

ABSTRACT

The subject of this doctoral dissertation is the analysis of conditions necessary for developing an implementation concept of a business model for medical diagnostic facilities, incorporating modern information systems and e-services. This is particularly significant in the context of dynamically evolving market, technological, and social conditions shaping the future of the healthcare sector in Poland. In response to the increasing average life expectancy and the growing number of patients with chronic diseases, it becomes essential to enhance the efficiency of medical facilities by adapting them to the expectations of contemporary patients. The dissertation highlights the fundamental role of innovative technologies, such as artificial intelligence, big data, and the Internet of Things, in managing diagnostic facilities. Digitalization and the implementation of advanced IT tools enable process automation, improving operational efficiency and the quality of patient care. The author thoroughly analyzes the challenges associated with implementing these solutions, emphasizing the necessity of investing in technological infrastructure, developing employee competencies, and transforming organizational culture.

Through qualitative research conducted on a selected private diagnostic facility, key factors determining management efficiency were identified, including the role of digitalization in optimizing operational costs, reducing diagnostic result waiting times, and increasing patient satisfaction. Based on this analysis, the author developed an innovative business model that can be adapted to various types of diagnostic facilities.

The chapters of the dissertation cover theoretical foundations of management and quality, as well as a detailed analysis of the functioning of the Polish healthcare system, the legal framework for medical activities, and the differences between public and private diagnostic facilities. Particular attention is given to the role of digital technology platforms, such as resource management systems, e-services, and remote access to test results.

The cognitive objective of this research was to understand the key determinants of efficient management in diagnostic facilities, while the practical goal was to develop a business model that optimizes resource utilization and improves the quality of diagnostic services. The proposed model integrates modern technologies with patient expectations, enhancing both the competitiveness and operational efficiency of medical facilities.

In conclusion, this dissertation contributes to the development of management theory in healthcare by offering solutions for medical diagnostics in Poland and supporting the digital transformation of the healthcare sector.