 | 33.33% |
| | Attribution of responsibilities | 7 | 46.67% |
| | Increase of autonomy | 11 | 73.33% |
| | Flexibility of working hours | 13 | 86.67% |
| | Conciliation with private life | 10 | 66.67% |
| | Extra days off | 4 | 26.67% |
| | Openness to suggestions | 14 | 93.33% |
| | Other non-material | 3 | 20.00% |

Table 4. Frequency of each type of incentive.

Source: Elaborated by the authors.

The other case, with a base salary, presents itself as a medical service provider "through green receipts". All these cases present a 100% dedication to the private sector. In the keyword analysis, the most relevant words for the theme with a relative weight greater than 0.5% were "incentives"—0.81%, "goals"—0.63%, "users"—0.62%, and "doctor"—0.53%. The word cloud is represented in **Figure 3**. Word frequency queries allow us to summarize and visualize the words or concepts extracted from the interviews, to identify emerging themes and words used by the participants, thus performing an initial exploration of the study's textual information. In terms of content, the relevance of incentives for retention of medical professionals and how they reflect on organizational goals and patient care is observed^[33,40].



Figure 3. Word cloud.

Source: NVivo 12.

In the thematic analysis, it was possible to verify, globally, the themes that had greater relevance among the interviewees, such as motivation to work in the private sector due to better financial and non-financial conditions. After the final codification, the following categories were defined: "Activity Sector", "Performance Evaluation", "Incentives", "Incentive System Organization", and "Commitment Factors".

In the category "Activity Sector", two subcategories were defined: "Public Sector" and "Private Sector". In the opinion of the physicians interviewed, the main factor recognized by all, without exception, is salary, both for those who work in the private sector as a complement to the public sector and for those who work exclusively in the private sector. Physicians are of the opinion that the private sector is becoming less and less attractive due to the reductions that remuneration has been undergoing, which does not offer stability. However, they consider that the public sector is more disorganized than the private sector, which, although not a decisive factor, is one to consider when making the decision to change. To understand how medical professionals are evaluated in the private sector, the subcategories "Objectives", "Indicators" and "Results" were defined with the purpose of understanding the current practices of performance evaluation.

The objectives currently used by private healthcare networks in Portugal are mainly related to increasing production, user satisfaction, and opinion. The opinions on individual and organisational alignment are fundamental and recognise that this is one of the main difficulties in correctly defining individual objectives. They suggest improving communication between administrations and doctors. During the interviews, indicators were mentioned that are currently used by the private healthcare networks on which the interview

focused (**Table 5**). The indicator' number of consultations' is the only one referred to in the 5 health networks under study.

Table 5 Indicators commently used by the health one networks up don study

| Indicator | Frequency |
|---|-----------|
| Consultation time | 2 |
| Delays/Waiting time | 4 |
| Number of consultations | 5 |
| Number of surgeries | 4 |
| Consultations waiting list | 1 |
| Attendance of patients/hour | 1 |
| Completion of diagnostic form of the user | 1 |
| Patient satisfaction | 4 |
| Time that the user must stay off work | 1 |
| Appointments occupancy rate | 2 |

Source: Elaborated by the authors.

It is recognized by the interviewees that there is no incentive to achieve certain goals or to achieve the desired results. There are other policies aimed at encouraging physicians that are not directly linked to results: (i) infrastructure, equipment, and technology, (ii) health insurance, and (iii) attendance bonuses, and promotions of employee well-being. Career development is considered one of the weak points in the private sector because it does not present itself as an evolution from the professional's point of view. In general, physicians recognize the higher payment than in the public sector as an incentive, but they believe that other incentives such as health insurance, parking, or training should be assigned and would also be recognized, such as selection of users, medical activity, and reduction of bureaucracy.

When asked how an incentive system should be structured, the interviewees suggested that it should start by involving physicians in the definition of its structure, especially in terms of defining objectives and the indicators to be used, improving their commitment. The doctors consider that the organization can also contribute to the better performance of the clinician. This support can be given in different ways, such as more agile and user-friendly software^[41,42], a higher ratio of non-medical clinical human resources, and promoting communication between physicians to promote the discussion of clinical cases and referrals.

5. Discussion

The primary factor for physicians choosing to work in the private sector is remuneration. However, there are other incentives that contribute to the decision, both material and non-material. Material incentives include the equipment and technology required to perform their work. Non-material incentives include work-life balance, flexible working hours, medical differentiation, and the fact of not having to provide emergency care. These results corroborate^[3] that the private sector is more attractive in terms of remuneration for physicians. Despite the fact that most physicians' ties with the private sector are paid per act, it is considered that there could be more professionals with employment contracts in order to increase their stability, which is in line with the findings of Eiche et al.^[26]. This type of bond (salary) is not attractive to companies from a production and tax perspective^[6]. Therefore, they should consider introducing a quality-based pay-for-performance model that reduces the negative effects of pay-per-act and allows the physician to have stability and attachment to the institution of an employment contract.

At a non-material level, there is an appreciation of the value of time to reconcile private and professional lives. As presented in the literature review, incentives that promote a better work-life balance have an impact on motivation and commitment, reducing the likelihood of burnout^[41].

Doctors consider that especially consultations are poorly paid, which makes the private sector less attractive. It is essential that this trend be reversed so that physicians have prospects for pay growth, which would promote their motivation. In the trajectory described, motivation will tend to continue to decline^[24].

On the other hand, the public sector continues to be the work option of most physicians, especially at the beginning of their careers, due to its stability, but the main factor that motivates physicians to collaborate with the private sector is remuneration. Among the interviewees, there are several doctors who have neither performance evaluations nor activity statistics. When the performance evaluation is more structured, the objectives that the doctors present are mostly quantitative and associated with production, with a small part about quality. At the private level, there is no strong culture of quality incentives^[43,44]. The main challenge is to align business indicators with quality indicators of the medical service and, at the same time, to obtain the agreement of the physicians themselves on these indicators.

In summary, physicians recognize that higher remuneration in the private sector is an incentive. However, they believe that they could be more dedicated to the sector and committed to a specific health group if there was a more attractive material and non-material incentive policy that valued the professionals and made a difference in the choice of the health group itself^[45,46].

The structuring of the incentive system was mentioned in the various interviews, where physicians suggested being involved. First, the physician should deliberate and have the option of being integrated or not into the incentive system. The presentation of the scheme should always be face-to-face, with an element of the direct hierarchy present, considering that this person will accompany the physician along the way.

According to our interviewees, non-medical human resources also contribute to better performance. In providing technical support to the physician, the ratio of nurses is important, especially in specialties that require more nursing time.

6. Conclusions

Incentives in the private sector are a recurring practice. However, structured incentive systems for physicians are less frequent. In general, the private sector is based on production incentives that motivate physician collaboration. Quality incentives are still rare in a system that should increasingly focus on quality. Incentives can also work as a complement to physician remuneration since physicians show some dissatisfaction with it. Although they value non-material incentives, the impact of material incentives on their satisfaction is greater, especially with regard to remuneration. In the long run, non-material incentives become an acquired benefit and lose their value and impact on the physician. It will be relevant for organizations to create strategies that promote the valuation of non-material incentives over time.

The focus of private healthcare organizations, in the first instance, should be to ensure that there is a basis for implementing a robust incentive system. To do this, they should consider, at the outset, the human resource and data collection and analysis needs so that reporting is not affected. Later, in the structuring phase, they should consider the physicians' opinions and their socio-economic context, trying to understand what kind of incentives are valued. The incentive model should also meet the organization's objectives but have a flexible and adaptable structure while in force, and should be closely monitored by the physician so that the

improvements promoted are more effective. During its execution, its effectiveness and its positive and negative consequences should be evaluated.

The predominant payment model in the private sector motivates production. However, it is necessary to encourage quality and ensure that the user has a positive experience. Outcomes play an important role in patient choice, with patients preferring facilities that perform better^[43,47,48]. The focus of the implementation of an integrated incentive system should be on treatment outcomes and contain a vision of what is desired for health care in the medium and long term.

In the initial phase of the research, it was found that there is little literature that focuses on the private sector, so using data from studies applied in the public sector is a limitation of this study. In this study, there were difficulties in recruiting participants, which limited the sample, which could present a greater diversity and, consequently, provide more information to the research. Allied with this, the individual interviews, for external reasons, could not be face-to-face, which limited the development of some topics, the concentration of the interviewees, and possible unnoticeable reactions in a video meeting.

Future studies should focus on understanding the vision of the organizations to realize the feasibility and operationalization of the suggestions provided in this research. This is important in defining and implementing a complete and win-win incentive system.

Author contributions

Conceptualization, FN and ICPM; methodology, ACF; software, JA; validation, ACF, FN, ICPM and JA; formal analysis, JA, and ACF; investigation, JA and ICPM; resources, FN and ACF; data curation, JA; writing—original draft preparation, ICPM and JA; writing—review and editing, ICPM, FN and ACF; visualization, ICPM and ACF; supervision, ACF; project administration, JA, ICPM and ACF; funding acquisition, FN and ICPM. All authors have read and agreed to the published version of the manuscript.

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Conflict of interest

No conflict of interest was reported by all authors.

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