

Project management office in the healthcare sector: A literature review

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ABSTRACT

This article aims to present a review of the literature on the importance of project management in the healthcare sector, especially in philanthropic hospitals, highlighting the transition of hospitals from entities focused exclusively on healthcare to comprehensive organizations, which also seek excellence in healthcare. administrative management, aiming at the growing need for effective management practices to ensure the quality and sustainability of hospital services. describes the different types of project management offices - EGPs and highlights their importance in standardizing methodologies, reducing risks and establishing clear metrics. Firstly, the historical context of the evolution of hospitals is presented, highlighting the growing importance of project management in this environment, as well as the need for improvements in administrative and financial management, especially in philanthropic hospitals, where financial sustainability is a constant challenge. Next, the implementation of Project Management Offices (EGPs) is discussed as an effective practice to improve the efficiency and effectiveness of hospital operations, presenting the different types of EGPs and highlighting their importance in standardizing methodologies, reducing risks and establishing clear metrics. Finally, challenges faced during the implementation of EGPs are discussed, such as resistance to change and lack of understanding of project management techniques on the part of healthcare professionals.

Keywords: Project management office, Philanthropic hospitals, Project management in the health sector, Hospital projects.

INTRODUCTION

Historically, it is observed in hospitals, especially in private and non-profit organizations, the centralization of the focus of attention and investments in activities related to health care, specifically patient care, with little concern for the implementation of methodologies and best practices in the scope of administrative management (SALEEM *et al.*, 2020). The global economic crisis that occurred in the 1980s changed the hospital scenario even further (AUBRY *et al.*, 2014). Currently, they are perceived as departmental companies that are integrated through management processes, where hospital administration is responsible not only for patient care, but also for administrative, technical, scientific, innovative and economic services in search of constant improvements in its processes (CHRISTENSEN; GROSSMAN; HWANG, 2009).

Coordinating a hospital is an extremely complex activity, which demands attention to work processes, the maintenance of participatory management and effective communication between interested

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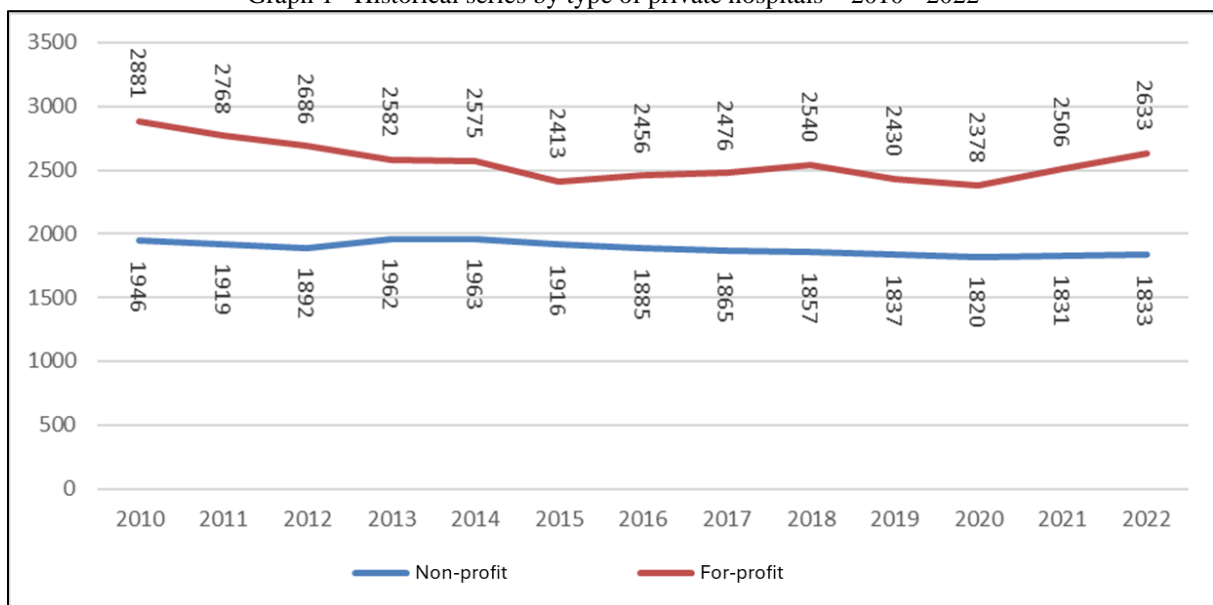
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parties, in addition to financial sustainability for contributions to technology and innovation in health. It is estimated that 30% of all investment in hospitals is consumed by waste, rework, inefficiency and excessively complex processes (BURMESTER, 2013). One of the effective practices to support hospital management is project management.

For a hospital to be considered philanthropic and receive exemptions from social security contributions, it must be private and non-profit, in addition to complying with the provisions established in Law 12,101 of 2009. Among the obligations set out in the Law is the provision of, at least 60% of services to the SUS. **THE Erro! Fonte de referência não encontrada..** presents the historical evolution by type of private hospitals, for-profit and non-profit, in Brazil (CNES, 2023), where it is clear that the number of hospitals has changed little in the last 20 years.

Graph 1– Historical series by type of private hospitals – 2010 - 2022



Source: Adapted by the author of | data: national registry of health establishments (2023).

Philanthropic hospitals in Brazil hold a large part of the beds made available by the Unified Health System (SUS). The vast majority dedicate well over 60% of their entire installed capacity to service this type of agreement. The SUS transfer to hospitals to pay for consultations or procedures is lower than the amount spent on operating these services, thus generating a collapse in their financial systems. According to the Federal Council of Medicine (2023), the amounts paid to institutions cover an average of 53% of the costs, that is, for every R\$100.00 reais spent on a procedure, the SUS transfers only R\$53.00 reais. The lack of investment in the health sector by municipalities is also an important factor that contributes to weakening the financial viability of these hospital organizations.



Institutions, in turn, use various initiatives to raise resources, including tax incentive projects through which it is possible to allocate part of the income tax due or withheld, parliamentary amendments coming from government spheres, solidarity events, campaigns and various donations (ARAÚJO, 2020).

In this way, the development of good projects and even the readjustment of projects from previous administrations are essential for increasing revenue. To achieve this, it is necessary to have a project management team prepared and knowledgeable in the platforms used for writing projects. According to Souza (2009), it is necessary to create specific sectors dedicated to public planning, with well-established objectives, medium and long-term planning and full awareness of the actions necessary to achieve these objectives. Faced with this problem, hospitals are beginning to implement methodologies and tools in search of efficiency and effectiveness, with a focus on increasing value generation (HREBINIAK, 2006; KERZNER, 2018; PMI, 2017).

Project management plays a key role in addressing emerging issues in the healthcare sector. Project management methods and techniques can be used to plan, execute and manage projects aimed at improving the provision of care, reducing costs and enhancing good treatment results (SCHOPER *et al.*, 2018), making it possible to meet the interests of discharge administration achieving organizational goals (ADLER and KNOW, 2013; MAMÉDIO *et al.*, 2020). For Aziz (2006), EGPs in healthcare organizations must have common project management methodologies, clear metrics and measurement systems, as well as tools for generating reports.

In this context, the implementation of a Project Management Office (EGP) contributes to various aspects of management, such as the standardization of operations and better control of internal projects. It assists in decision making based on strategic planning, in the provision of information in an agile and centralized manner, in the uniformity of executions, in addition to enabling the dissemination of best management practices between projects, improving, in a systematic way, the planning of activities in institutions (MAMÉDIO *et al.*, 2020).

Vargas (2018b) defines an EGP as an organizational area responsible for conducting, planning, organizing and controlling the activities of a project in the best possible way so that all assumptions are met. This structure comprises people with full command of project management and their areas of knowledge, capable of guaranteeing the necessary support to those responsible and project teams (ROCHA, 2019).

However, the relevance of project management in hospitals has not yet been fully demonstrated in the scientific literature. Few studies address the strategic management of hospital projects. Most focus on operational management issues, such as human resources and cost reduction (SRIVANNABOON, SOUTHALL, 2011; BITENCOURT, 2020).



From the context of the importance of project management practices, as well as the applications of an EGP in the hospital environment, this article seeks, through a review of national and international literature, cases of EGP applications that can provide details of the results and challenges encountered during and after its implementation.

METHODOLOGY

To carry out this article, a systematic review of the literature was used.

To answer the guiding question “How can project management office concepts be applied in the health sector?” The following databases were accessed: Capes, Scopus, Google Scholar, Science direct and SciELO. For the search, the following keywords were used combined, project management in the health sector and implementation of a project management office. The research was limited to the period from 2019 to 2023 and was restricted to academic articles published in Portuguese and English. For the construction of the research, only articles were accepted, whose object of study was aligned with the interest of the review. For exclusion, the criteria used were to exclude duplicate articles and articles that, although on the topic, dealt with situations that are not aligned with the guiding question.

The compiled article base totaled 438 documents. The books, theses and dissertations were then removed, resulting in 325. The phase of excluding duplicate articles and articles that were not aligned with the protocol began, reaching 232 documents. In the next phase, titles and abstracts were read to check whether there was agreement with the review theme, resulting in 121 articles. In the penultimate phase, articles that were only partially available were excluded, resulting in 83 documents. In the last phase, the introduction of articles was evaluated, excluding those that did not focus on the topic of office management in the health area, reaching 48 articles, which served as the basis for carrying out the present analysis.

RESULTS AND DISCUSSIONS

The first analysis carried out was on the steps that make up the different models for implementing an EGP. It was observed that these models vary their steps and levels of detail, but many steps remain common.

TABLE **Erro! Fonte de referência não encontrada.** presents the implementation stages of the studied models.

Table 1egp implementation models.

Models	Place of use	Number of steps	Phases
Block and Frame (1998)	General applications	10	<ul style="list-style-type: none"> • PMO diagnosis and possibilities; • Identify sponsor; • Determine PMO Roles • Define roles and responsibilities; • Prepare communications plan; • Prepare project plan; • Obtain financial/HR resources; • Create/adjust methodology, processes, software; • Carry out pilot projects and adjustments; • Roll out according to plan.
Cleland (2002)	General applications	7	<ul style="list-style-type: none"> • Define services; • Define competencies; • Define and announce the start of the EGP; • Work on the needs of GPs; • Develop PMO services • Refine skills • Deliver better products
R. Pinto (2012)	General applications	8	<ul style="list-style-type: none"> • Project management; • Physical implementation; • Diagnosis; • Implementation of services; • Pilot project; • Analysis of results and adjustments to methodology and software; • Training; It is • Closing
Carvalho and Piscopo (2013)	University / Federal of Juiz de Fora (UFJF)	6	<ul style="list-style-type: none"> • Decision; • Pre -structuring; • Structuring; • Planning; • Execution; It is • Management
Medeiros <i>et al.</i> (2018)	Federal educational institution	5	<ul style="list-style-type: none"> • Decision on the creation of the Project Management Office • Creation and formalization of assignments • Structuring the strategic EGP • Definition of management techniques and methods • Consolidation, improvement and dissemination of good practices
PMO Value Ring (2017)	General applications	8	<ul style="list-style-type: none"> • Define the functions of the PMO; • Balance the mix of PMO functions; • Define PMO processes; • Define PMO KPIs; • Define the headcount and competencies of the PMO; • Identify the maturity of the PMO and plan its evolution; • Calculate PMO ROI; It is • Monitor the strategic performance of the PMO.

Vargas (2018)	General applications	8	<ul style="list-style-type: none"> • Choose PMO type • Get support from Sponsor • Create infrastructure • Motivate and indoctrinate those involved • Implement framework • Establish pilot project • Go into operation • Feedback and continuous improvement
Junqueira et. al. (2020)	General applications	5	<ul style="list-style-type: none"> • Define the objective and type of strategy for the office; • Prepare a plan for its execution; • Establish priorities and schedule; • Offer support and contribute to stakeholders; • Support the support of the project in its construction.
Almeida et al. (2021)	Santa Catarina government bodies	6	<ul style="list-style-type: none"> • Establish the functions of the PMO; • Obtain financial/HR resources; • Structuring; • Define roles and responsibilities; • Training; • Roll out according to plan.

Source: The author (2023).

Analyzing the models presented, it appears that despite the variation in the number of proposed steps, there is a common line of reasoning for the implementation of EGPs . Therefore, determining functions, obtaining financial resources, defining work methodology, team training, carrying out the pilot project and applying good practices are basic activities in almost all verified models, regardless of their area of application.

Next, relevant aspects present in the literature on the challenges and good practices of project management in the health area were listed, **Erro! Fonte de referência não encontrada.**

Table 2– Challenges and good practices in implementing EGPs

Authors	Year	Theme	Objectives of the work	Main findings or highlights
Phan, Jacqueline	2015	Using the project management office to connect the dots between projects and strategy	Provide an overview of healthcare EGPs and the mechanism for strategic change in an organization.	The author asserts that evolution of healthcare PMOs to provide a tracking and reporting function offering strategic and enabling function will not occur quickly and needs to address the PMO pitfalls that plague many organizations. The next decade will show whether healthcare PMOs can carve out a place for themselves in the executive strategy layer of decision-making.



Lavoie-Tremblay, M., Aubry, M., Cyr, G., Richer, M.C., Fortin-Verreault, J.F., Fortin, C., & Marchionni, C.	2017	Innovation in health service management: Adoption of project management offices to support major health care transformation	Explore the characteristics that influence the acceptance of Project Management Offices and their adoption in the healthcare sector.	Nurses as leaders of EGPs in the context of organizational transformation have the potential to raise awareness of the characteristics that promote their initial adoption and acceptance.
Lavoie-Tremblay, M., Aubry, M., Richer, M.C., & Guylaine, CYR	2018	The Health Care Project Management Office's Strategies for Continuous Change and Continuous Improvement	Expand understanding of continuous improvement mechanisms used by EGPs and describe EGP strategies for change and continuous improvement in the context of major transformation in healthcare.	The EGP is fundamentally based on four strategies designed to promote the sustainability of projects, namely: (1). Develop a support model and provide rigorous project guidance. (two). Develop and provide rigid and lasting tools and methods that lead to continuity. (3). Provide or offer training, teaching (knowledge transfer), particularly in project management. (4). Introduce and use communication and collaboration methods.
Schultz, C., Graw, J., Salomo, S., & Kock, A.	2019	How Project Management and Top Management Involvement Affect the Innovativeness of Professional Service Organizations—An Empirical Study on Hospitals.	Investigate how the involvement of senior management and the professionalization of project management affect the company's innovation capacity.	Hospitals have a greater capacity to implement innovations and expand the range of medical services when they have a high level of professionalism in project management.
L. Giasson et al.	2019	Findings on Health Administration Reported by L. Giasson et al (The Best of Both Models: Key Components of a Successful Hybrid Project Management Office Model in a Health Care Organization)	Describe the hybrid EGP model with a particular focus on network creation.	Project management is considered an important skill for improving organizational efficiency. Its practice is evolving in healthcare organizations.
Saleem F, Murtaza I, Hyder S, Malik MI	2020	Public Health and Project Management: Do Projects Deliver?	Investigate the effectiveness of applying project management in different phases of the project of a national maternal health program.	Project managers experience various problems from the project initiation phase to its closure. One aspect raised in the research was the inability of project managers to understand project management techniques. The reason for this is the lack of experience on the topic, which reduced their ability to add to the project.

Alves, ALF, de Cassia Silva, S., & Nunes, MAP	2022	practices in hospitals: integrative literature review	Survey of publications in the world scientific literature on Project Management (PM) practices and implementation of Project Management Offices (EGP) in hospitals.	The article highlights, based on an integrative review, the importance of EGP as a support nucleus for project management and the consolidation of management and project governance in hospitals, in order to decentralize decision-making. It highlights the importance of the EGP functions for the professionalization of project administration in the hospital context, as it enables practices and tools that help to overcome challenges such as: outdated infrastructure; scattered information; poor organization; lack of authority in project management; communication failure; planning failure; failure of control monitoring and lack of information from past projects.
Gorla F, Borojevic A, Gibertoni C, et al.	2023	The Hospital of Tomorrow Case Study: Multidisciplinarity , Inclusiveness and Holistic Approaches to Foster Innovation in Complex Organizations	Describe and analyze an action research initiative carried out by management, staff and the World Health Organization (WHO) at IRCCS Azienda Ospedaliero-Universitaria di Bologna, Policlinico di Sant'Orsola , Italy.	Aligning a project's objectives with the institutional strategy is essential for achieving the project's goals. The establishment of goals must incorporate aspects of integration with the hospital environment and parallel elements of innovation. Goals need to be SMART: specific, measurable, achievable, relevant, time-based, while also needing to be shared and supported by all levels of the organization.
Dimitrios Kaboukos	2023	Innovative anthropocentric methodologies for project & infrastructure management in the Healthcare sector”	Explore the importance and contribution of project management methodologies in the Health sector and their “human-centeredness” in terms of growth and contribution to society.	Project management plays a crucial role in addressing emerging issues in the healthcare sector. Project management methodologies and techniques can be used to plan, execute and control projects that aim to improve healthcare delivery, reduce costs and improve treatment outcomes.

Source: The author (2023).

Regarding the implementation of EGPs, Schultz (2019) states that hospitals will be able to implement innovations and expand the scope of their portfolio of medical services, but it is necessary to invest large financial amounts in professionals qualified in project management. Saleem (2020) reports that the project manager's lack of experience contributes to the creation of numerous challenges from the project initiation phase to its closure.



As a business certainty, Lavoie (2018), Giasson (2019) and Dimitrios (2023) highlight that project management is crucial to help solve common hospital problems. The planning, execution and control stages will help improve operational efficiency in addition to reducing costs and improving results.

An aspect raised by Saleem (2020), Aubry *et al.* (2014) and Freire *et al.* (2016) is the inability of doctors and nurses to understand project management techniques. Likewise, project managers must understand the languages of clinical care. If there is no integration between the parties, the risk of low performance in projects is very high.

FINAL CONSIDERATIONS

After analyzing the literature review carried out on the 48 selected articles, it is clear that project management in hospitals and healthcare areas becomes a priority need as organizations face increasingly complex and dynamic challenges. The implementation of an EGP appears as a strategic response to deal with these growing demands for excellence in initiative management. It is worth mentioning that during the research to write this article, a specific project management implementation model for hospitals or the health sector was not identified, however all the models presented can be used to implement an EGP as it does not matter of the segment to be applied, the models follow a common line of reasoning.

Over the years, the role of EGPs has evolved significantly, moving from mere administrative facilitators to essential strategic agents in achieving organizational objectives. The literature presented highlights their importance as centers of excellence in project management, capable of providing support, guidance and coordination for a variety of initiatives within healthcare organizations. Its role goes beyond simple project planning and execution, also encompassing the standardization of methodologies, risk reduction, the establishment of clear metrics and the development of project management skills.

However, during the implementation of an EGP there can be several challenges. It is essential to overcome barriers such as resistance to change, lack of understanding of project management techniques by healthcare professionals and the need to invest in qualified professionals. Furthermore, integration between clinical and management teams is crucial to the success of projects, as a lack of alignment between these groups can result in execution failures and low performance.

EGP implementation models highlights the importance of a systematic and progressive approach, which involves steps such as diagnosis, defining roles and responsibilities, preparing detailed plans and carrying out pilot projects. This approach allows for gradual adaptation to the organizational culture and specific needs of each healthcare institution.

Finally, the analysis of related studies also reveals a growing interest in the adoption of EGPs as a strategic tool to drive innovation, improve operational efficiency and promote financial sustainability in



the healthcare sector. However, an ongoing commitment to developing project management skills and a culture of collaboration and organizational learning is necessary to ensure long-term success.



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