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Physicians' hybridisation with accounting in public hospitals

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Abstract

Accounting information has become an integral part of management tools in public hospitals. Following COVID-19, the crisis in the supply chain and the war in Ukraine severely impacted the financing of public hospitals. In response to this multi-crisis environment, physicians have increased their awareness on an efficient use of scarce resources. This paper examines the intersection between accounting and medical practice, taking into account both the competing logics and the two prevailing models of medical practice. We develop a theoretical framework to understand how these crises, and potential future crises, influence the hybridisation of medical practice with accounting principles.

KEYWORDS

Accountingisation, hospital management, hybridisation, medical profession

JEL CLASSIFICATION

M41, I18

1 | INTRODUCTION

Before COVID-19, the claim that accounting was an essential part of the practice of medicine in public hospitals was generally accepted. Not only was the assessment of doctors based on financial flows of the outcomes achieved and efficiency (Broadbent & Laughlin, 2001), but accounting also moulded the behaviours and actions of doctors due to their focus on the "cost-effective delivery of health care" (Chapman, 2015, p. 400). For physicians, this process of "accountingisation" was a novel phenomenon at that point.

The term "accountingisation" was coined by Power and Laughlin (1992), but the essence of the concept already existed, being associated with the New Public Management (NPM) movement in the 1980s (Hood, 1995). Politicians viewed accounting in public medicine as key to ensuring "better quality and more cost-effective medicine, better decision-making locally and giving a considerable degree of power to the patient and their general practitioner" (Thatcher, 1989). This British accounting logic was successfully disseminated among public hospitals and physicians worldwide. Physicians used accounting information such as budgets, performance measurements, standard costing, and money spent to make medical decisions (Kurunmäki et al., 2016; Malmmose, 2019).

The COVID-19 crisis represented a turning point in this status quo, since the needs for the optimal management of bed capacities, equipment purchases, and human resources, which were identified using accounting tools, ensured appropriate sanitary performance in an epidemic setting. Management accountants provided the necessary financial and non-financial information for each managerial level to make better decisions (Rezaei et al., 2022); for instance, to control operating expenses and improve the efficiency of management decisions (Lalani et al., 2023). Consequently, the position of accounting as a key component to organise and support medical efforts during the pandemic was reinforced (Huber et al., 2021). The resulting crisis in the supply chain due to COVID-19, and, more recently, the Ukraine war, has led to a significant increase of hospital costs, with severe consequences on the financing of public hospitals. It is likely that physicians will be required to progress further in their hybridisation with accounting (Vesty et al., 2023), particularly given the trust and confidence in accounting that emerged during the pandemic.

In this paper, we propose a theoretical framework that explains how accounting is incorporated into medical practice of medicine at public hospitals. To accomplish this goal, we adopt a perspective based on the sociology of Gieryn (1983, 1999). Thus, we examine the compatibility of accounting with two competing logics that coexist in the medical field, that is, one based on science and the other based on practice. We argue that each logic exhibits different boundary-works with accounting, with the former logic being more permeable to accounting than the latter. We add to this theoretical setting the distinction between two models of medical practice, namely, organisational and occupational, that is drawn from the sociology of Evetts (2009, 2010, 2013).

The rationale is that those physicians who adhere to evidence-based medicine (EBM) use clinical trials that standardise, to some extent, their medical care (Romana, 2006), making them more receptive to integrating accounting logic. In contrast, those who follow practice-based medicine (PBM) and believe that good medicine stems from competencies and skills acquired on the job (Liff & Andersson, 2011) may be more resistant to the standardisation inherent in accounting logic. Although both EBM and PBM physicians strive to perform their clinical tasks in the best possible way (Andreasson et al., 2018), and accounting has impenetrated their boundary-works, their interpretation of the accounting logic varies according to their dominant medical logic. Thus, the concept of the medical profession as an occupation is evolving in current public hospitals, as physicians who follow EBM guide their activities by the medical protocols established by their organisations. Meanwhile, their acceptance of accounting logic leads them to increasingly consider this information as valid for making sound medical decisions and evaluating the quality of their work. In this way, Physicians behave more like employees following the guidelines set by their hospitals rather than professionals with independent judgement holding a position in a hospital.

We illustrate our analysis with narratives collected from otolaryngologists working at the second largest public hospital in Portugal, Centro Hospitalar Universitário São João (HSJ), during the crisis of the early 2000s,[1] which was caused by neoliberal reforms. Their narratives

[1]Portugal is a non-Anglo-Saxon country, but it reflects the widespread changes that have taken place in the field of health care management. In 2002, the European Union forced Portugal to implement neoliberal policies. As in other countries (Broadbent & Guthrie, 2008), this reorientation and the resulting impact on health care management was controversial.

indicated that the otolaryngologists included in the organisational model felt comfortable using both accounting and medical data when making decisions regarding diagnoses and treatments when they embraced a form of medicine based on science. In contrast, when physicians were of the occupational type and/or practiced medicine based on practice logic, they highlighted a secondary role for accounting in their daily practice. Under the umbrella of the accountingisation process, otolaryngologists became physicians who prioritised cost savings when making decisions regarding treatments and prescriptions instead of merely becoming cost-conscious physicians.

The various impacts of accounting on physicians' practice have been referred to the specific scenario being analysed (Kraus, 2012): some physicians acquired calculative skills through accounting (Kurunmäki, 2004; Kurunmäki & Miller, 2011; Sjögren & Fernler, 2019), while others remained relatively naïve, attributing less importance to accounting (Kraus, 2012). The extant literature has reported inconclusive results regarding the extent to which accounting has been incorporated into the toolkits of physicians. For instance, in a situation featuring a conflict between managerial values and clinical values, such as the prescription of a more effective but also more expensive medication, which value should prevail? Authors such as Sjögren and Fernler (2019, pp. 913–914) have called for further investigation of "the role of accounting in shaping the scope and contents of professional work in an established NPM setting", thereby moving beyond the dichotomy between managerial and professional mindset "to focus on the incorporation of accounting concepts and technologies in everyday operations" on the part of professionals. Other scholars, including Kastberg and Siverbo (2016), have called for attention to be given to the diversity of the "strength of professional identity" in health care that has emerged as a result of accounting. We aim to address these calls by analysing the permeability between accounting and medical practice boundaries, considering the co-existing medical competing logics and the two medical practice models. We believe that all these elements configure the framework to understand the hybridisation of physicians with accounting.

Our analysis, which is situated at the intersection of medical logic and professionalism, allows us to explain and anticipate future developments in the hybridisation of accounting processes, particularly in light of ongoing economic crises. Crises lead to the reconfiguration of professional objectives (Rodriguez et al., 2023). During such times, professionals often need to adapt their roles and responsibilities to meet the urgent demands of the situation. This adaptability is crucial for maintaining effective and responsive healthcare services in the face of unprecedented challenges. Notably, advancements in this hybridisation process have the potential to address and prevent dysfunctions that have previously been identified in processes associated with neoliberal reforms. The first lesson drawn from the history of this transformation is that seeking to engage physicians with accounting poses significant challenges and may not be a straightforward process. The second lesson is that the current hybridisation process may be able to align the profile of an organisational physician with accounting more effectively than that of an occupational physician. The third lesson is that the prevailing influence of medicine based on scientific evidence fosters hybridisation with accounting among physicians.

2 | BOUNDARY-WORKS AND COMPETING LOGICS IN MEDICINE

Medicine is considered a special profession that is distinguished from other (ordinary) occupations by strong points of demarcation (Lamont & Molnár, 2002). Medicine also requires specialised education and training to acquire the specific skills to practice it. Each difference between medicine and other fields of knowledge is a boundary demarcation that represents, according to Gieryn (1983, p. 789), "an effective ideological style for protecting professional autonomy". From Gieryn's theoretical perspective, we consider boundary-work in medicine as

the ideological limits used by the medical profession to justify its objectivity and preserve its autonomy. These limits are dynamic and evolving, and they can even disappear. As Mizrachi et al. (2005, p. 21) affirmed, "boundaries are marked daily" and the limits of such boundaries can fluctuate in the absence of clashes or outright conflict.

As boundaries can serve as both barriers that reinforce separation and junctures that facilitate connections (Comeau-Vallée & Langley, 2020, p. 1651), we acknowledge the different influential roles they play in shaping interactions between medicine and other knowledge fields and their underlying dynamics. At present, two competing ideals of medicine coexist, one based on science and the other on practice (Dunn & Jones, 2010). Thus, no unique thought or dominant logic in the medical field underlies its boundary-works. EBM emphasises knowledge based on research and innovative treatments, whereas PBM emphasises physicians' clinical knowledge (Laine & Davidoff, 1996). These two paradigms offer different models of problems and solutions inside the medical field (Kuhn, 1962). EBM has been the dominant medical logic in the latest decades (Dunn & Jones, 2010; Mizrachi et al., 2005; You, 2016), not least because it has been promoted in medical education at universities (Glasziou et al., 2008). EBM refers to "the conscientious, explicit, and judicious use of current best evidence, primarily from clinical trials, in making decisions about the care of individual patients. In general, the goal of EBM has been to improve quality through the standardization of medical care" (Romana, 2006, p. 1). Physicians who adopt EBM treat patients and prescribe them medicines based on an ideal of clinical efficacy that emerges from scientific evidence. By its nature, EBM offers self-protective benefits for doctors because it justifies clinical choices as the best alternative for patients and third parties (Armstrong, 2002). As a result, doctors not only gain highly specialised knowledge through their education and training; they are also able to update their knowledge frequently. Furthermore, due to a myriad of diagnostic technologies, the application of medical guidelines designed under the EBM umbrella allows doctors to choose among a variety of options. Accordingly, EBM is the dominant paradigm (Bensing, 2000). As Costa (2015, 255) claimed, "Formerly, clinical knowledge used to be king, but presently, published evidence from clinical trial results and meta-analyses is the new king!"

In contrast, PBM proposes that therapeutic models should be based on competencies and skills that are acquired on the job. Care is consequently customised (Liff & Andersson, 2011). This approach is consistent with the fact that although education, training and investigation are all requirements for becoming a good doctor, the salient point is the continuous practice of medicine; that is, experience matters (Armstrong, 2002; Hallier & Forbes, 2005; Traynor, 2008). Physicians who adopt PBM merge their scientific knowledge with their personal practices and the needs and preferences of specific patients. These doctors are actively involved in the design of customised treatments, and they assume that there is no reason to blindly trust in science. Practice allows such doctors to achieve direct knowledge of the best treatments and drugs. For advocates of PBM, EBM is based on statistical models rooted in an idealised rationalisation that leads to uncertainty with regard to daily practices. Despite these differences, health care professionals who adopt either EBM or PBM preserve their skills and knowledge with the goal of performing their clinical tasks in a proficient and expert way (Andreasson et al., 2018).

3 | THE HYBRIDISATION OF ACCOUNTING AND MEDICAL PRACTICE TYPOLOGY

At present, accounting influences clinical medical work in various ways and has different effects. A more preeminent role of accounting is anticipated due to the current multi-crisis environment (e.g., in the aftermath of COVID-19 or during the Ukraine war). Even the most reluctant physicians accept the fact that their medical practice must share space with accounting, at least in public hospitals. For instance, Andreasson et al. (2018) describe physicians'

complaints about the intrusion of accounting into medicine or the lack of respect for purely medical skills and knowledge, which are essential for performing clinical tasks in a proficient and specialised way. These resilient professionals are irritated and use terms such as "contamination" or the "displacement of professionalism" to evaluate this situation (Freidson, 2001; Muzio & Kirkpatrick, 2011). The sentiment underlying these judgements is that they do not want to become "mercenaries", using the term coined by Möller and Kuntz (2013). Other physicians are resigned to (but upset about) the loss of their prior dominance and influence in the field of medicine. They are aware that the application of accounting values and criteria implies the subordination of medical values and criteria (Muzio & Kirkpatrick, 2011).

Despite the abovementioned factors, most physicians who work in organisational contexts fully accept the fact that accounting is a part of their professional practice. They do not usually use accounting-related language but nevertheless employ accounting techniques in their daily tasks. Furthermore, their ideal of medicine combines both "patient health" and "financial health" (Egener et al., 2017); that is, doctors prescribe and treat patients based on a combination of accounting values (e.g., cost savings) with medical values (e.g., trustworthiness and commitment to their patients' welfare) (Castellani & Wear, 2000; Relman, 1988). These physicians are committed to budgets in public hospitals, pay attention to costs and pricing, and are ready to use key tools drawn from management accounting (Kurunmäki, 2004). These physicians represent the group of hybrid professionals that emerged after the appearance of the NPM movement and the corresponding accountingisation.

Prior studies have not provided a solely academic meaning of an hybridised physician. According to Muzio and Kirkpatrick (2011), this identity corresponds to a different social class in which physicians' links with the "outside" are viewed as a part of their professionalism. Kraus (2012) indicated that hybridisation is equivalent to accountingisation because accounting now impinges on professional core values and work practices in public health care. The definitions provided by Kurunmäki (2004) and Kurunmäki and Miller (2011) focused on the approach of combining skills and knowledge drawn from the accounting and medical professions. Finally, Jacobs (2005) used the term "hybridised" to refer to physicians who experienced a deep transformation with regard to their use of accounting. We argue that the combination of accounting and medicine is prone to result in a variety of types of hybridisation ranging from physicians for whom accounting is not a determinant of their clinical decisions to physicians who modify their clinical judgements and make medical decisions based on accounting information (as suggested by Sjögren & Fernler, 2019). We rely on Evetts' (2009, 2010, 2013) distinction between occupational and organisational professionalisms to conceptualise two approaches to clinical practice that may explain the differences observed in physicians' hybridisation with accounting.

Occupational physicians perceive hospitals as work environments in which they cultivate and establish their professional identities. This approach emerged in the eighteenth century, when medicine evolved from a solo practice to a social practice associated with public hospitals in which doctors occupied clinical positions. Managers of these hospitals, guided by Weberian principles, delegated a broad range of clinical responsibilities to doctors while simultaneously excluding them from administrative tasks (Blau & Scott, 1962; Etzioni, 1964; Sorensen & Sorensen, 1974; Wallace, 1995). Consequently, these physicians developed a strong orientation with regard to their professional values and norms (Laine & Davidoff, 1996). Evetts (2010) suggested that Durkheim's model of occupational communities helps us understand why these doctors willingly adhere to a set of common rules that guide their professional practice and are derived from their own medical community. According to this occupational approach, doctors enjoyed a privileged status, and their training and socialisation were based on highly specialised professional models that ensured their occupational value (Evetts, 2009, 2010; Freidson, 2001). This occupational value took various forms, such as greater professional autonomy, higher incomes, elevated social

status, and arguably, enhanced job security (Nancarrow & Borthwick, 2005). With the emergence of the NPM movement, the work of these occupational doctors became subject to the scrutiny of governments and patients, among other parties, rather than solely of their own medical community. In addition, they were pressed to integrate accounting into their medical boundary-work, leading to the traditional definition of hybridised doctors (Noordegraaf, 2007). These occupational physicians understood that economic and clinical efficiencies served as a foundation for organising and providing care, that is, they followed the rationalities of both accounting and medicine as described by Kippist and Fitzgerald (2009) as well as Kurunmäki (2004). Although occupational physicians acquired accounting-based calculative skills (e.g., they became bean-counters due to accountingisation), they subordinated the financial and economic aspects of their profession to its clinical aspects (Edwards et al., 2003; Garelick & Fagin, 2005; Lapsley, 2001; Vlastarakos & Nikolopoulos, 2008). In summary, although occupational physicians' attitude has evolved facing accounting issues and they might be named as post-occupational, they are on the lowest level of hybridisation. We expect them to employ the rhetoric of "medicine first", which features arguments based on terms such as quality and commitment, rather than strongly employing criteria pertaining to economic efficiency.

The other category of professionalism defined by Evetts (2013) is organisational professionalism. As in the case of auditors working in large audit firms, physicians have evolved over time from occupational physicians into highly skilled employees (Evetts, 2013; Light, 2003). In this context, the public hospital rather than the profession itself dictated the ideal form of this organisational professionalism, that is, "performance indicators, linked to future salary increases, were defined by the organization, not by the individual practitioner or a professional institution" (Evetts, 2009, p. 260). Noordegraaf (2007) indicated that these practitioners were primarily guided by organisational guidelines. Consequently, their hybridisation with accounting in response to neoliberal reforms was higher than in the case of occupational physicians. While the NPM movement promoted the use of accounting, organisational physicians incorporated accounting in a straightforward manner and exhibited a significant degree of hybridisation with it. In the event of a conflict, our intuition is that some of these physicians might prioritise accounting over medicine. Sociologists such as Freidson (2001) have observed a threat to physicians' individual autonomy due to this type of professionalism, which results from their subordination.

Prior studies in the fields of accounting and management have also indicated a third type of hybridity, namely, that of doctor-managers, a term which refers to physicians who have taken on managerial roles in public hospitals. These doctors perceived accounting as an integral component of their managerial responsibilities. It is possible that these doctor-managers also utilised accounting in their clinical activity when they set aside their managerial responsibilities. Namely, hybrid doctor-managers must effectively navigate a diverse range of clinical and economic objectives (Kippist & Fitzgerald, 2009). Figure 1 summarises the theoretical arguments which we aim to endorse with our case study.

4 | CASE STUDY PRESENTATION

4.1 | Setting and methodology

We conducted a historical study involving physicians at HSJ. HSJ was founded in 1959 and is the second largest hospital in Portugal. This hospital is connected to the Faculty of Medicine of the University of Porto, one of seven public universities that offer medical studies in Portugal. Future doctors receive a theoretical education in EBM in its classrooms while they complete their practical training at HSJ. The pathway, length of studies and training exhibited by these

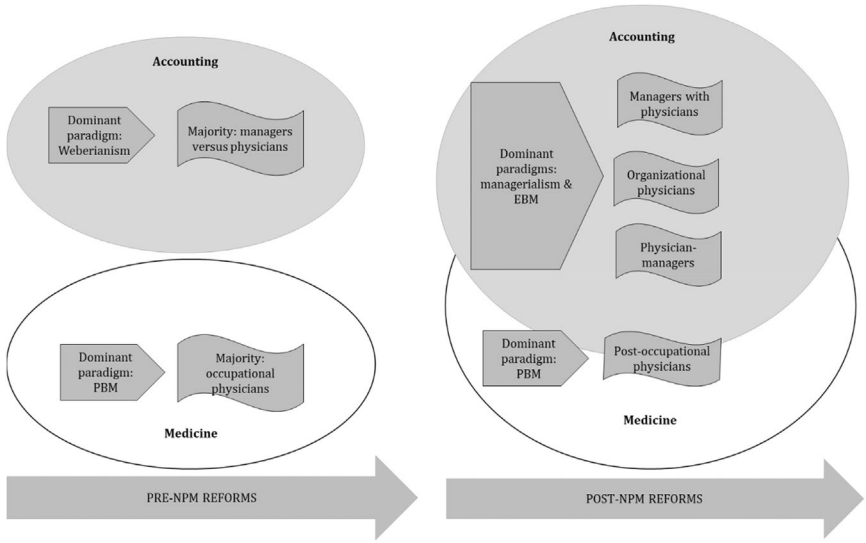

FIGURE 1 Hybridisation processes related to neoliberal reforms.

students[2] and their (high) levels of satisfaction are similar to those of students in other Western settings (Martins et al., 2011).

In December 2006, HSJ became a public enterprise (Decreto-lei 93/2005, 2005; Decreto-lei 233/05, 2006), which was the starting point for the accountingisation process. Since that time, yearly contracts with the government have defined HSJ's "productions" and the associated costs.[3] The resultant transfer of public funds, that is, the "payment" to HSJ, covered all charges associated with an inpatient stay from the time of admission to discharge. The Ministry of Health also guaranteed full reimbursement for all drugs administered when HSJ used generics that have been proven to provide similar levels of clinical effectiveness to brand-name drugs. In addition, the Portuguese government pushed physicians to become middle managers at the same time as they performed their clinical tasks. The government aggregated specialties based on autonomous units that were understood as responsibility centres that focused on a mix of clinical and managerial issues.[4] These physicians were the main guardians of economic efficiency. The government also offered physicians "autonomy and accountability in the corresponding clinical management as

[2]These doctors studied for five years in medical schools that were associated with hospitals. Next, they worked as interns in associated hospitals for a period of 18 months to acquire experience in patient observation, the treatment and analysis of clinical information, and the reading and interpretation of complementary methods of diagnoses. The government also required doctors who wished to practice in public health services to complete an advanced internship. To complete such an advanced internship, doctors were required to pass a competitive exam to access vacancies (which were limited in terms of health institutions and specialties). These advanced internships lasted between 3 (e.g., internal medicine) and 6 years (e.g., urology surgery). At the end of this process, doctors were required to pass an exam. After completing an advanced internship, doctors were able to become specialists, progressing from being residents to senior physicians through a competitive system based on curriculums or a public exam.

[3]The term "contract" implies a legal agreement that is stronger and more binding than the accounting term "budget". Not coincidentally, the Ministry of Health uses the industrial word "production" in its contracts to refer to clinical issues, such as patients, hospitalisations, episodes, external consultations, or radiation therapy. The price of each type of production is based on the diagnosis-related group (DRG) system, that is, on specific pathological treatments. Additionally, this price depends on benchmarking with other hospitals based on their global efficiency indices. Each index represents the ratio between the hospital's output valued at average network costs, adjusted by the case-mix and by the hospital structure factor, and the hospital's output valued at current costs.

[4]The heads of these units were responsible for monitoring the performance of medical protocols, implementing quality control and productivity programs, ensuring organisational effectiveness, and providing constant updates of clinical processes (article 22 of Decreto-lei 188/2003, 2003).

well as incentives and quality care" (Decreto-lei 188/2003, 2003).[5] Noticeably, this ideal of autonomy was in line with the logic of EBM (see, e.g., Armstrong, 2002). To monitor physicians' "clinical activity", the government implemented "a system of regular evaluations, including a set of weighted factors, in close connection with production to demonstrate the efficiency and quality of the clinical results" (Decreto-lei 188/2003, 2003).

We chose to study the field of otolaryngology because it is a consolidated and traditional specialty that includes patients of all ages and genders, unlike other specialties, such as paediatrics or obstetrics. Otolaryngologists do not frequently deal with extreme cases of life or death, for example, these physicians treat more patients with tonsillitis or tinnitus than those with ear or nose cancers. From an accounting perspective, direct costs were the largest budgetary items (personnel, materials, and pharmaceuticals) in HSJ, as well as for the studied department. Depreciation of the equipment and certain supplies were also directly traceable to the otolaryngology department. Otolaryngologists at HSJ had their own surgery subunit, which exhibited few dependencies on other units.

We use primary sources in our research, basically narratives from interviews to the main actors and accounting official documentation. Narratives from personal interviews are increasingly utilised as tools for critical accounting research (Beattie, 2014; Haynes, 2006; Llewellyn, 1999). These narratives offer deep insights into individual experiences and perspectives, making them valuable for understanding complex interrelations in professional fields. In this context, we employ the phenomenological method (Tomaszewski et al., 2020) to analyse the experiences of otolaryngologists concerning accounting information and its integration into their medical practice. This approach allows us to capture the nuanced ways in which these professionals navigate and reconcile the demands of accounting with their medical responsibilities. Therefore, we chose to investigate these issues indirectly by analysing verbal narratives extracted from one-on-one semi-structured interviews as primary evidence. This method enables us to uncover the underlying themes and patterns in their experiences, providing a richer, more comprehensive understanding of the hybridisation process in a medical setting.

We carefully followed all the procedures recommended for exploratory qualitative research, especially those indicated for case-study research (Yin, 2009) and interviews processes (Bardin, 1994). We also collected interviews of the chief executive officer (CEO) of HSJ in television, radio and the press. Most of the interviewees provided us abundant narrative on the topics of this case study although only few parts of this material could be type-recorded. In these interviewees, we also were provided with rich archival data that complemented the documentation published by the Portuguese government concerning the HSJ. Remarkably, we gained access to those contracts that reported on the organisational reforms that the Portuguese government aimed at HSJ, and to those business plans that reported on the organisational reforms promoted by senior managers.

Seven of our interviewees were senior otolaryngologists, while the other six were residents. We conducted these interviews in 2007, after the HSJ had become a public enterprise, and we finished our collection of documentation and observations in 2015, when HSJ merged with Hospital Valongo. As aforementioned, we followed the established guidelines for exploratory qualitative research (Bardin, 1994; Hayne, 2022; Lillis, 1999; Malmmose, 2019; Yin, 2009).

The individual interviews lasted 2 h each on average. During the interviews, we avoided expressing our opinion on any matter or interrupting the physicians while they were answering our questions or offering their opinions. We began all the interviews by asking a generic question that encouraged these physicians to speak freely. For example, we asked them to "please, explain how you make your clinical decisions" or "what type of information and factors do you consider when requesting a complementary diagnostic or when prescribing a specific

[5]This autonomy was collective because the government required physicians to work "in multidisciplinary health teams" (Decreto-lei 188/2003, 2003).

therapy?" We subjected the content of these recorded narratives to a qualitative exploratory analysis.[6] We also presented these physicians with a questionnaire designed to collect the paradigms of medicine they adopted. Our intention was to understand the physicians' attitudes towards their clinical practices and the possible influence that EBM and PBM had on their attitudes towards economic factors related to their work.

To enhance the validity and comprehensiveness of our research, we employed a triangulation approach based on the integration of multiple data sources and perspectives. Specifically, we conducted interviews with key individuals, including the chief financial officer (CFO), the head of management accounting, and the head and subhead of otolaryngology. Additionally, we sought the expertise of two controllers, who provided valuable insights into the mechanisms underlying accounting diffusion and communication. The narratives obtained from these interviews, alongside relevant documentation, shed light on the physicians' acceptance of accounting practices within the organisation. Furthermore, these narratives offered valuable insights into the impact of organisational reforms that aimed to improve both accounting tools and EBM practices.

In addition to the interview data, we collected a range of supplementary materials to complement our findings. These materials included legal documents, press and media interviews, and a review of scientific papers published by the hospital's otolaryngologists during the study period. These diverse sources of information were carefully archived and organised to ensure ease of access for future researchers. The data thus collected are available upon request. By adopting this comprehensive approach and collecting data from various sources, we aimed to ensure a robust foundation for our study and to obtain an extensive understanding of the complex dynamics' operative within the organisation.

The narratives of doctors working in the clinical service of otolaryngology at the HSJ highlighted the fact that the clinical trial protocols associated with EBM governed their clinical activity. They noted that "there is a protocol, and I follow it" (otolaryngologist 5) or "what I observe are the clinical trials" (otolaryngologist 4). They followed these rules regardless of the pathologies they encountered. For instance, as otolaryngologist 3 noted, "Even when I've been seeing an oncological patient, I follow the rules, the clinical trials" (otolaryngologist 3).

Only on rare occasions did these doctors fail to follow these clinical rules: "The nonuse of protocols is quite exceptional" (senior-otolaryngologist 6). Protocols "start with these clinical examinations with less informative power, and depending on their results, we go for higher informative examinations" (senior-otolaryngologist 1). For instance, "if we have, for example, a situation in which a possible surgical intervention is anticipated, we often have to make a more general evaluation based on an analytical study of biochemistry and dermatology. If this is an individual who is more than fifty years old, it already justifies performing an electrocardiogram or often a radiological study, most of the time in the form of CT (computerised tomography), for the possible region of approach" (senior-otolaryngologist 4). In summary, the diagnostic process follows a common series of steps: "since the patient arrives with symptoms, this opens decisional points, and we explore them, from the most frequent to the least frequent. The study continues until we find the diagnosis" (otolaryngologist 6). We observed that most otolaryngologists accepted these

[6]We listened to the interviews and transcribed them in Portuguese and then we translated the interviews from Portuguese into English, resulting in 68 pages. We proofread these pages to double-check the contents, preserving the order of the text in its entirety. Then, we began to trim the text in accordance with the themes, ideas and concepts we identified. Finally, we initiated a coding process with the aid of the qualitative data analysis software NUD.IST, in which context we did not limit the number or type of codes created. We reread and reinterpreted the coded text to reorganise and reduce the number of codes, following which we abandoned parts of the text that were irrelevant to the objective of the study. We repeated this procedure until the process reached maturity, that is, until we had created meaningful categories that satisfied the criteria proposed by Bardin (1994), namely, mutual exclusion, homogeneity, relevance, objectivity, fidelity and productivity. To complement physicians' narratives, we employed document collection techniques.

clinical trials. They found value in the fact that "the service protocol was done in service […] it was consensual" (senior-otolaryngologist 6).

The next stage involved treatment: "from the moment we have the diagnosis, we decide on the treatment according to the clinical trials" (otolaryngologist 4). Patients received reimbursement for pharmaceuticals under certain conditions. The HSJ provided a list of generic and essential medicines that were mandatory for all hospitals. If otolaryngologists decided to prescribe medicines that were not on the official list, they must: (i) demonstrate sound reasons based on significant differences between the medicines in terms of their formulas and ingredients; and (ii) report the corresponding therapeutic benefits. If they receive authorisation, they can prescribe the medicine.

Other HSJ physicians kept their practice in a radically different manner. They viewed the protocols as "a way to standardise doctors' decisions" (anonymous). They made individual clinical decisions or referred their decisions to consultations. These otolaryngologists trusted in their own skills, qualifications and rules. They rejected EBM because "this is not a factory. Medicine is not manufacturing" (senior-otolaryngologist 7). They expressed a similar view regarding the list of medicines: "this is a way to limit the medication, and this means that there are some drugs that we use at the hospital level that are very harmful for the patient" (senior-otolaryngologist 7). One doctor complained that "when we have patients with cancer, in pain, first, we have to justify why we give them morphine or 'Fentanyl,' and that justification takes three days to be accepted". Another physician expressed the following complaint: "if I prescribe another drug, I will be asked, 'but why?' And I justify it because the patient is allergic or because […] otherwise, I will not be able to get it" (senior-otolaryngologist 2). Despite these physicians assuming PBM, the majority competing logic in HSJ was EBM.

4.2 | Accounting and medical practice hybridisation

Since 2006, the legislative development affecting the HSJ led to a shift in the responsibility for accounting towards the heads of medical services (e.g., otolaryngology), triggering the hybridisation of medicine with accounting (Figure 2).

The HSJ CEO fully embraced these reforms. He was a physician-manager,[7] but his public expressions indicate that he behaved more as a manager than as a physician. Far from simply reacting to accounting or acquiring the calculative skills described by Kurunmäki (2004) or Kurunmäki and Miller (2011), he was a bean-counter, as shown by his defence of "first efficiency". This defence caused him to be a critic of medicine.[8] The accounting department in the HSJ bore the responsibility of providing the head of otolaryngology with accounting information and support to facilitate her understanding of the reports. After the accounting department presented its budget, she negotiated this budget with her clinical director by employing a purchaser–provider split approach, as described by Broadbent and Laughlin (1995). This negotiation system not only successfully bridges the gap between the realms of accounting and medicine but also contributes to the minimisation of potential differences between

[7]This CEO is a graduate of the University of Porto School of Medicine, where he also earned physician qualifications and later assumed a position as an associate professor. He took a leave of absence from his clinical practice to become a physician-manager on HSJ's board from 2005 to 2016, where he earned the Best Leader Award in 2013.

[8]For instance, he claimed that progress in the medical field should be conducted in pursuit of accounting values. Concretely, his proposal was for a new form of medicine that takes advantage of information technologies to ensure efficiency. The positive "outflows" that he associated with monitoring in real time "how the surgery rooms are functioning when a surgery begins and when the surgeon's work ends, just when the patient leaves the room" (António Ferreira, 2014a) are additional examples of his commitment to accounting. Additionally, he claimed that "if the São João efficiency indicator – that is, the unit cost per standardised patient – was applied to all Portuguese hospitals, then spending on health care in the country would decrease by more than €500 million. However, this would happen only if these hospitals wanted this reduction" (António Ferreira, 2014b).

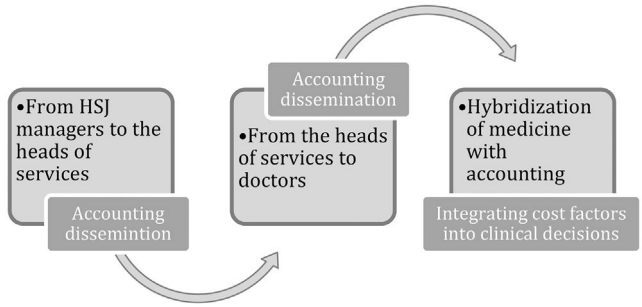

FIGURE 2 Accounting dissemination process.

otolaryngology and other clinical units. As the head of otolaryngology emphasised, "My main concern is the thinking of our clinical unit. However, I do not believe that we can exist, as healthcare providers, in isolation from the rest of the hospital. Therefore, if our care has lower costs, I am satisfied because this will have an effect on the total hospital's budget. And thus, if it can benefit the hospital, this is the best way".

In the otolaryngology unit, the budgeted productions focused on the number of consultations and follow-up consultations. Production in the surgery subunit was estimated based on the number of elective and urgent surgeries. To effectively monitor the consumption of pharmaceuticals and clinical material, the head of management accounting provided the head of otolaryngology with a detailed breakdown of the quantities and average prices of these products. The cost accounting system that facilitated this reporting deviated from the model prescribed by the government. The department of accounting allocated indirect costs from such services without adhering to the reciprocal method of allocation. Within this full-costing system, certain traceable variable overhead costs were classified as indirect costs. As a result, conflicts arose regarding these allocation rates in terms of responsibility and controllability, as recognised by the CFO. The accounting department was responsible for reconciling the hospital's cost accounting information with its clinical information, which had been recorded in an IT system known as SONHO. This integration of medical criteria with managerial criteria highlights the intersection between these two domains in decision-making processes.

The accounting department conducted a monthly analysis of variance for otolaryngology, closely monitoring its performance and comparing that performance with the previous year. The head of management accounting provided comprehensive analyses and control maps to the head of otolaryngology and her senior manager. These reports served as valuable references for monitoring and managing daily services. These accounting reports were flexible and customisable, allowing for adjustments based on specific instructions and requirements. The accounting department utilised this information to analyse variances in production. Additionally, the CFO issued follow-up reports regarding the production of the top ten autonomous units, which represented significant financial costs within HSJ's overall budget. The head of otolaryngology was provided with key performance indicators (KPIs) as part of the budgeting processes. Furthermore, she received relevant information that she could use to benchmark the costs associated with her own unit. Additionally, the head of otolaryngology could make specific information requests. She expressed her confidence that "Whatever I need or ask for is on the records or the reports for issues such as the management of the wait list in surgery. If the patients' registration on the wait list is not done correctly, it affects the surgeries' records, the patients' calls for surgery, and the assigned wait time".

With regard to the dissemination of accounting information, the head perceived meetings with otolaryngologists as serving "more scientific purposes than the purposes of debating this issue [of accounting]". As an example, otolaryngologists played an active role in suggesting and

revising medical protocols, which would subsequently undergo a review and approval process by the clinical director. In the process of preparing their proposals, the doctors systematically reviewed medical guidelines, examined reports of clinical studies, analysed peer-reviewed and published review articles, and referred to monographs, among other sources. However, most otolaryngologists expressed divergent views of these meetings. For instance, one senior otolaryngologist noted that during these meetings, doctors were "informed of major political decisions and costs". They also highlighted the presence of accounting information and recognised its relevance with regard to making decisions pertaining to their clinical practice. Most of these physicians perceived that the accounting information they received served as a way of "engaging them in uniform conduct". In contrast, a minority of doctors expressed their dissatisfaction with the communication of accounting information during these meetings, suggesting that such information was not pertinent to their work. For instance, one resident claimed that "the purpose of our meetings is not this. It is not to see the costs. These are medical meetings to see patients: clinical cases. They are about our work. This is not about management".

Budgetary negotiations and the dissemination of KPIs were additional contexts in which accounting information was shared among otolaryngologists. One resident described the process of communicating budgets and variances during these meetings as follows: "I know that the unit has certain objectives at the beginning of the year that it intends to achieve, does it not? Moreover, I see that the achievement of these objectives depends on the number of consultations, the number of surgeries, and the number of treatments. I know that underlying these targets is the unit's budget. It includes all the expenses related to diagnostic procedures, medications, and inpatient hospital stays. I know that the overall process is something like this. However, do I know the details in terms of numbers? No, I do not". This statement suggests that the resident may have desired additional accounting information to inform his clinical decision-making. A senior otolaryngologist also expressed a demand for more comprehensive accounting information: "I would like to have overall service information. That is, I am interested in knowing how the service is evolving in terms of cost reduction, in terms of performance, in terms of availability, and the quality of the medical activity. I think that these aspects are not separable. They constitute a unified whole". In addition, otolaryngologists received other accounting information, such as information pertaining to the cost of medications, through the IT system they used for prescriptions. As one senior otolaryngologist mentioned, "After prescribing a patient aspirin, the computer system indicates that *the daily cost of this patient is one euro*, for example. I have this information available, too".

The head of otolaryngology viewed medicine as a specialised field that needed both experience and strong "common sense", emphasising the importance of the doctor's discretion. She recognised the relevance of economic and financial considerations in the practice of medicine. She advocated for the integration of cost-related factors into clinical decisions as long as the patient's best interests were not compromised. This doctor-manager not only included accounting in her boundary-work pertaining to accounting, thereby enhancing her calculative and negotiation skills, but also included accounting information in her clinical decisions. To some extent, she merged her medical role with her management role. As an example of this integration, the admission processes used for elective patients were established with cost savings in mind. Patients' visits were scheduled to avoid starting their preop procedures on Friday to prevent patients from spending the weekend at the hospital. Instead, on Monday, "doctors must request all the necessary exams". These processes ensured that doctors' "delays did not double or triple the time required" (head of otolaryngology). Another case in which accounting was incorporated into physicians' medical work pertained to her agreement to write prescriptions in specific doses. She explained that this practice helped "control consumption much better and allowed for more effective management of all expenses at this level". This doctor-manager expressed a belief in boundary-work between accounting and medicine. She expressed the view that "A doctor can be a manager, but a manager cannot be a doctor. If I were the head of this

unit and I did not have clinical knowledge, I might dehumanise the service. I would only count numbers and neglect the benefits [to patients]". To illustrate her approach, she highlighted her acceptance of variations in productions and the resulting penalties, noting that "if that brings benefits to the patient, I do not mind bearing a penalty. Above all, it is important to strike a balance. However, this should benefit the patient; otherwise, it makes no sense".

However, the hybridisation between accounting and medicine did not follow a linear pattern among otolaryngologists who engaged in direct contact with patients and had limited or no managerial responsibilities. In the otolaryngology unit, medicine was governed by EBM. The head of the department reasoned that this situation was the case because these doctors were "working in a teaching hospital, in a university hospital with highly skilled people". She further promoted EBM within the clinical unit because "what we do is likely similar to what doctors in the United States do or to what we have just read in a book, and this knowledge has already been applied". However, she noted that the procedures that were governed by EBM had been the targets of "some critics", indicating that not all otolaryngologists embraced this logic.

For many otolaryngologists, accounting was closely linked to the medical guidelines that they followed. However, we observed noteworthy variations in terms of polarity when conflicts arose between accounting and medical considerations. As one senior otolaryngologist stated, "we determine them based on a consensus in therapeutic terms about what is expensive, what is cheap, what we can medicate, and what we cannot". Efficiency was a value that governed the medical guidelines. Another senior otolaryngologist provided a specific example of this hybridisation: "I try to ask for the minimum number of tests. However, my requests depend on the patient's pathology. I follow the medical guidelines. Doctors make decisions on a dichotomous basis. We start with [cheaper] tests that provide less information, and subsequently, we decide to use [more expensive] tests that provide more information. So, if I can follow these phases without affecting the patient's health, I do". One resident also shared their perspective, affirming that "If the exam is very expensive, and it will have little influence on my clinical decision, […] I will not ask for the exam. Now, if it is crucial, then yes". As another resident stated, "We can often ask for a battery of tests, which is not very correct because they are often very unnecessary tests. Sometimes, we also have to adapt a little to our reality and to what the hospital can offer".

Most of these otolaryngologists adhered to what one physician who adopted the PBM approach referred to as "the herd" when prescribing medications, that is, following a government-provided list of medicines. They chose drugs based on "efficacy, organic form, the patient's tolerance, and the price". These doctors noted that if they "spent excessive amounts on a particular drug, there is a call to explore other alternatives" and mentioned that they were "receptive to the proposed modifications". Many of these otolaryngologists prescribed generic drugs, even if they were aware that other medications offered greater therapeutic value. As one senior otolaryngologist indicated, "Antibiotics are extremely potent. However, the very powerful ones and the newest ones are also the most expensive. We prefer to reserve them for solving very difficult situations. Thus, here, there is always a trade-off between the clinical and financial aspects". These doctors prioritised accounting when they emphasised the organisational doctors' typology. In summary, doctors who adopted EBM took on the role of organisational employees and fully embraced accounting practices. It seems that their focus on accounting overshadowed the principles of EBM. For instance, the subhead of otolaryngology drew the following conclusion: "Currently, we work a bit like blue-collar workers. We do not have time to think but only to execute".

Conversely, PBM doctors denounced the "crazy situations" resulting from cost-saving decisions and the use of KPIs to evaluate doctors' performance. In the words of one senior otolaryngologist, "The number of appointments does not measure the doctor's job, do you know? If we are going to go there, we are disgraced. We can see fifty patients and make fifty blunders".

These doctors complained that accounting was unable to capture the essence of clinical work, emphasising the fact that the outcomes are based on "medical intuition", "professional experience", "uncertainty", "the uniqueness of each case", and "patient considerations". These doctors focused on the HSJ occupational typology and embraced PBM. They appeared to rely on knowledge that they had gained through their practice of medicine. The motto of PBM residents was as follows: "If I have any doubt, any important doubt, I ask an older colleague". For these residents, "financial restrictions" or the "economic consequences of clinical decisions" must always be subordinate to the "patient's clinical interest". Among our interviewees, only three otolaryngologists fit this profile, which one of them summarised as follows: "We are doctors, not managers". These occupational doctors recognised only one perspective, that is, the medical perspective. They justified their position with regard to accounting by asserting that "Medicine is not manufacturing. Sorry there, but it cannot be measured by how many screws it uses or how many radios or recorders you use". These physicians believed that hospital protocols and the prescription of generic drugs undermined their individual autonomy, which they considered to be a fundamental value of their PBM. However, this attitude did not imply that accounting was completely disregarded in their work. These (occupational) doctors rejected the professional discourse that justified exclusive privileges and certain abusive behaviours reminiscent of medicine's "golden age". These doctors were hybrid doctors, for whom economic values were secondary in importance. They viewed the prescription of "cheap medicines" as beneficial, as it benefited not only the patient (who was required to make a copayment) but also the hospital and the state. Given the bureaucratic nature of the health care system, which required justification and authorisation, these otolaryngologists emphasised the need to demonstrate a therapeutic benefit when prescribing specific medications.

In summary, the hybridisation of accounting and medicine was not a straightforward process for otolaryngologists who engaged in direct contact with patients but had limited managerial responsibilities. However, all of these otolaryngologists acknowledged the importance of accounting information when making decisions related to their clinical work. The main hybrids in this context were doctors with an organisational profile and a commitment to EBM. On the other hand, doctors who complained about the influence of accounting information tended to embrace the logic of PBM and to exhibit an occupational orientation. The key difference between these groups pertains to their approaches to clinical dilemmas. Organisational-EBM otolaryngologists might prioritise accounting considerations over medicine, whereas occupational-PBM doctors remain committed to the principles of medicine.

4.3 | Discussion: insights drawn from the hybridisation between accounting and medicine

The case of HSJ and the otolaryngology unit offers a vivid illustration of the complex interplay between accounting practices and medical decision-making, as well as the control of their work. The acceptance of accounting information by doctors can only be understood in the context of a transition within medical logics: the shift from PBM to EBM. As observed in the case, accounting information allows otolaryngologists to have support in their clinical decisions. Therefore, they not only use it in their resource allocation, integrating financial and clinical information into their clinical activities, but it also enhances their acceptance of it to establish accountability and measure performance resulting in an "accountingisation" as described by Power and Laughlin (1992).

The narratives of otolaryngologists highlight the relevance of medical logic in the process of hybridisation between accounting and medicine, as argued in our theoretical model and summarised in Figure 1. The theoretical framework elucidates the process of professional hybridisation through the lens of historical lessons. By examining how past crises, such as neoliberal

reforms and, more recently, the COVID-19 pandemic, have shaped the integration between accounting and medical practice, the framework not only sheds light on the past but also provides a valuable tool for analysing and forecasting the ongoing process of hybridisation in the future.

We observe that HSJ accounting practices, with a detailed breakdown of pharmaceutical consumption and surgery costs, are used to manage its human resources and facilities effectively. This reflects the broader shift towards an "accountingised" healthcare system, where financial data supports clinical decision-making by ensuring that resources are used efficiently, as suggested by Kurunmäki et al. (2016). The purchaser–provider split approach in budget negotiations within the otolaryngology unit exemplifies how accounting helps to bridge the gap between financial and clinical domains, a key feature of EBM's integration with managerial practices, as issued by Broadbent and Laughlin (1995). This integration is crucial in ensuring that clinical decisions are informed by both evidence-based guidelines and cost considerations, allowing for progressing towards the aimed balanced approach to patient care and financial sustainability as other authors have previously pointed out (e.g., Fisher, 1998; Porter & Kaplan, 2016).

Moreover, the intensive use of IT systems to reconcile cost accounting information with clinical data at HSJ is another sign of the growing reliance by otolaryngologists on accounting to inform their clinical decisions. This integration facilitates their clinical practice especially when the dominant logic is EBM, because, as Rezaei et al. (2022) point out, informed decisions balance clinical evidence with cost considerations, ensuring that patient care is both effective and economically sustainable. The flexibility of these accounting reports, which adapt to informational needs, combined with the provision of KPIs that inform otolaryngologists about the adequacy of the work performed, further supports this integration, as Huber et al. (2021) indicate, allowing clinicians to make informed decisions that align with both medical and financial goals.

The hybridisation of accounting is not limited to those clinicians whose dominant logic is EBM. However, accounting faced more challenges to penetrate the defences of PBM compared to the boundaries associated with EBM. Thus, the case of HSJ confirms that accounting encounters more resistance among PBM otolaryngologists. This confirms prior research because they often believe that economic considerations of efficacy and effectiveness are secondary and nonessential to their clinical judgement (Ammerman et al., 2014; Vesty et al., 2023). Quite the opposite occurs among EBM otolaryngologists, who believe that the way to practice their medicine is through the standardisation of their medical diagnosis and treatments in the form of medical guidelines (as indicated by Bragato & Jacobs, 2003; Gebreiter, 2017). We note that their EBM standardisation is in line with the accounting concept of standard costs developed by HSJ managers. his leads clinicians to be more receptive to budgetary information or recommendations to prescribe generics. Although their attitude toward KPIs is more one of "resignation", we observe that EBM also facilitates that accounting information influence clinical decision-making, as suggested by previous research (Gebreiter, 2017). Since the EBM logic facilitates forecasting and controlling clinical processes and outputs, it is understandable that accounting has a more extensive impact within EBM environments. We argue that accounting alters the understanding of the transformation process, the observability of outcomes (output), and the observability of behaviours (effort) (Fisher, 1998) for otolaryngologists who adopt EBM. Consequently, accounting transcends the boundaries of EBM more extensively than those of PBM. In summary, accounting operates within the demarcations of medicine with different degrees of permeability and flexibility depending on the EBM or PBM logics embraced by otolaryngologists.

Otolaryngologists also confirmed the existence of occupational and organisational professionalism, as suggested by the sociology of professions. Occupational otolaryngologists,

following the PBM logic, tended to prioritise the clinical aspects of their profession over the financial and economic aspects (as noted by Edwards et al., 2003; Vlastarakos & Nikolopoulos, 2008; Lapsley, 2001; Garelick & Fagin, 2005). Their professional identity was primarily oriented on medicine (Kraus, 2012). On the other hand, organisational-EBM otolaryngologists embraced accounting as a central value in their vision of medicine, indicating a high level of hybridisation. Their heads and subheads were doctor-managers (Kurunmäki, 2004) who had integrated accounting into their boundary-work in the context of EBM logic while simultaneously incorporated medicine into their management practices. Over time, they became staunch advocates for accounting.

The HSJ case confirms the framework depiction of the transition from PBM to EBM, demonstrating how accounting practices are central to this shift. The case also aligns with existing literature, illustrating how accounting can either enhance or challenge traditional medical practices depending on the professional orientation of the physicians involved. This dynamic illustrates the ongoing evolution of professionalism in healthcare, where the boundaries between medicine and management are increasingly blurred. The analysis underscores the complex and evolving relationship between medicine and management in modern healthcare, where accounting continues to play an increasingly influential role. As crises such as the COVID-19 pandemic have shown, the integration of accounting into medical practice is likely to deepen, with organisational physicians playing a key role in this transformation (e.g., Lalani et al., 2023; Pavlatos & Kostakis, 2022).

Accounting was identified as a pivotal component of the task of organising and supporting medical efforts during the COVID-19 crisis (Huber et al., 2021). As such, it played a vital role in the process of allocating doctors, nurses, patients, and ventilator hours by utilising the number of beds as a primary indicator. Furthermore, accurate inventory information was imperative for the effective organisation of essential materials and ventilator supplies. This emphasis on accounting resulted from the urgent necessity of capacity management to accommodate the overwhelming influx of patients and ultimately enhance the hospital's ability to save lives. Pavlatos and Kostakis (2022) reported that hospitals that were heavily impacted by the pandemic responded by intensifying the utilisation of their budgets to support activities such as planning, resource allocation, and cost control. This heightened emphasis aimed to mitigate uncertainty and manage costs effectively. Moreover, the quality of cost accounting played a significant role in reinforcing this effect. This reinforcement of accounting practices was not limited to qualitative improvements within hospitals, as governments also increased funding for public health care facilities. It can be affirmed that accounting and medicine fields increased their common overlapping area, meaning a higher level of hybridisation.

Another effect of the pandemic was the strengthening of EBM. This confirms that crises, in particular, lead to the reconfiguration of professional objectives (Rodriguez et al., 2023). An example of the success of new EBM protocols is the widespread adherence to the recommendation for infected individuals with mild symptoms to remain at home and engage in self-quarantine (Xu et al., 2020). Despite the rapid development of new vaccines within the EBM framework, it was still necessary to follow the steps required to ensure their safety and efficacy diligently in the face of impatience on the part of both citizens and governments who exerted pressure to expedite the overall processes (Iserson, 2021). While the urgency attributed to attempts to address the pandemic and save lives was understandable, a balance had to be struck between expediting the vaccine development timeline and maintaining robust safety and efficacy standards. This rapid development of vaccines within the EBM framework strengthened its credibility and solidified its role in successful vaccine decision-making. This situation resulted in gains in people's confidence in universal protocols established by doctors and guided by public health authorities (Stevens et al., 2023).

In addition, the COVID-19 pandemic promoted the broad use of telemedicine and online consultations as well as the use of technology to combat the virus and improve management

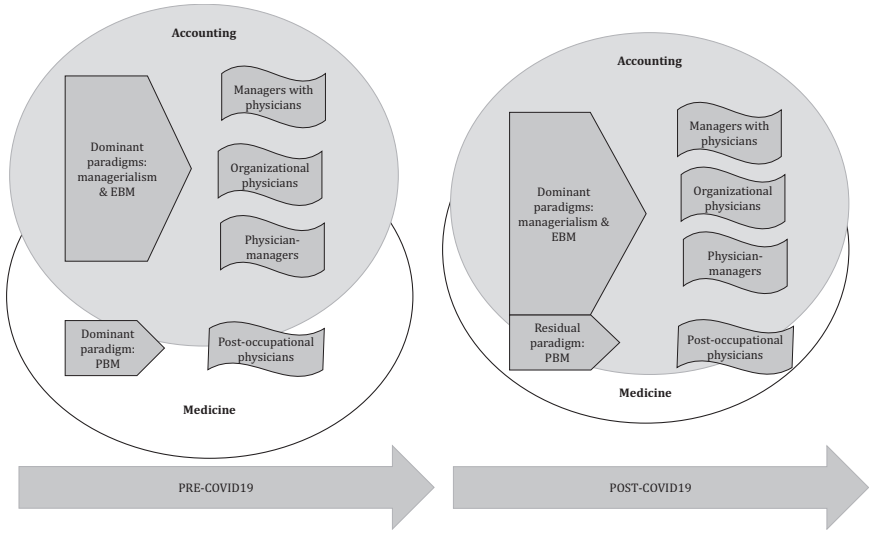

FIGURE 3 Hybridisation processes related to COVID-19.

(Talha et al., 2022). This personalised approach, supported by information technologies and potentially by artificial intelligence in the near future, represents a contemporary development that appears to be in line with the principles of PBM. However, it should be noted that this personalisation is primarily based on the perspective of EBM. In summary, patients enjoy enhanced accessibility to their physicians, while doctors are able to disseminate information and ensure compliance with treatment protocols. In fact, physicians advocate for the inclusion of digital health applications funded by the public as integral components of their EBM guidelines (Wangler & Jansky, 2023). Before the pandemic, PBM operated within a humanistic framework that emphasised clinical interactions and a personalised approach to patients. In contrast, EBM tended to foster impersonal and fragmented clinical practices (Weaver, 2015). After the pandemic, this field has exhibited an increasing trend toward a new human-centric technological approach based on EBM that incorporates, to some degree, practices associated with PBM. This shift reduces distance and softens differences between the two accounting logics, although it poses additional challenges to the survival of prior PBM models (see Figure 3).

5 | CONCLUSIONS

The phenomenon of accounting in public hospitals impacts the entire medical profession (Evetts, 2013). The "set of central, distinctive and enduring characteristics that typify medicine" (Ashforth et al., 2000, p. 417; Parsons, 1939) is now different because accounting has penetrated its boundary-work. As Colletti et al. (2012) affirmed, the dominant accounting logic used in the public health care sector, namely. EBM, is based on the core values of efficacy, efficiency, and value for money (e.g., cost savings or reductions in patient throughput time). Accounting quantifies clinical tasks in terms of budgets, balanced scorecards, cost of activities, and so forth. Neoliberal reforms represented the first pivotal point at which accounting impacted health care because physicians were required to accept the use of terms such as patient-clients, balance cost with quality in the provision of clinical service-care and focus on the rational use of public funds (Broadbent & Guthrie, 2008; Evetts, 2010; Klikauer, 2015; Noordegraaf, 2007). Physicians were necessary accomplices in this development. Their collaboration and active involvement fostered this process. The second boost was the COVID-19

crisis, due to the exceptional circumstances and scarcity of all kind of resources (Pavlatos & Kostakis, 2022).

In the medical field, physicians vary in terms of how they perceive and conceptualise their profession. This diversity of perspectives plays a significant role in the incorporation of accounting practices into medicine. The trade-offs between two competing logics within the medical field, one rooted in scientific principles and the other grounded in practical considerations, explain the different forms of hybridisation with accounting observed among professionals. We explain these differences from the perspective of Gieryn's (1983) and Evetts's (2009, 2010, 2013) professionalism. The boundary-works associated with EBM are more permeable to accounting than those pertaining to PBM. Organisational professionals perceive their activity in the public hospital to be a job that they perform under the parameters of accounting and the guidelines of their organisation. In contrast, occupational professionals consider themselves to be professionals who are hired by the hospital for which they work, in a context in which the "rules of the game" are determined by the medical profession itself rather than by the accounting department. By examining the responses of otolaryngologists working in a Portuguese hospital, we confirm that the explanatory axis linking the type of medicine with the type of professional practice accounted for the varying levels of acceptance of accounting doctors exhibited in their daily clinical work. We notice that organisational doctors are mainly EBM followers, while occupational doctors adopt PBM. This model facilitates an analysis of the changes resulting from neoliberal reforms, but it also enables doctors' potential responses to other types of reforms to be anticipated.

By critically analysing the effects and outcomes of the reform, we can identify areas that can be enhanced or modified to achieve better results. The first lesson drawn from history is that the implementation of transformations that engage physicians in the task of meeting additional KPIs, such as reducing overtime hours, increasing the number of teleconferences, or managing wait lists while simultaneously implementing budget cuts undoubtedly poses significant challenges and may not be a straightforward process. In the initial stages of accountingisation, many physicians perceived accounting as a threat to their independence (Exworthy & Halford, 1999a, 1999b). For centuries, medical decisions and their control had been focused on ideological values such as expertise, ethics, and service, which were the province of the medical profession. Economic value, which had been secondary in the medical profession until that change, was the foundation of accounting tools. A great deal of literature has reported the initial negative reactions of the medical community, which were followed by a period of clashes (Broadbent & Laughlin, 1995, 2001; Hood, 2006; Hoque et al., 2004; Jackson & Lapsley, 2003; Lapsley & Wright, 2004; Malmmose, 2015; Power & Laughlin, 1992; Simonet, 2008). However, further reforms are likely to be easier because the domains of medicine and accounting are permeable and after COVID-19 crisis more blurred. The second lesson drawn from history is that the current process of hybridisation may not result in physicians with a sole profile. One effect of neoliberal reforms was the creation of a new area of professional expertise in medical management (Llewellyn, 2001), that of the physician-manager, as well as the consolidation of organisational physicians. The third lesson drawn from history emerges from this research. Not all doctor physicians think about their profession in the same way, and their ways of conceiving of their profession determine their toleration of situations in which accounting trespasses the threshold of medicine. The prevailing influence of EBM plays a crucial role in explaining the increasing acceptance of accounting practices among physicians. The fourth historical lesson is that medicine based on scientific ideals is a facilitator of the ability to control physicians' behaviour and outcomes (Fisher, 1998), as "good practice" can easily be cost-standardised according to certain protocols. Finally, we can learn from the past that accountingisation had a "collateral" effect: it led to a process of hybridisation between accounting and medicine in clinical practice.

The link between EBM and organisational physicians caused a situation that requires further reflection on the part of researchers, practitioners, and governments regarding the type of clinical service that can satisfy societal needs in health care.

In the wake of the COVID-19 pandemic, the supply chain crisis, and the more recent Ukraine war, public hospitals are experiencing significant repercussions with regard to their financial resources. At present, factors such as sluggish economic growth, inflation, volatility in energy prices, and other issues have intensified the pressure on governments to ensure efficiency and value for money in public health care. Consequently, these compounded crises have led to an increase in hospital expenditures, particularly in light of the need for state-of-the-art and costly technologies in the field of diagnosis. Notably, the substantial amortisation costs associated with these sophisticated technologies have negatively impacted the profit and loss accounts of hospitals. This situation suggests a change in the control locus from doctors to machines.

Information technologies have played a crucial role in reducing the cost burden on physicians. The implementation of patient portals, for instance, has facilitated online access to health information, allowing patients to view their laboratory results, schedule appointments, and engage in asynchronous communication with health care providers through secure messaging (Raisa et al., 2023). Additionally, tools such as symptom checkers have enabled hospitals to offer personalised services by leveraging the time saved in the process of diagnoses and technological capabilities to reach a larger patient population. This standardisation of medicine has further led to cost reductions by enabling physicians to be replaced by machines in the context of certain clinical activities and decisions without significant decreases in clinical quality. This context is likely to require that physicians make further advances in their hybridisation with accounting and to highlight the importance of the organisational physician with a commitment to EBM.

We recognise that this study has some limitations. Professionalism is a complex issue. The relationships between accounting and professionalism are also extremely complex because a myriad of institutional, organisational, and personal influences mediate them. Professional bodies are highly politically-oriented, and they shape their agendas to favour their members' interests. Thus, the core idea that the ability of accounting to exert control over professionals can only be understood within a comprehensive framework that includes the institutional level can serve as a foundation for future efforts to develop this research further. Another limitation of our study pertains to the differences among various actors, for example, physicians who occupy full-time managerial positions and other specialists who are entirely dedicated to the profession, such as nurses, therapists, or social workers, as indicated by Malmmose (2019). Future research should focus on these areas.

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DATA AVAILABILITY STATEMENT

Data are available for researching institutions.

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APPENDIX 1

EXTERNAL SOURCES OF EVIDENCE

Decreto-lei 129/2005. (2005) Altera o Decreto-Lei n.° 118/92, que estabelece o regime de comparticipação do Estado no preço dos medicamentos.
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