Evidence-based healthcare management

Gestión sanitaria basada en la evidencia

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Received/Recibido: 12/24/2021 Accepted/Aceptado: 03/19/2022 Published/Publicado: 04/25/2022 DOI: http://doi.org/10.5281/zenodo.6661169

Abstract

Evidence of the effectiveness and efficiency of management decisions being taken in health care of any system or model is of great importance for specialists. The health care system development in the economically developed countries of Europe, North America, Asia, and the South Pacific Ocean shows clear convergent trends. Three priority areas characterize them: strengthening the budgetary and state principle, compulsory health insurance, and additional (voluntary or departmental, corporate) health insurance coverage. These processes are extremely difficult to assess because no country has proven data on the benefits of some principle of health care. The theory of "evidence-based management in health care" presented in the article provides a reliable basis for choosing the most effective health care model and making the most effective management decisions. Management methods are implemented under the mutual influence of many factors and conditions, which are impossible to consider even with modern informatization. Hence, the study aims to analyze and examine evidence-based healthcare management. To that end, the materials of publications on the problems of evidence-based medicine and evidence-based management and the method of content

analysis and comparative assessments, synthesis, and logic of definitions development are utilized. Based on the results, the point at issue is the formation of a new culture of management, one of the functions of which is to acquire and effectively use new knowledge. The ability to obtain and analyze the necessary information and use it in decision-making should become one of the key management competencies.

Keywords: management in healthcare, evidence-based medicine, evidence-based management, concept, healthcare system management

Resumen

La evidencia de la eficacia y eficiencia de las decisiones gerenciales que se toman en el cuidado de la salud de cualquier sistema o modelo es de gran importancia para los especialistas. El desarrollo del sistema de salud en los países económicamente desarrollados de Europa, América del Norte, Asia y el Océano Pacífico Sur muestra claras tendencias convergentes. Se caracterizan por tres áreas prioritarias: fortalecimiento del principio presupuestario y estatal, aseguramiento obligatorio en salud y cobertura complementaria (voluntaria o departamental, corporativa) de aseguramiento en salud. Estos procesos son extremadamente difíciles de evaluar porque ningún país en el mundo tiene datos comprobados sobre los beneficios de algún principio de cuidado de la salud. La teoría de la "gestión en la atención de la salud basada en la evidencia" presentada en el artículo proporciona una base confiable para elegir el modelo de atención de la salud más efectivo y tomar las decisiones de gestión más efectivas. Los métodos de gestión se implementan bajo la influencia mutua de muchos factores y condiciones, que son completamente imposibles de considerar incluso con los medios modernos de informatización. Por lo tanto, el estudio tiene como objetivo analizar y examinar la gestión de la salud basada en la evidencia. Para ello, se utilizan los materiales de las publicaciones sobre los problemas de la medicina basada en la evidencia y la gestión basada en la evidencia y el método de análisis de contenido y evaluaciones comparativas, síntesis y lógica de desarrollo de definiciones. Con base en los resultados, el punto en cuestión es la formación de una nueva cultura de gestión, una de cuyas funciones es adquirir y utilizar efectivamente nuevos conocimientos. La capacidad de obtener y analizar la información necesaria y utilizarla en la toma de decisiones debe convertirse en una de las competencias clave de gestión.

Palabras clave: gestión en salud, medicina basada en evidencia, gestión basada en evidencia, concepto, gestión del sistema de salud.

Introduction

Almost all higher management schools in the world are concerned about the problem of improving the efficiency of management in various sectors of the socio-economic sphere. In the healthcare sector, this problem was identified in the early 90s of the last centuries, and every year of the new century, it becomes more and more acute[1-3].

The effectiveness of management decisions is achieved in different ways: from various management technologies to innovative approaches, which is evidence-based management: management based on evidence, actual data, and research results.

The concept of "evidence-based management" in its complete form was first presented by Pfeffer and Sutton, professors at Stanford University, published in the journal of one of the best business schools, "Harvard Business Review" [4,5]. Acceding to them, Evidence-Based Management is deemed a framework that institutions can utilize to assist them in measuring, managing, and increasing the value they derive from their product delivery. EBM concentrates on enhancing outputs, lowering risks, and optimizing investments. This is generally believed to be the case the revolutionary idea of "evidence-based management" was born; however, along with this, the concept of "evidence-based medicine", like evidence-based management, was born much earlier, in the 90s of the last century[6].

Overall, the current study intends to analyze and inspect Evidence-based healthcare management, its efficiency, and the means of its successful implementation.

Methods

The article uses the materials of publications on the problems of evidence-based medicine and evidence-based management[4-10] and the authors' experience in clinical medicine and healthcare organization. The content analysis and comparative assessments, synthesis, and logic of definitions development are applied.

Pfeffer and Sutton adopted the successful experience of using evidence-based medicine in healthcare management and developed management theory at a whole new level. The concept of "evidence-based management" and "evidence-based medicine" has quite confidently entered medical and management practice since the second half of the 19th century [4,5]. The authors explain how to search for and find reliable, verified information, why evidence-based management can provide better results than any other management concept. Irrefutable facts and circumstances, characteristic of each medical organization, underlie the correct management decisions made by all leaders[9,10].

Evidence-based management is more than just «reading articles, applying standards or management procedures that can be learned and replicated". It is the central vector of management of the company's activities. The main idea is the manager's sensible approach to the available information to ensure efficiency and determine further actions.

We should note that managers truly believe in the power of proven methods and out-of-the-box management patterns, finance, marketing, time, etc. Moreover, the experience of other effective managers is carefully studied and applied by their colleagues and even competitors, striving to repeat their success. But in most cases, in practice, the expected effect remains unattained: the artificial model adopted from the outside fails under new conditions.

The only way to avoid mistakes in management is to carefully study the performance of organizations, especially the reasons for their growth or decline, which is evidence for effective management based on proven correct management decisions. But then the question arises of how, in contrast to evidence-based practical medicine, to obtain evidence of the most effective management decisions, what indicators of the correct choice of a particular decision in health care management should be taken as a key in the management process in health care. This is, according to the authors of the article, the concept of evidence-based management.

It is quite appropriate to cite here the results of research on evidence-based management in health care by McKee et al.[9]. In 'Organizations and Reorganization: Power and Change in Health Care Organizations, the authors present a variety of aspects of health care organization and reorganization, including evidence-based management. Moreover, the central idea is the concept itself and the principle of "evidence". The evidence is primarily facts, research findings on the "organization and reorganization" of health care, analysis of management models, balance sheets, organizational forms, quasi-market, and health care structure. Moving logically towards evidence in an optimal model of care, the authors emphasize the need for reforms in health management based on research evidence. The "evidence" (proof) and "non-evidence" (lack of evidence) is the optimal "potential" of the effectiveness of the organization of medical and health care[8].

The most common definition of evidence-based medicine is based on three postulates: conscious, clear, and impartial use of the best available evidence to make decisions on the care after specific patients[11-15].

Along with this, the concept of evidence-based medicine refers to the clinician's ability to find, critically evaluate and use medical information to make rational clinical decisions. Obviously, according to the article's authors, this definition implies considering and analyzing many factors and assessing the conditions of the management of medical organizations and their internal state (at the micro-level). Health management (at the macro level) takes place in. In this case, a specific management object's management postulates of personnel, finance, and material resources should be considered, subject to a certain time and place.

The systemic nature of healthcare and the "potential of evidence in relation to the evidence of the potential" of a medical organization must be considered[15-19].

In essence, it is about forming a new culture of management, one of which is to acquire and effectively use new knowledge. The ability to obtain and analyze the necessary information and use it in decision-making should become one of the key management competencies.

The ideal manager is hard to find just because he is the acme of perfection and as much a mythical creature as a unicorn[20-22]. Being ideal is simply impossible, but you can polish the edges of your performance and be effective in one or a maximum of two areas[23]. Anyone can be a good leader in a certain situation, but no one can all the time.

Tortorella et al.[24] believe an organization must perform four functions to ensure appropriate management: (P) roducing results the organization exists for and that determine its effectiveness, (A)dministering that ensures productivity, (E)ntrepreneuring, through which change is managed, and (I)ntegrating, that is, the combination of elements of the organization to ensure its viability in the long term. Management is not a group of people occupying a specific place in an organizational hierarchy or a position. It is the process of defining, adjusting, and finally achieving corporate goals. Whoever takes part in this process and whatever his place in the organizational structure, be it a senior executive, administrator, consultant, leader, manager, or worker, is involved in the management process and performs in this sense the function of a manager[25-27]. The leader must have numerous, sometimes mutually exclusive, characteristics to implement them simultaneously. Tortorella et al.[24]

conclude that management is a too complex process for one person to deal with. The perfect manager simply does not exist. What's to be done? To be effective in the short and long term, the company must be led by a management team of people with complementary management styles[28,29].

Along with this, there is a need to assess the evidence of the state of the potential of the object of management in comparison with the potential of evidence-based management. This follows from the strict rule of probability - "it is possible to apply the evidence-based management of medical organizations only if there is evidence of the correspondence of the potential of the medical organization to the planned management decision[30-32].

Based on the most successful justifications by Pfeffer and Sutton[4] of evidence-based management, the authors of the article consider it necessary to focus the search for answers on the question "why is evidence-based management able to provide better results than any other management concept?". It may be logical to differentiate problems, search for their causes, and answer[6,15].

In the comparative aspect of evidence methods, it is appropriate to cite domestic examples of numerous studies that offer recommendations and ways to improve... and "new" models of various health services obtained from "statistically justified "volumes" of observations (confidence coefficient $t \geq 2$, $P<0.05$, etc.)[12,13].

When applied to the assessment of evidence-based management decisions, the macroeconomic level of analysis on the verge of health policy allows differentiating three forms of global health care systems: state-funded, insurance, and commercial medicine. There is no well-defined form of the health care system in any country, and in some countries, one or the other prevails, giving rise to a «mixed» health care system.

However, the evidence does not help to determine a more or less effective system in terms of health indicators, the ratio of doctors to population, beds, or the level of funding. The multifactorial nature of the named parameters that form health and management, the absence of evaluative indices of their relative contribution to health, and the uncertainty of health as a result of evaluating managerial decisions cause great difficulties.

Many authors discuss the often-cited paradigm that "more than half of the achieved level of public health is determined by the factors of lifestyle and behavior of the population", which is not based on unequivocal evidence[16,17].

There is one more definition that provides a more thorough approach to evidence-based medical management: Evidence-based medicine is the strengthening of the clinician's traditional skills in diagnosis, treatment, prevention, and other areas, through the systematic formulation of questions and the use of mathematical estimates of probability and risk[6,8,19]. Evidence-based medicine uses at least two generally accepted criteria for medical competencies applicable in management: knowledge and skills. These criteria relate to evaluating medical information and "making rational clinical decisions. Regarding evidence-based management in healthcare, it is imperative to consider the state of the object of management, namely, a medical institution of any corporate form.

Decision-makers in fast-growing healthcare rely primarily on what had worked before. Evidence-based governance in health care, explains the way health care leaders can move from making reasonable guesses to using the best available information for decision-making[7,11]. Based on the vast experience of the authors, it follows that evidence-based management is one based on practice-proven evidence, which focuses on the analysis of processes, from the rationale for planning the number of beds, the needs, and staffing, to the choice of an effective leader, with effective decision-making[24].

In their second edition of the book, Kovner and D'Aunno[17] deepen these issues of evidence-based management, substantiate the principles and prospects for its development, cite numerous cases from the practice of interviews with experts. An evidence-based approach to management "ensures that healthcare leaders ask the right questions, use the best available evidence, and make the best decisions to complete their mission". Evidence-based governance in health care is essential to improve decision-making, which increases the efficiency of the medical organization, and ultimately affects the health of large groups of the population but can also lead to irreparable consequences.

Hunter recognizes that Evidence-based management is more difficult than evidence-based clinical medicine and explores their similarities and differences. The challenge for evidence-based health management is to "reduce the obstacles to the practice of evidence-based health management[21].

Summary

1. The concept of evidence-based management in healthcare is based on the disclosure of knowledge that is most useful for healthcare organizations and successful cooperation with professionals at various levels of the healthcare system.
2. Partner work helps to clarify the contradictions between the producer and the user of knowledge in the choice of priorities.
3. The main idea of evidence-based management in healthcare is to make high-quality decisions based on a combination of critical thinking and the best available

knowledge and achievements.

4. Evidence-based management in healthcare is based on making decisions through the fair, explicit, and reasonable use of the best available evidence from a variety of sources.

5. The ways of successful implementation of evidence-based management have been determined: the transformation of a practical question or problem in response to a question; systematic search and extraction of evidence; critical assessment of the validity and significance of evidence; weighing and collecting evidence; incorporating evidence into decision-making; evaluation of the results of the decision made to increase the likelihood of a favorable outcome.

Conclusions

Each management theory fills the space of management methods, but their mastering does not go beyond theory and practice, skills and abilities[25].

At the same time, no one has either assessed the effectiveness of each of the management methods with the help of evidence or built ratings of their effectiveness in specific conditions; moreover, the so-called hybrid management has been used. That is why the theory of evidence of effectiveness and benefits in individual management methods and specific management decisions becomes useful.

Evaluation of the evidence of the correctness of management decisions in medical care involves leadership, the delegation of authority, critical assessment of experience, intuition, organizational and structural factors, resources of a medical organization, and external conditions. In this regard, it is necessary to emphasize the role of professional competencies of management personnel, which are acquired during education, training, simulations[26,27].

To teach the RUDN students the techniques of mastering managerial competencies while continuing medical education, we propose situations, cases, electronic modules, algorithms that increase the evidence of managerial decisions of healthcare managers. More than 400 chief physicians and directors of private medical organizations have undergone retraining at the specialized department of the healthcare organization of the Faculty of Continuing Medical Education[12].

Irrefutable facts and circumstances (postulates), typical of the management of a particular organization, underlie the correct management decisions made by the leaders of different systems and forms of health care.

Searching for and finding reliable information in the health care system and its management shows the ability of evidence-based health care management to provide better health outcomes and efficiency.

The definition of evidence-based management decisions implies "considering and analyzing many factors and assessing the conditions the management of medical organizations and their internal state (at the micro-level), and health management (at the macro level) takes place in". In this case, the management postulates of personnel, finance, and material resources of a particular health care organization or system should be considered, subject to a certain time and place.

Regarding the assessment of managerial decisions, the macroeconomic level of analysis allows searching for evidence of the effectiveness of three world health care systems: state-funded, insurance, and commercial medicine. There is no healthcare system in the world with indisputably proven effectiveness, and in some countries, one or another type of healthcare system prevails.

Difficulties in assessing the effectiveness of a health care system or model are inherent in the multifactorial nature of the parameters that form and assess health, as a proven result of managerial decisions, the uncertainty of the very concept of health and disease, because of assessing managerial decisions.

Achieving the effectiveness of management decisions in healthcare ("evidence-based management": management, which is based on evidence, on the use of various methods (technologies) of management (human, financial, material resources), technological effectiveness of continuing medical education, assessment factors of the internal and external environment, in historical retrospective and prospective forecasting[28].

Acknowledgments: none
Conflict of interest: there is none.
Funding: no funding

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