Innovations in Health Administration Strategies for Effective Healthcare Management and Patient Care

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1. Overview

A critical aspect of healthcare quality is the patient experience, although healthcare administrators face difficulties in improving it within a swiftly changing landscape (Lunn et al., 2021). The 2010 Patient Protection and Affordable Care Act (ACA) significantly altered healthcare reimbursements by connecting hospital payments to patient satisfaction measures^[1]. Additionally, the CMS implemented hospital value-based purchasing (VBP) programs to reward providers based on care quality and patient outcomes^[2]. This change signifies a shift from primarily focusing on clinical results to incorporating patient experience as a crucial performance indicator^[3]. Globally, patient experience is now considered a key measure of quality care^[4]. Current studies indicate that 95% of U.S. survey participants view patient experience as extremely or very important^[5].

Examining the methods healthcare administrators use to enhance patient experience can yield valuable knowledge and establish effective practices applicable to comparable environments. While improving patient experience presents difficulties, it directly affects hospital performance. Although initially increasing costs, efforts to enhance patient experience also create potential for revenue expansion^[6]. This change underscores the importance of patient experience and satisfaction as crucial indicators of healthcare quality^[7].

Appreciative Inquiry (AI) is grounded in fundamental principles that are crucial to its approach in developing organizations. These principles are utilized by AI experts to recognize and enhance the strengths, assets, and abilities of both individuals and organizations^[8]. Researchers have identified five essential principles derived from social constructionism theory: (a) the constructionist principle, (b) the principle of simultaneity, (c) the poetic principle, (d) the anticipatory principle, and (e) the positive principle^{[9][10]}. Collectively, these principles establish the theoretical basis for comprehending how AI operates and is implemented. The constructionist principle posits that reality is a product of social construction through language and discourse, with knowledge and meaning emerging from social interactions^{[11][12]}. This principle highlights the significance of conversation in molding organizational realities and stresses the transformative power of shared positivity.

The foundation of AI rests on four fundamental principles: (a) simultaneity, (b) poetic, (c) anticipatory, and (d) positive, which shape its implementation and practice^{[12][13]}. Regarding describe simultaneity as the simultaneous occurrence of inquiry and change, highlighting inquiry's crucial role in the transformation process. The poetic principle suggests that organizations, akin to poems, are open to various interpretations and can be continuously reshaped through their members' narratives and dialogues^[14].

Another explanation the anticipatory principle, which links collective, affirmative imagery to a deliberate process of molding reality. The positive principle underpins AI, emphasizing: (a) tackling organizational change with an optimistic mindset, (b) avoiding deficit-focused change models, (c) focusing inquiry on organizational strengths and expanding upon them, and (d) understanding that positive inquiries and discussions promote constructive change^[15]. Transitioning from theory to application, the AI methodology employs the 4-D cycle, which incorporates these principles into a practical framework^{[16][17]}.

^{3,4}Health Administration

Appreciative Inquiry (AI) Theory in Healthcare

The implementation of Appreciative Inquiry (AI) theory in healthcare environments stems from a criticism of approaches that focus on deficits and problems. AI has demonstrated its capacity to revolutionize leadership and service provision^[18]. During challenging times, such as the recent pandemic, the AI framework has shown its effectiveness in addressing crises while simultaneously enhancing resilience and stimulating growth at both individual and systemic levels^[19]. The collaborative nature of AI in healthcare is gaining recognition for its ability to encourage innovation and facilitate knowledge exchange, both of which are essential for improving organizational performance^[20].

conducted semi-structured interviews by applying the phases of the AI 4-D cycle as a structured method. Several study suggest that , the AI 4-D cycle made it possible to thoroughly examine effective tactics: (a) Discovery: using positive inquiry to extract effective practices; (b) Dream: imagining future possibilities based on extraordinary experiences; (c) Design: turning these possibilities into workable plans; and (d) Destiny: attempting to maintain the influence of these plans. In line with the objective of this study, which is to investigate practical tactics that boost hospital performance and patient experience, this technique gave healthcare professionals a methodical framework for evaluating and improving patient-centered care (PCC).

However, government regulations, sector competition, and the widening gap between healthcare costs and customer income, or claim rates, make managing healthcare businesses difficult, even with substantial financial revenues and room to grow in terms of customer numbers. The ongoing rise in claim rates in the healthcare industry suggests that businesses are becoming less profitable as a result of the costs incurred in providing the services. When examined in the context of the Brazilian economy, this reality motivates businesses in the industry to create innovative cultures and effective management models. In order to make these businesses more competitive and resilient, this innovation involves modifications to the integrated healthcare action system, activities, institutions, and modern technology that combine to create a new way of doing things. Similar to this, The importance of efficient management in all institution activities is stressed by the ANS, not simply those that are thought to be directly related to healthcare^[21]

Giving its clients, referred to as beneficiaries, access to medical professionals and services is the main activity of a healthcare organization. The relationship between the healthcare organization and its beneficiaries depends on the efficiency, quality, and control of these processes ^[22]. Beneficiaries' opinions of quality and satisfaction may be impacted by this relationship, and in severe circumstances, they may turn to the government or the legal system for support, which could subject the healthcare organization to administrative actions ^[23].

Product innovation and the use of technology in service processes are closely related, requiring adjustments to service workflows in order to fulfill demand, meet productivity goals, track efficiency indicators, and supply useful data to managers and regulatory health authorities.

Research shows that higher quality and productivity in service businesses are positively correlated^[24]. Therefore, in order to solve the issues presented by the global trend of rising healthcare expenditures for beneficiaries, it is imperative to develop a computerized system for controlling procedures ^[25]. Regard, the research's objective is to examine how an innovative approach to satisfying beneficiaries' needs in a healthcare organization is the use of information technology systems. Another study suggests that, this entails enhancing control and efficiency, creating a structure for keeping competence, and proactively looking for methods to support a business service that relies heavily on knowledge^[26].

Studies in the literature that concentrate on developing operational strategies are few and few between. However, as the dynamic ability to innovate is essential for the survival and success of firms today, the ability to monitor and adjust to changes should be ingrained in all company activities. Thus, this research endeavors to support the application of innovation in strategic formulation procedures concerning a healthcare organization's communication channels^[27].

The paucity of research on healthcare organizations in Brazil, where services that require a lot of understanding are common, as well as the paucity of research on the tools utilized to regulate methods of communication and the standard of services provided, further motivates this effort. We also highlight the regulations that mandate information disclosure to consumers and the ANS, as well as data gathering for statistical monitoring.

2. Literature review

2.1 Additional health care's difficulties in knowledge-intensive commercial services Knowledge-intensive services

That use expertise in biochemistry, physiology, pharmaceuticals, surgery, psychology, and epidemiology to enhance physical and mental health are what the Statistical Classification of Economic Activities in the European Community (NACE) refers to as the health-care sector. Many countries as United States, and Canada are among the countries that have initiated information and communication technology investment programs to try to construct the necessary buildings to incorporate services from patient unit records and other multiple health service providers^[28].

The healthcare industry's usage of information technology has made patient records and data generated during treatments accessible, ensuring the patient receives the necessary therapy for their safety. Therefore, this industry is fostering quality, safety, and management, increasing automation and technology, and incorporating cutting-edge elements into healthcare services to boost organizational competitiveness and productivity^[29].

The data about patients, clients, suppliers, communities, and other professionals will be helpful in creating protocols and encouraging innovation in care interventions in the event of illness or even when assessing new treatments, drugs, as well as healthcare supplies. Additionally, established concepts in facilities, particularly in the field of medical treatment, involve supplier-customer interactions, personal ties, and knowledge expansion as a way of service credibility^[30].

Information technology, which is essential to improving patient care and operational efficiency, can be used to explain management in the healthcare industry. Health information technology (HIT), telemedicine, and management information systems have all been integrated to change healthcare management and make it more patient-centered and efficient.the function of computer systems is as follows: The use of e and E-Hospital Services: These programs make it simpler to obtain healthcare services, increasing production and efficiency in businesses [31], and By offering remote services, telemedicine is a new field that improves healthcare delivery and may result in improved outcomes for patients and operational efficiency [32].Operational Improvements Have an Impact on Quality and Efficiency: HIT improves workflows, lowers mistakes, and streamlines administrative procedures, which improves patient safety and care quality [33]. Data management: With tools for sharing and visualizing health data, efficient gathering and analyzing information are essential for well-informed decision-making [34].Although there are many advantages to incorporating IT into healthcare administration, these benefits must be fully realized despite obstacles such as costly costs of implementation and change aversion.

Through the deployment of technology that supports health-related innovation, which is used in various markets, these measures enable the proactive delivery of services. Other players were able to take part in the organizational innovation scenario of the Brazilian health care sector through government backing for outside expenditure on the hospitality sector. This included technological advancements (IT), methodologies for innovation, and dependent on knowledge services that are privileged by a worldwide system Healthcare systems revolved around synergy, and health care improvement^[35].

Information technology (IT) is the set of professional, technological, and computational resources used to produce electronic information. The characteristics of KIBS in the healthcare sector are highlighted by the fact that it may be applied to services or processes and used systemically or as a single solution. Information technology permeates all organizational value chains, facilitates the operation and development of businesses' products, and allows for the collection and exchange of knowledge about unforeseen changes in the corporate environment. It has been observed that until the company culture is changed, the implementation of an IT system—such as a computerized management system—does not promote information sharing^[36].

According to the knowledge and learning economy, It ought to be easier to get trustworthy data and insights. and support organizational changes if processes are more automated. Since non-care services do not require specific professional knowledge to provide services, studies presume that they are not knowledge-intensive. They shouldn't be classified as intense knowledge services because of this.On the other hand, research on customer contact—including KIBS—is seen as specialized knowledge innovation, marketing innovation, and process innovation. These forms In addition to the systemic feedback of innovation processes, of innovation aids the enterprise in establishing key partnerships with others goals and stakeholders of the health care sector^[37].

2.1.1 handling of digital documents.

A mechanism to deal with records assists an organization in meeting its operational and strategic goals by preserving historical data, protecting intellectual property, and defending legal and strategic important.can determine provide an explanation of the issues, offer pertinent data and answers, and perhaps set up and oversee the infrastructure required to deliver these remedies. When supplier and person receiving assistance collaborate and encourage the client to take part The outcome of the method for solving issues will be superior service. Relationships are usually highly involved^[38].

EDM uses a set of technological components, including hardware and software, to manage a document's whole life cycle, as seen in Characteristics of EDM. Characteristics of EDM: creation, processing, and assessment; Research optimization (location and traceability); organization; sharing; archiving; dissemination and sharing (spreading); and approval.

2.1.2 system for managing workflow is the source.

A computerized workflow management system manages a series of operations that must be performed in a certain, predetermined order in order to produce, design, execute, interpret, coordinate, and monitor a business's workflows and achieve the desired outcome. An employee or group of employees is given a

particular duty in an automated workflow management system. The processes system notifies the member (or team) in charge of beginning another assignment when a task is finished, and so on, once this procedure is finished. The operation necessitates meticulous preparation and daily procedure analysis^[39].

Workflow features mechanism guarantees that the tasks are automated in a specific order and that all agents or users involved in the process are notified when the next task is due. Consequently, the task is fully automated in terms of coordination.

The Workflow Management Coalition (WfMC), as illustrated in Workflow characteristics, asserts that workflow management systems must also include a number of features targeted at project management and monitoring, whether through the use of historical reports or real-time indicators^[40].

Workflow features include process design, whose objectives are directed by a mathematical model or workflow; process means, leadership, and performance based on a series of operations; All agents or users participating in the process will be informed when an action is required, and a pre-established workflow will direct its execution. Several workflows will be executed, coordinated, and monitored. Among the sources are Information regarding each activity's execution and the process' efficacy should be provided by the indicators^[41].

2.1.3 Brazil's additional health care

The legal framework for Brazil's private health care sector, also known as supplemental health care, is establish the National Administrative Authority for Secret Healthcare, or ANS, and regulate private health insurance providers in the nation.

With the purpose of regulating the supplemental health-care sector and advancing the preservation of public interest, the ANS is a municipal body connected to the Ministry of Health by a special agreement. The industry's economic stability, service quality, and continuous efforts by businesses in this market to improve health and service accessibility are among its other goals^[42].

The ANS exerts its regulatory jurisdiction through the development and dissemination of regulatory resolutions, in Portuguese. These resolutions must consider the needs and interests of participants in the field of auxiliary health services in addition to adhering to the agency's legal frameworks. In order to enable the participation of the sector's businesses and society in the creation of Before creating new obligatory decisions, the ANS consults with the general population^[43].

Active conflict mediation is a concept and dispute resolution technique that seeks to enhance communication and unite government agencies, vendors of services, beneficiaries, health care firms, and other participants in the demand for additional health care, according to the American Nurses Association. This kind of mediation aims to give health insurance beneficiaries the care they require, monitor health care providers continuously, and influence their behavior to ensure that their actions do not compromise the interests of their beneficiaries, either individually or collectively^[44].

To assist in the intermediation and mediation of disputes between beneficiaries and healthcare institutions, the ANS developed a process known as Preliminary Intermediation Notification. An NIP begins when a health care plan beneficiary files a formal complaint with the ANS, which subsequently notifies the insurance company. After assessing the circumstances, the medical facility must determine whether to approve the request or provide evidence that it is not valid. Penalty payments and legal actions against the healthcare provider are possible outcomes of an NIP process^[45].

Therefore, even if a healthcare organization's main objective is to provide health care to its consumers by providing access to services and medical specialists, the ANS requirements require the company to undertake elements connected with control, productivity, and quality. The main way that a health care provider and its clients build a relationship is through health care procedures; if they are not followed, the company's reputation for offering high-quality services may suffer, and complaints and additional NIP notifications may arise^[46].

A health care organization's contact center should be equipped to respond to inquiries and provide broad further health information. These were established by the ANS through regulation. In addition to requiring prompt responses to inquiries about the deal, reach, periodic adjustments to prices, and other matters that not require contract access, this resolution sets many principles for the services rendered to health care recipients. A health care institution's contact center team must have a connection to a system that can provide information on the consumers, the query or say, how to resolve it, and documents related to the claim within the time constraints set by the ANS. This is true regardless of the way the recipient sends their requests in^[47].

One important indicator for contact centers is average handle time (AHT). It is computed as the ratio of the overall time spent on calls for a particular operation to the total number of calls or requests made during a specific time period. Not every request can be answered by the initial response team. Support teams, sometimes referred to as back-office teams, for example, deal with requests and demands for more comprehensive or differential care, as well as the issuance of service authorizations, procedure authorizations, and elective hospital admissions. Both the contact center's first-level inquiries and those received and processed by the back-office staff must be completed within the ANS-recommended response times.

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The back office, which is responsible for issuing the service authorization, also makes use of the average handling time (AHT) concept. This represents the proportion of requests received over the period to the time needed to review and make available the requested document. As with the contact center, if the AHT is shorter, an operator or attendant can release more pre-authorizations in a given period of time^[48].

Since it is now clear that patient data generated during telephone assistance processes must be included in a patient record, made available to those who need it, and subject to the appropriate pre-authorization of medical procedures when accessed, the use of information technology, as described in Normative Resolution, has received a lot of attention lately.

For health care organizations to keep track of medical records and access them with beneficiaries, as well as for any requests or claims, an electronic system is required. A computerized system is one that can collect, process, store, analyze, and disseminate data for a particular purpose. Additionally, it may convey and retain essential data for decision-making^[49].

Instead of successfully satisfying customers' needs (40%) contact center employees at healthcare companies were found to spend 60% of their time on non-customer service-related tasks. These responsibilities include post-attendance (19%), administration (18%), and leisure time (23%). These figures show that a significant amount of contact center workers' time in the healthcare sector is spent on administrative tasks. Ineffective processes and unclear information are common causes of poor customer service performance^[50].

It should be noted that automation and innovation in the labor market have been stimulated by the growing expense of manual labor. This is the rationale behind the drive to implement new management strategies, particularly the setting of service objectives and enhanced cost control via service innovation^[51].

2.2 Approach

Since the study employs the action research strategy—an autonomous, social research with an empirical basis—to address problems faced by supplemental health-care companies, it is categorized as applied research. The introduction of an alternative technology that improves the quality and efficacy of supplemental health care operations was designed and executed with the assistance of the researcher^[52].

2.2.1 Phase of exploration.

The study's first phase identified the problem and looked at the situation, including the state of the health care sector, the legislation, and any actions that had been taken.

2.2.2 thorough research stage.

The theoretical examination carried out here comprised the laws controlling the industry, the regulations governing contact centers and the resources that enable them to comply with guidance and regulations, and the operational requirements for reducing beneficiary complaints. The management believe that a reduction in average handle time (AHT) is one feature of operation that is ideal. During the extensive research phase, we looked for a technological solution that would meet the needs and facilitate the evaluation of the results^[53].

A functional requirements mapping that contrasted the concepts and characteristics of IT systems that infiltrated the document management and workflow domains was finished in order to meet the demands of healthcare organizations. Beneficiary claim receipt, processing, approval, and communication are handled by a workflow management (WFM) tool, while document retrieval and preservation are handled by solution^[54].

Based on the ANS regulations and the needs of the healthcare sector, a board of functional requirements was established. In this work, these requirements were designated as "Primary Evaluation Elements". For every important evaluation factor, the necessary procedures and activities were arranged. These are referred to in this work as "concepts." For every highlighted notion, the definitions, characteristics, and features of the EDM and WFM systems were compared. defines functionality as an automated system's ability to provide resources that meet the user's needs in a particular scenario. The degree to which a system's features meet the needs of its users is known as its suitability^[55].

According to the proposed software program evaluation model, which seeks to reduce subjective components while promoting the comprehension of functional needs, the assessment methodology employed here was adjusted. From a creative perspective, paradigm was applied. Here, a checklist involving just one functional characteristic and the relationship between each functionality and an objectively determined quality was analyzed. Each feature is compared to the conceptual definition of the computerized system^[56].

2.2.3 selecting tools for electronic document management and workflow management.

In order to meet business needs, we created an internal "request for information" document that has been sent to suppliers through the company's supply chain. It requests technical and commercial data. Since the company's supply department managed its own supplier and business operations, the details of the system selection and acquisition process were excluded from this study^[57].

Healthcare, a phony trademark, was chosen as the system tool to safeguard the company's privacy. This system offers tools for document managementand workflow management. The Healthcare system fulfills functional requirements and establishes the function of Electronic Document Management by enabling the saving and retrieval of documents related to each request or claim in the form of annexes, in addition to acting as a tool for workflow management. This demonstrates the expectation that a tool with these characteristics may be completely suitable for the operational needs in compliance with the previously mentioned criteria^[58].

The Healthcare system allows contact center requests to be registered both automatically and manually. Email, fax, and online requests and claims are immediately redirected to a queue on the workflow tool and given a system-specific protocol number^{[59][84]}.

2.2.4 first application

To lower risks and make the "Operational Pilot" phase of operational changes easier, a controlled environment was used for the initial phase of implementation. This controlled environment could be used to validate the training plan, the choice of infrastructure components, the Request for Information, and its suitability for the project's scope and business requirements. To evaluate the concept using the HealthCRM software, the implementation team chose to look at the authorization procedure for elective hospital admissions, known as Guia de Internação Hospitalar (GIH) in Portuguese^[60].

Special emphasis was paid to user training. Users who receive proper training are more likely to be satisfied with new technologies than those who do not. This is because users who do not receive proper training may fail because they are unaware of the possibilities of the system. The importance of evaluation is emphasized in the quest for improved productivity and operational excellence. This evaluation was conducted as part of the review and analysis of the pre-authorization procedure for hospital admissions. The tremendous complexity of operating processes is one of the largest barriers to delivering high-quality services, claim. This objective led to the creation of a workflow for the pre-authorization process^[61].

3. Results analysis and discussion

The functional requirements were found to be fully met when the system was placed into service. According to a follow-up review, the system facilitates process regulation in compliance with ANS requirements. Visual information on timeframes, such as notifications and visual indicators of the process duration, were essential for process administration and control in ensuring responses within the ANS-recommended time restrictions. The average service time and the quantity of complaints that recipients included in their claims were also verified^[62].

In order to determine average handle time, pre-authorizations for hospital admissions were examined and issued in the week before to the start of the operational pilot. The average analysis and release time was known as the AHT1 (Average Handle Time without Workflow). The average time needed for analysis after the HealthCRM program has been installed. The latter was referred to as AHT2, or Average Handle Time with Workflow^[63].

The analysis only considered cases that were evaluated and approved by the back office without consulting the evaluation and/or medical auditing. Furthermore, procedures that had to remain "pending" due to the need for supplementary or additional paperwork from health care providers or beneficiaries were excluded^[64].

The handle times obtained before and after the computerized system was implementedentered into a statistical analysis by usingappropriatecomputer program utilizing independent samples and the Student's t-distribution^{[65][85]}.

The average handle time of the operations was 07:28 minutes (7 minutes and 28 seconds), before the computerized system was implemented. The average handle time after implementing AHT with WFM was 05:50 minutes (5 minutes and 50 seconds). It's interesting to notice that using the computerized system with workflow tool reduced the average handle time. The average handle time of the workflow tool is 1:38 minutes (1 minute and 38 seconds) shorter than the previously calculated average time, resulting in a productivity gain of 21.96%.

The deployment and operation of the workflow system involved an assessment of human capital; failure to do so would jeopardize the installation and long-term viability of workflow automation. Following the conclusion of the trial and the realization of operational gains, the decision was made to continue using the technology^{[66][75]}.

4. Conversation

The evaluation phase was carried out in compliance with the action research criteria after the action phase. This evaluation was based on a supervised operation, the operational pilot. Based on the results, any qualitative or quantitative advantages were noted in relation to the objectives of the task^{[67][76]}.

4.1 Qualitative findings

The different creative activities that innovative technologies enable organizations to do are connected to the resources needed to develop and oversee technological improvements in terms of process innovations. In addition to attending to the client's desires, it is essential to respond to their requests within specified time frames in order to deliver a service that meets their needs. The use of innovative approaches to improve processes can help raise the importance of particular service features without necessitating the learning of new skills^{[68][77]}.

The program's adoption also made it possible to create indications that executives could use to keep an eye on things in real time, manage deadlines, control productivity, and swiftly recover documents in accordance with ANS laws^{[69][78]}.

4.2 Quantitative findings

Organizations in the insurance and healthcare industries must aim for operational excellence and service quality despite budgetary constraints. Management, worker efficiency, and quality of methods for getting together health care demands should receive special attention because these products and services represent essential components in the communication between the health care the organization and its clients, even though the primary business of a health care company is to guarantee those who benefit with condition care by means of access to amenities and medical professionals^{[70][79]}.

Productivity is increased by 21.96 percent when the average handle time is lowered by 1:38 minutes (1 minute and 38 seconds) in comparison to the previously calculated average time utilizing the computerized workflow management tool. An increase in team productivity is indicated by this decrease in handle time, and this improves service capacity^{[71][80]}.

5. Conclusions and their practical implications

Better relationship management with the health care company's beneficiaries, service quality monitoring, information generation for users and the ANS, and highlighting the importance of personal connections and trust in supplier-customer relations for health services as well as government regulatory requirements were all made possible by the choice of the HealthCRM workflow^{[72][81]}.

In this post, we were able to show how an automated system enhanced the creativity and effectiveness of customer service provided by a healthcare provider. Taking into account the new services that impacted organizational knowledge and knowledge exchange inside the organization's culture also improved quality and organizational competitiveness^{[73][82]}.

In light of these findings, it is possible to see how a computer-supported health care facility can become a KIBS in supplemental healthcare through competent document administration and actuation. Given the unique character of its regulation, further research may broaden the KIBS innovation nuclei that impact the body of knowledge in the public health sector^{[74][83]}.

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