

The Integration of Virtual Development into the Organizational Complexity of Healthcare

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Abstract

The development of the computer system in a hospital environment improves patients' quality of life and allows healthcare management to evolve into the greatest virtual and functional techniques. Considering state-of-the-art devices as an aid in various highly complex surgical procedures, this gives society confidence in the services available, with continuous and rehabilitation treatments being the ones that have a greater number of technological devices helping in their favor. The contextualization aims to analyse that the inclusion of digitalization linked to virtual realities with different aspects and robotics helps to reduce hospitalization time. Methodologically, a bibliographic review was used, recommending the topic with articles that reference clinically successful research, and a Capes database was used in the search for the retrospective review. It is considered that the production describes the quality and reliability of virtual techniques and the scope of health improvement, which thus corroborates the benefits of organizational understanding in economic and care terms.

Keywords: Robotics. Virtual reality. Augmented reality. Health games

Introduction

Management inserted in the context of virtual strategies with operational structuring for healthcare, has the qualification to achieve success in reliable access to diagnosis and treatment. The necessary conduct for the care demand will depend on the tools that the already computerized health system can absorb or generate to build an institutional collaborative profile.

The concept of health policies based on its technological services, whether epidemiological, clinical, technical or administrative, must develop an integrative modular solution that builds the basis that will mediate decision-making within the team.

Health as a whole tends to have a slow population adaptation when it comes to high technologies generated suddenly, as occurred in the case of the pandemic. Regardless of access to data generation, operational demand needs to consciously work on the partial reduction caused by interference in the demand for information. This may corroborate unbalanced levels of health surveillance.

Artificial intelligence generates simultaneous learning between man and machine in public health, considering risks and benefits as a set of standards still in the process of adaptation. The population can be classified as having permanent risks if

there is no marked promotion in the use of interfaced profiles, which can visibly bring quality of care.

In the era of digitalization with complex systems that collaborate with correct conduct and the construction of technical/scientific plans for management. Robotization levels are increasing and professionals need continuous evolution to share the dynamism of robotics, virtual reality, augmented reality and functional games in the healthcare sector. Many of these are used as bases for highly complex clinical research and monitoring treatments with potential highlights for neuromotor treatments.

The agreement of health systems, through qualitative indicators, shows the functionality in the construction of implementation processes, through articulation in training and encouragement in the adaptation of care projects. Adaptation is generated based on population needs so that successful execution is viable and the entire planning process is functional.

The present study shares virtual technology aimed at health treatment, advocating scientific evolution in the process of treatments and clinical interventions. The methodological tool used is based on retrospective exploratory research, guided by keywords and with an active search in the journal

Capes Scientific Electronic Library. The productions analysed maintained the inclusion and exclusion criteria integrated with the coherence and relevance of the theme.

Development

Institutions typically use high-precision invasive techniques to study cutting-edge robotic devices. Cardiology and neurology are the scientific basis of biomedical engineering for developers of silent and revolutionary mechanisms that minimize trypanophobia in patients (fear of procedures that need to be perfused with a needle), examples such as puncture for catheter infusion. (Pasternak, 2015)

The use of virtual tools with developers specialized in health, reinforces planning as a methodological way of including, informing and encouraging patients' recovery, optimizing their quality of care.

Measures with an impact on the health routine require the team to be more cautious in understanding the population. Exposure to possible interventions or serious infectious pathologies can lead to psychosocial concerns and cause discomfort to the entire team as well as to the patients themselves. (Silva et al., 2021).

Computational technology focused on the manipulation of surgical techniques can be operated and integrated into the environment through manipulation that replicates the scenario and structures in realistic, didactic and functional commands. These functional programs reduce the risk of errors in a hospital environment, improving trust between the healthcare team and managers. (Porto et al., 2020).

Clinical studies corroborate the evolution of automated practices integrated into renowned hospitals with modern operational and conduct technologies. It is necessary to know that patient safety is properly prioritized in the process of robotics in healthcare, device testing reduces administration costs by being financed and having great importance in global scientific impacts. The resolution of these points is the evolution of treatments, presenting a lower risk of infection and a reduction in hospital stay. (Pasternak, 2015).

Doctor/patient communication must prioritize quality and safe care, which establishes clear communication and contributes to the correct identification of the treatment. Technology comes to speed up this communication and mediate objective reports of this care.

Professionals with training in technological assistance activities tend to be extremely important in the function of manual computerization and/or techniques that require human interference. The concept of improving care brings collaboration to the management team in making use of the waiting time for critically ill patients. This portrays the positive cost-benefit for the hospital environment. (Pasternak, 2015).

Simulators with advanced technology are allies in training efficient methods and curing patients. Complex procedures demonstrate the efficiency and effectiveness of this security. (porto et al., 2020).

The reality of promising treatments for psychomotor problems, neurodegenerative diseases, disorders and/or genetic mutations using the inclusion of virtual assistance through games, has offered more pleasurable knowledge and enabled faster adaptation, with the understanding and acceptance of children in the universe of hospital socialization. (Araújo et al., 2018).

If we consider the progress of science with the operational need for health, we can significantly project the link in management participation as an important incentive in the adaptation of digital tools that contribute operationally to their health services.

The concern focused on population vulnerability has evolved these perspectives exposed in virtual reality construction processes, coming to remedy impacts resulting from the fragility in the early and chronic diagnosis of certain pathologies. This includes experience with the pandemic, where mental health is subject to collective disorders. (Silva et al., 2021)

Practices that simulate augmented reality can aid functionality in medical care, as well as detailed studies of life-threatening surgeries. The increase in learning with simulators improves the capacity of students in the health area, as the simulator technique captures the interfaces that are equivalent to procedures realistic. (Porto et al., 2020)

The process of educational health inclusion through new technologies is also a daily reflection in the development of simple strategies. The implementation of treatment through health games brings in computer graphics a dynamic and interactive form for child and adolescent treatment. This virtual access supports pathological stabilization and facilitates prolonged treatment in a hospital environment. (Araújo et al., 2018).

However, patient safety is recommended by law and is conceptualized in management to identify, organize, classify and prevent, through technological development in virtual format, the reduction in the number of accidents in clinical and hospital environments. Considering that the provision of services in the health sector is continuous, the results in the scenario of harm to the patient must be carefully monitored.

The display of indicators that express data for the construction of hospital profiles, points out significant characteristics in the action process, making it possible to clarify and contribute to a better and evolved public health scenario. Understanding the protection of confidential information should result in action plans focused on the confidentiality of your population. (Silva et al., 2021)

Final Considerations

The world of clinical research and adaptation to technologies must take care and establish goals to reduce patient suffering, bringing their reality to treatment in a light way. The evolution in diagnoses through virtual reality, robotics in major procedures and continuous treatment with educational games, is a promising reality and means that several centers are recognized with positive highlights in the readaptation of patients.

The process of virtual inclusion has been modernizing in all specialties, whether educationally or therapeutically. The health protocols that involve adjustments to some procedures are very variable, it all depends on the population's needs. Evidence of advancement is visible in professional performance and modern techniques, where science stands out with collaborative evolutions, presenting innovative proposals for the global health system.

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