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DREIHER DALIA

TOOLS FOR MANAGING THE QUALITY OF MEDICAL SERVICES IN ISRAELI HEALTHCARE ORGANIZATIONS

SPECIALTY 521.03 - ECONOMY AND MANAGEMENT IN FIELD OF ACTIVITY

Doctoral thesis in the field of Economic Sciences

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DREIHER DALIA

INSTRUMENTE PENTRU GESTIONAREA CALITĂȚII SERVICIILOR MEDICALE ÎN ORGANIZAȚIILE MEDICALE DIN ISRAEL

SPECIALITATEA 521.03 - ECONOMIE ŞI MANAGEMENT ÎN DOMENIUL DE ACTIVITATE

Teză de doctorat în științe economice

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Author: **Dreiher Dalia**

CHIȘINĂU, 2023

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ANNOTATION

to the doctoral thesis in economics by Dreiher Dalia
"Tools for managing the quality of medical services in Israeli healthcare organizations",
Free International University of Moldova, Chisinau, 2023

Structure of the thesis: introduction, four chapters, conclusions and recommendations, bibliography from 284 sources, 159 pages of main text, 55 figures and 14 tables, 66 appendices.

The purpose of research is to develop a set of tools for managing the improvement of the quality of medical services in public Israeli general hospitals.

Objectives: describe approaches to determining the quality of medical services and assessment methods; bring quality standards of medical processes as an organizational means of ensuring the quality of medical services; describe the tools for managing the quality of services in medical institutions; conduct a comparative analysis of systems for improving the quality of medical services in the countries of the world; analyze trends in the development of the quality of medical services in the Israeli market; explore the experience of applying quality assurance tools in public and private hospitals in Israel; to form a mechanism for managing the improvement of the quality of medical services in public hospitals in Israel; to develop a system of tools for managing the improvement of the quality of services in public Israeli hospitals; evaluate the effectiveness of the quality management system for medical services in public medical institutions in Israel.

Scientific novelty. The concept of the quality of medical services has been clarified, a complete definition of methods for assessing the quality of services in the field of medicine has been formulated, a mechanism for managing the improvement of the quality of services in medical institutions has been formed, including a set of tools that contribute to the quality of services provided in public hospitals in Israel. An assessment of the effectiveness of the quality management system for medical services has been developed, including quality indicators measured in quantitative and qualitative values.

The scientific problem solved is to develop a mechanism and a set of tools for managing quality improvement in the provision of medical services, which will make it possible to adjust actions at the country level and evaluate the effectiveness of quality improvement management in Israel's public general hospitals.

The theoretical significance: the content of approaches to defining the quality of medical services has been comprehensively disclosed, methods of assessing the quality of medical services have been identified, ways of applying quality standards in managing the quality of services in medical institutions have been proposed, and a definition of a set of tools for managing the quality of services in medical institutions has been formulated.

Practical significance is associated with an increased need for the provision of quality medical services in Israel's public general hospitals. The developed mechanism for improving the quality of medical services can help determine the optimal degree of implementation of tools that contribute to the development of the application of quality management of medical services, and through the implementation of practical recommendations to improve the quality of medical services provided, help improve the level of Israeli healthcare.

Implementation of scientific results. Scientific research in the form of conclusions and recommendations were presented at scientific conferences and in journals: 3 articles (1,6 a.l.) published in scientific journals of category "B", 5 articles (2.85 a.l.) published in scientific journals of other databases, 4 reports (1.9 a.l.) presented at foreign conferences and 2 report (1.3 a.l.) at conferences held in the Republic of Moldova.

ADNOTARE

la teza de doctor în științe economice Dreiher Dalia
"Instrumente pentru gestionarea calității serviciilor medicale în organizațiile medicale din Israel",
Universitatea Liberă Internațională din Moldova, Chișinău, 2023

Structura tezei: introducere, patru capitole, concluzii și recomandări, bibliografie din 284 de surse, 159 de pagini de text principal, 55 de figuri și 14 de tabele, 66 de anexe.

Cuvinte-cheie: managementul calității, management, instrumente de management, îmbunătățire a calității, servicii medicale, spitale publice israeliene.

Domeniul de studiu: 521.03 - Economie și management în domeniul de activitate

Scopul tezei este de a dezvolta un set de instrumente pentru gestionarea îmbunătățirii calității serviciilor medicale în spitalele publice generale israeliene.

Sarcinile tezei: descrierea abordărilor pentru determinarea calității serviciilor medicale și metodele de evaluare; identificarea standardelor de calitate a proceselor medicale ca mijloc organizatoric de asigurare a calitatii serviciilor medicale; descrierea instrumentelor de gestionare a calității serviciilor în instituțiile medicale; efectuarea unei analize comparative a sistemelor de îmbunătățire a calității serviciilor medicale în țările lumii; analiza tendințelor de dezvoltare a calității serviciilor medicale pe piața israeliană; explorarea experienței aplicării instrumentelor de asigurare a calității în spitalele publice și private din Israel; formarea mecanismului de gestionare a îmbunătățirii calității serviciilor medicale în spitalele publice din Israel; dezvoltarea unui sistem de instrumente pentru gestionarea îmbunătățirii calității serviciilor în spitalele publice israeliene; evaluarea eficacității sistemului de management al calității pentru serviciile medicale din instituțiile medicale publice din Israel.

Noutatea științifică. S-a clarificat conceptul de calitate a serviciilor medicale, a fost formulată o definiție completă a metodelor de evaluare a calității serviciilor în domeniul medicinei, s-a format un mecanism de gestionare a îmbunătățirii calității serviciilor în instituțiile medicale, inclusiv un set de instrumente care contribuie la calitatea serviciilor oferite în spitalele publice din Israel. A fost elaborată o evaluare a eficacității sistemului de management al calității pentru serviciile medicale, incluzând indicatori de calitate măsurați în valori cantitative și calitative.

Problema științifică soluționată urmează să dezvolte un mecanism și un set de instrumente pentru gestionarea îmbunătățirii calității în furnizarea serviciilor medicale, care să permită ajustarea acțiunilor la nivel de țară și evaluarea eficienței managementului îmbunătățirii calității în spitalele publice generale din Israel.

Importanța teoretică: conținutul determinării calității serviciilor medicale este dezvăluit cuprinzător, abordarea evaluării calității serviciilor medicale la nivel macro (de stat) și micro (spitale) este structurată, ținând cont de tipul, forma, metoda și metodologia de evaluare, s-a identificat interconexiunile dintre instrumentele, criteriile și indicatoarele de gestionare a calității serviciilor medicale.

Semnificația practică este asociată cu o nevoie crescută de furnizare de servicii medicale de calitate în spitalele publice generale din Israel. Mecanismul dezvoltat pentru îmbunătățirea calității serviciilor medicale poate contribui la determinarea gradului optim de implementare a instrumentelor care contribuie la dezvoltarea aplicării managementului calității serviciilor medicale, precum și prin implementarea recomandărilor practice pentru îmbunătățirea calității serviciilor medicale oferite. Contribuie la îmbunătățirea nivelului de asistență medicală israeliană.

Implementarea rezultatelor științifice. Cercetările științifice sub formă de concluzii și recomandări au fost prezentate la conferințe științifice și în reviste: 3 articole (1,6 c.a.) publicate în reviste științifice de categoria „B", 5 articole (2,85 c.a.) publicate în reviste științifice din alte baze de date, 4 rapoarte (1,9 c.a.) prezentate la conferințe externe și 2 raport (1,3 c.a.) la conferințe desfășurate în Republica Moldova.

АННОТАЦИЯ

к диссертации на соискание ученой степени доктора экономических наук Дрейхер Далия "Инструменты управления повышением качества медицинских услуг в государственных больницах общего профиля Израиля", Международный Независимый Университет Молдовы, Кишинэу, 2023

Структура диссертации: введение, четыре главы, выводы и рекомендации, библиография из 284 источников, 159 страниц основного текста, 55 рисунков и 14 таблица, 66 приложений.

Ключевые слова: менеджмент качества, управление, инструменты управления, повышение качества, медицинские услуги, государственные больницы Израиля.

Область исследования: 521.03. Экономика и управление в сфере деятельности.

Цель диссертации состоит в разработке инструментов управления повышением качества медицинских услуг в государственных больницах общего профиля Израиля.

Задачи диссертации: описать подходы к определению качества медицинских услуг; охарактеризовать процесс оценки качества медицинских услуг; описать роль инструментов управления в повышении качества медицинских услуг; раскрыть методологию научного исследования; представить основные методы исследования; описать подходы к анализу и представлению результатов исследований; провести сравнительный анализ систем здравоохранения в аспекте повышения качества медицинских услуг стран мира; выявить тенденции повышения качества медицинских услуг в Израиле; исследовать опыт применения инструментов обеспечения качества в государственных больницах общего профиля Израиля; сформировать механизм управления повышением качества медицинских услуг в государственных больницах общего профиля Израиля; разработать систему инструментов по управлению повышением качества услуг в государственных израильских больницах; составить оценку эффективности механизма управления повышением качества медицинских услуг в государственных медицинских учреждениях Израиля.

Научная новизна и оригинальность. Уточнено понятие качества медицинских услуг. Сформирован механизм управления повышением качества услуг в медицинских учреждениях Израиля, включающий комплексы инструментов, способствующие качественному предоставлению услуг в государственных больницах Израиля. Разработана система проведения оценки эффективности применения механизма управления повышением качества медицинских услуг, включающая алгоритм проведения оценки в зависимости от выбранного пути и инструментария управления повышением качества.

Полученные результаты, способствующие решению научной проблемы, заключаются в разработке механизма и комплекса инструментов по управлению повышением качества предоставления медицинских услуг, что позволит скорректировать действия на уровне больниц и провести оценку эффективности этого процесса в государственных больницах общего профиля Израиля.

Теоретическая значимость: комплексно раскрыто содержание определения качества медицинских услуг, структурирован подход к оценке качества медицинских услуг на макро- (государство) и микроуровне (больницы) с учетом типа, вида, метода и способа оценки, выявлены взаимосвязи инструментов, критериев и показателей управления качеством медицинских услуг.

Практическая значимость связана с повышением потребности в предоставлении качественных медицинских услуг в государственных больницах общего профиля Израиля. Разработанный механизм управления повышением качества медицинских услуг может помочь определить оптимальный и адекватный поставленной цели, инструментария, способствующего развитию управления качества медицинских услуг, что будет способствовать повышению уровня здравоохранения Израиля.

Внедрение научных результатов. Результаты исследования представлены в виде 3 статей (1,6 а.л.), опубликованных в научных журналах категории "B", 5 статей (2,85 а.л.), опубликованных в научных журналах других баз данных, 4 докладов (1,9 а.л.), представленных на зарубежных конференциях и 2 доклад (1,3 а.л.) – на конференциях, проведенных в Республике Молдова.

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LIST OF ABBREVIATIONS

CEO - Chief Executive Officer

CHI - Compulsory Health Insurance

CQI - Continuous Quality Improvement

DMAIC - Define, Measure, Analyze, Improve, Control

EFQM - European Foundation for Quality Management

GDP - Gross domestic product

ISO - International Organization for Standardization

JCI - Joint Commission International

JUSE - Union of Japanese Scientists and Engineers

MBQA - Malcolm Baldrige Quality Award

NCQA - National Committee for Quality Assurance

NHIL - National Health Insurance Law

NICE - National Institute for Clinical Excellence

OECD - Organisation for Economic Co-operation and Development

PDPC - Process Decision Program Chart

PDSA cycle - "Plan-Do-Study-Act"

PEST - Politics, Economics, Social, Technological

QFD - Quality Function Deployment

QMS - Quality Management System

SWOT - Strengths, Weaknesses, Opportunities, Threats

TQC - Total Quality Control

TQM - Total Quality Management

VHI - Voluntary Health Insurance

INTRODUCTION

Actuality and importance of research theme. Medical services are an integral part of every person's life, and the quality of these services directly affects the health and well-being of society. Quality management has become an important issue for healthcare organizations over the past decades. A focus on quality of care is relevant and necessary to effectively manage these services for the benefit of patients and physicians. This is because the field of health policy and management faces significant theoretical and practical challenges. Despite years of reform efforts, Israel's health care system needs improvement, especially in terms of quality. Among the many reasons for this, one can highlight the dominance of microeconomic thinking and the lack of comparative studies of healthcare organizations. Healthcare organizations face many challenges that can be classified into four main areas: increasing costs of healthcare services, rapidly increasing technological dependency, pressure on organizations from international regulatory bodies to reduce costs and improve quality, and pressure to meet patient needs.

Improving the quality of medical services in Israel's public general hospitals will provide better healthcare for the country's residents. Public general hospitals in Israel are the main providers of healthcare services to the population, especially for those who cannot afford private healthcare services. Therefore, improving the quality of medical services in these hospitals is key to improving the overall health and well-being of Israeli residents.

In the modern world, a large number of innovative technologies, approaches, methods and tools have been introduced and are in use, which can significantly improve the quality of medical services and manage this process more productively. Studying the features of their development and implementation in the management system of public hospitals in Israel will improve the quality of medicine in general and, accordingly, make them more accessible to everyone. In addition, Israel is one of the leading countries in the field of medicine and modern medical technology in the world. A well-chosen system of management tools for improving the quality of medical services will help maintain and strengthen Israel's leadership in this area.

The area of quality and patient safety in healthcare is relatively new. However, interest in quality in a broader sense continues to grow. In Israel, activities to improve quality and patient safety have recently begun. It was not until 2003 that the National Program for Quality Indicators in the Community was launched, and in 2012 the National Program for Quality Indicators in Hospitals was

launched. Thus, to date, in Israel there are no theoretical and practical results from extensive research on tools and their implementation in the quality management system in public general hospitals.

Effective quality management of health care services can help hospitals provide safe and effective care, as well as improve efficiency and reduce health care costs for governments and individual patients. By focusing on quality management, hospitals can also improve patient satisfaction, reduce the risk of medical errors and adverse events, and ensure compliance with relevant regulations and standards. This can help build trust in the hospital among patients, families and the community at large.

Study degree of the research theme. To date, the issue of managing the quality of medical services has been studied fragmentarily and does not present a holistic picture and a unified vision of the processes, ways and approaches that could guide the development of policies, strategies or programs for managing the quality of individual medical services of a medical institution. The results of the analysis of existing practices and developments in the field of quality management at the country level, as well as in Israeli hospitals, are not sufficiently reflected in theoretical studies.

However, some issues related to quality management of medical services are covered in various studies by scientists and practitioners. Approaches to defining the concept of quality of medical services vary depending on the points of view of the authors. Some authors, including Subhash S., Shewhart W.A., Endeshaw B. Lakin K., and Kane S., highlight certain values and understanding of the quality of medical services. The World Health Organization and the International Organization for Standardization provide rather vague definitions of the quality characteristics of health care services. The dual nature of the quality of medical services is reflected in the studies of Donabedian A., Čučković D. et al. Israeli scientists Bar-Ratson E., Rosen B., Gabison R., and Eligulshvili B. also consider various aspects of the quality of medical services. The process of improving the quality of medical services in the Republic of Moldova, aspects of the implementation of personalized medicine and its quality are considered by Moldovan scientists Dragomir L., Carp M., Zarbailov N., Gușilă I., Kurochkin G. S., and Ţopa A.

The formation of the quality of medical services is influenced by a number of factors, which was noted by Kim C.E., Zachariae R., Zamir F., Jaafar S., Ismail M., and Mosadeghrad A.M., as well as Israeli scientists Balicer R., Dreiher J., Davidovich N. et al. Significant contributions to the development of approaches and tools in the field of quality, including in medicine, were made by Ishikawa K., Tillinghast S.J., Deming W.E., Baker A., Busse R., Panteli D., Busse R., Kunkel S., et

al. Quality is a response to administrative restrictions and external rules: accreditation, quality program, investment programs - this is the conclusion of the authors Price D., Fukey L. N., Haugland H., Fereday S., Johnson J. K., Barach P., and Antony J. They continued their research within the framework of the development of quality management tools. Thus, the author came to the conclusion that, based on the results of theoretical research, one can very productively develop one's own ideas, establish patterns and obtain acceptable results for increasing the efficiency of medical services by improving the quality management system.

The purpose of research is to develop management tools for improving the quality of health care services in public general hospitals in Israel.

Research objectives:

• describe approaches to determining the quality of medical services;

• describe the process of assessing the quality of medical services;

• describe the role of management tools in improving the quality of health services;

• reveal the methodology of scientific research; present the main research methods; describe approaches to analyzing and presenting research results;

• conduct a comparative analysis of healthcare systems in terms of improving the quality of medical services in countries around the world;

• identify trends in improving the quality of medical services in Israel;

• explore the experience of using quality assurance tools in public general hospitals in Israel;

• form a mechanism for managing the improvement of the quality of medical services in public general hospitals in Israel;

• develop a system of tools for managing the improvement of the quality of services in public Israeli hospitals; evaluate the effectiveness of the management mechanism for improving the quality of medical services in public medical institutions in Israel.

Hypothesis of research. The introduction of a set of modern management tools for improving the quality of medical services in public general hospitals in Israel, when adapted within the framework of an appropriate mechanism, will improve the quality of medical services and improve patient satisfaction. The most likely and promising scenario, as suggested by the author, is to build on the basis of the quality management mechanism recommendations for quality improvement management for public general hospitals in Israel, which relate to the application of the mechanism, the algorithm for using tools, as well as assessing the effectiveness of implemented solutions.

The study confirmed the hypothesis that the introduction of modern management tools and a quality management mechanism actually contributes to improving the quality of medical services in public hospitals in Israel. This fact is confirmed by studies of country practices, as well as surveys, patient reviews and other studies in Israeli general hospitals. The results of the study and the author's practical developments may be useful for the future improvement of the mechanism and tools for managing the quality of medical services.

Generalization of the methodology and justification of the selected research methods. The structure of the scientific research methodology within the dissertation includes three areas: general characteristics of the research, the logical structure of the research and the time frame for conducting the research. The author chose a general approach to the study, based on the relationship between quantitative and qualitative methods of data analysis. Aspects such as reliability, validity, and representativeness were taken into account when assessing the quality of the study. The interrelation of fundamental (analysis, historical, logical, synthesis, induction, deduction, hypothetical, formalization) and applied research (observation, interviews, questionnaires, survey, testing, photography, measurement, comparison, experiment, modeling) made it possible to find the optimal and logical sequence of their application in the context of the problem being studied - the quality of medical services in general hospitals in Israel. This made it possible to obtain a more accurate and complete understanding of the processes and phenomena studied as part of the study. By combining different research methods, the quality and reliability of scientific research and their results can be significantly improved at. Thus, the use of fundamental and applied research methods is a necessary condition for the development of science and practice in the medical field, as well as for solving specific problems and problems of the research object. This approach to research work was chosen based on the characteristics of the subject and object of research in the dissertation.

Scientific originality and novelty consist of:

- clarification of the concept of quality of medical services, which helps to make scientific research in this area more accurate and valid, and also allows us to more accurately determine the criteria and tools used to assess quality and develop appropriate research methods;

- approaches to assessing the quality of medical services at the macro and micro levels have been formulated, including the type, type, method and method of conducting the assessment;

- developing a mechanism for managing the improvement of the quality of services in medical institutions, including a set of tools that facilitate the quality provision of services in public general hospitals in Israel;

- proposing a comprehensive assessment of the effectiveness of the management mechanism for improving the quality of medical services, including the development of an algorithm depending on the chosen path and tools for improving the quality of medical services.

Abstract of thesis chapters, focusing on the investigations and their need for the achievement of the purpose and the objectives of the research.

The dissertation is presented on 159 pages of main text. The structure of the doctoral dissertation includes an introduction, four chapters, conclusions and recommendations, a bibliography of 284 sources, 14 tables, 55 figures and 66 appendices.

The introduction argues for the relevance and degree of knowledge of the research topic, outlines the goal and objectives, presents a working hypothesis, describes the research methodology, and briefly outlines the content of the dissertation chapters. The introduction is written clearly and concisely in order to clearly present the content of the dissertation to the reader, as well as demonstrate the theoretical and practical significance of the scientific research.

Chapter I "Theoretical aspects of the quality of medical services as a component of the value-normative system of modern society", reveals approaches to defining the concept of quality of medical services. The author also discusses methods for assessing the quality of services in the field of medicine. The features of the use of quality management tools, which logically come from approaches to quality management, are described.

In Chapter II "Methodology for conducting scientific research", the author developed a methodology for scientific research, which was used to achieve the goal of the study, solve problems and test the hypothesis. The methodology provides specific research methods and tools, their description and the optimal order of application within the framework of research work. Approaches to analyzing and presenting research results in dissertation work to formulate conclusions and recommendations are also considered.

In Chapter III "Analysis of the development of the Israeli medical services market in the context of quality assurance", the author conducts a study of global systems for improving the quality of medical services using the example of a sample of countries. This made it possible to identify patterns and the degree of influence of certain factors and phenomena on the effectiveness of

quality management in private and public general hospitals. An in-depth study of trends in the development of the quality of medical services in Israel was conducted by conducting a questionnaire, studying documents, as well as internal documentation of general hospitals in Israel. This provided insight into the experience of using quality assurance tools in public and private hospitals in Israel. This analysis allowed us to identify trends, problems and advantages of the existing quality management system and find ways to possibly improve it.

In Chapter IV "Development of a system of tools for managing the improvement of the quality of medical services in public general hospitals in Israel", the author developed a mechanism for managing the improvement of the quality of medical services in public hospitals in Israel. This mechanism includes a comprehensive system of instruments that are suitable for use in public general hospitals in Israel. In order to establish the degree of effectiveness of the author's developments, an assessment of the effectiveness of the management system for improving the quality of medical services in public medical institutions in Israel was proposed. These developments will become the basis not only for practical implementation, but also for future research and testing in theoretical terms.

In general conclusions and recommendations, the author summarizes the results obtained and formulates conclusions that can be used for making management decisions in medical institutions in Israel. This part also presents recommendations that are addressed to those directly involved in order to help improve the quality of work of government agencies, general infrastructure in Israel and solve specific problems. The author's recommendations are based on the results of the study, as well as on a review of the literature and analysis of the experience of other countries, medical institutions and researchers in the field of quality management of medical services.

1. THEORETICAL ASPECTS OF QUALITY OF MEDICAL SERVICES AS A COMPONENT OF THE VALUE-NORMATIVE SYSTEM OF MODERN SOCIETY

1.1. Approaches to determining the quality of medical services

The quality of medical services is one of the most important factors for public health. Patients who receive high-quality medical care have a higher level of satisfaction, a faster recovery and a longer life expectancy. Quality medical care can also reduce treatment costs and reduce the burden on the health care system. On the other hand, low quality medical services can lead to serious consequences for patients, such as incorrect diagnosis, inappropriate treatment, complications and even death. Low quality medical service can lead to inefficient use of resources and management, which will have a negative impact on the country's economy. In general, the quality of medical services has a direct influence on the life and health of people. Therefore, improving quality, developing effective methods of quality management and evaluating the effectiveness and quality of medical practice are important tasks for health care systems and future scientific research in this area.

The purpose of this paragraph is to present various points of view on determining the quality of medical services. The author's research will help improve the understanding of what factors affect the quality of medical services and expand the boundaries of understanding the quality of medical services in the context of its dual nature.

Medical services play an important role in modern society, ensuring the maintenance of health and quality of life. Their importance extends beyond treatment, including prevention, diagnosis and rehabilitation. They contribute to the longevity and quality of life, supporting economic and social activity. High-quality medical services provide effective treatment, improve the prognosis of diseases. For individual individuals, the quality of medical services means access to professional diagnosis, treatment and rehabilitation, which can save their lives and improve their health. Quality service also creates trust between patients and medical professionals.

Healthcare systems are complex social systems, and values make up the central aspect of their complexity. Usually, values are considered as fundamental factors that shape changes in the healthcare system, influencing all aspects and functions of this system, including quality[1]. Society, which values compassion, justice and human dignity, strives to provide high-quality health care, available to all, regardless of their origin or economic situation. The quality of medicine reflects social values. Such

[1] WHYLE, E.B., OLIVIER, J. *Towards an explanation of the social value of health systems: an interpretive synthesis*. In: International Journal of Health Policy and Management, 2021, nr. 10(7), p. 414-429. DOI: 10.34172/ijhpm.2020.159.

a significant concept for society as medical services has a number of interpretations from the viewpoints of various researchers. The category "quality of medical service" consists of two independent parts - it is "quality" and "medical service".

Non-material goods are usually called services. A service is an activity that one person performs for another person, not in a material way[2] [3]. In health care organizations, the main benefit for the patient, as a rule, is the service itself, its content component. In addition, some types of activities of health care organizations have material results (medicines, products, equipment, etc.). The concept of medical service may vary by different authors, but in general it means providing medical care to a patient, including diagnosis, treatment and prevention of diseases. Medical service is a set of measures aimed at restoring human health or preventing diseases, which are provided by medical workers in accordance with the requirements of regulatory documents and medical standards[4]. This definition highlights the complex nature of the medical service, which is regulated by the framework of medical standards.

According to the understanding of the author, medical service is any type of work or service provided by medical institutions or medical personnel, which is aimed at improving or maintaining the health of patients[5]. Here is an emphasis on the role of medical services in strengthening health, accurate diagnosis, effective treatment. High-quality services improve health, inspire confidence and motivate patients to take care of their well-being.

Medical service is the provision of professional medical care, where the patient receives help in a timely manner, the medical worker and the patient communicate effectively, develop a common understanding of the problem and develop a mutually acceptable plan of assessment and treatment[6]. The key aspect is the quality of medical care provided by professional medical workers in interaction with the patient. This is significant for ensuring optimal treatment results, patient safety and improving the quality of life.

Medical services include medical care and medical care, as shown in Figure 1.1.

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[2] KUMAR, S., MOOKERJEE, V., SHUBHAM, A. *Research in operations management and information systems interface*. In: Production and Operations Management, 2018, nr. 27, p. 1893-1905. DOI:10.1111/poms.12961.

[3] WIRTZ, J., LOVELOCK, C. *Services Marketing: People, Technology, Strategy*. London: World Scientific Publishing Company, 2016. 800 p. ISNB 978-1944659011.

[4] MOSADEGHRAD, A.M. *Healthcare service quality: Towards a broad definition*. In: International Journal of Health Care Quality Assurance, 2013, nr.3, p. 203-219. ISSN 09526862.

[5] REISER, S.J. *The Concept of Service in Medicine*. In: Journal of Pain and Symptom Management, 2012, nr. 1, p.150-153. ISSN 18736513.

[6] BATALDEN, M., et al. *Coproduction of healthcare service*. In: BMJ quality & safety, 2016, nr. 25(7), p.509-517. ISSN 2044-5423.

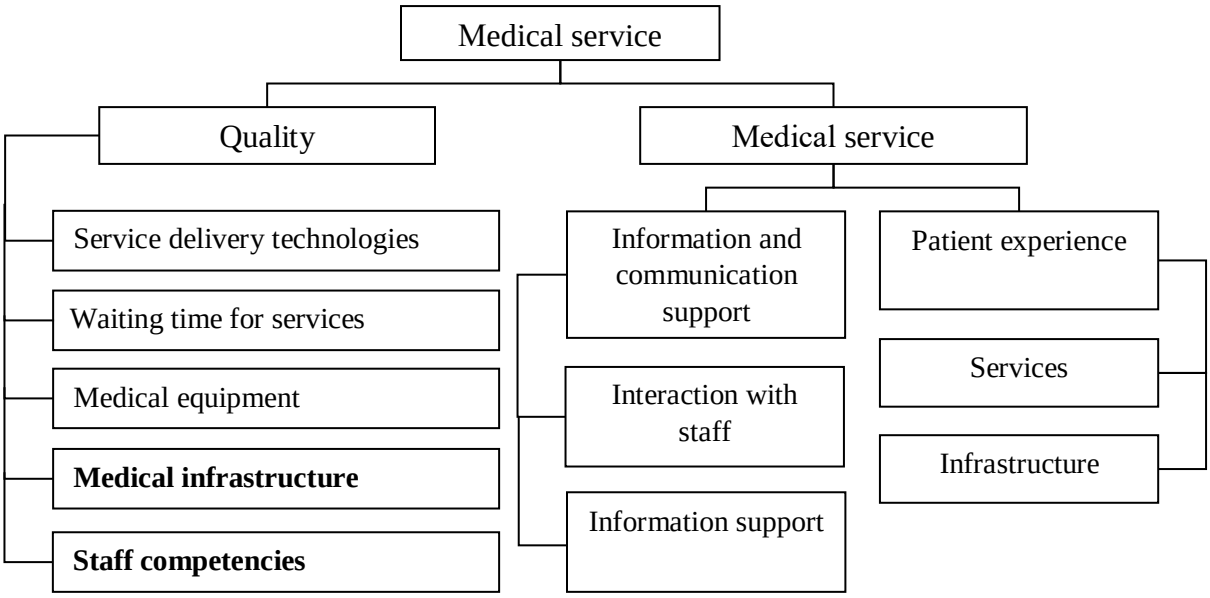

Figure 1.1. Medical service model [developed by the author based on[7]]

The scheme presents a structural model of medical service, reflecting the understanding of the difference between medical care and medical care, while preserving the conceptual basis of dividing the basic concept into its constituent elements. Medical care is professional help, which is provided to the patient for the diagnosis, treatment and prevention of disease[8]. On the other hand, medical care is an integral part of medical services, which may include patient care services, doctor's consultations, preventive measures and other auxiliary services that ensure the full functioning of a medical organization[9].

Medical service in the broadest sense is a complex provision of medical care, including diagnosis, treatment, prevention and rehabilitation of patients. This includes a spectrum of medical activities, ranging from examining the patient and carrying out the necessary tests, to prescribing treatment, surgical interventions, long-term monitoring and maintaining general health. The medical service is also shown in the activities of the medical personnel for the implementation of administrative-economic, administrative and other actions aimed at preserving, strengthening, improving, and reproducing individual and public health. According to the author, the result depends on these elements only if they are in the complex. Thus, the medical service in the broad sense is an

[7] BUTOVA, T.G., DANILINA, E.P. BELOBORODOV, A.A. *Assessment of the quality of medical services in modern conditions: problems and solutions*. In: Modern problems of science and education, 2017, nr.6, p. 13-21. ISSN 2070-7428.
[8] BEHERA, B. K. et al. *Primary health-care goal and principles*. In: Healthcare Strategies and Planning for Social Inclusion and Development, 2022, p. 221-239. DOI: 10.1016/B978-0-323-90446-9.00008-3
[9] KIM, C.E., et al. *Quality of medical service, patient satisfaction and loyalty with a focus on interpersonal-based medical service encounters and treatment effectiveness: a cross-sectional multicenter study of complementary and alternative medicine (CAM) hospitals*. In: BMC complementary and alternative medicine, 2017, nr.17(1), p. 1-12. ISSN 2662-7671.

indivisible service that has a complete, independent medical or diagnostic value. Medical service in a narrow sense describes a specific action or procedure provided by a medical specialist as part of the general treatment process (consultation of a doctor, carrying out certain medical tests, issuing a prescription for drugs or performing a specialized procedure).

Dividing medical quality and medical service is necessary to better understand and appreciate the multifaceted nature of medical services. Medical quality is much more than just obtaining clinical results. Equipment, infrastructure and personnel create fundamental conditions for effective and safe medical practice. These elements ensure compliance with standards and norms, which is an important aspect of ensuring high quality medical services. In turn, the service and process of providing medical service form an interaction between patients and medical personnel, creating an environment of trust and comfort.

Reanalyzed definition of medical services refer to its essential element – quality. Traditionally, in theory, two aspects of quality are distinguished: objective, which includes technical characteristics that the product must have, and subjective - properties that are related to the requirements of consumers[10]. This is a representation of quality that reflects two-way influence on the formation of quality - internal (product characteristics) and external (consumers). According to another point of view, quality is characterized by three aspects[11]: Quality of structure (organizational-technical quality of resources: buildings, structures, equipment, materials, personnel); Quality of the process (technologies, prevention, diagnosis, treatment, compliance with the principle of standards); The quality of the outcome (achieving accepted clinical indicators and matching them with economic indicators). In this case, a significant element is added when assessing quality - a process, the flow of which depends on the final result and customer satisfaction[12]. Based on these aspects, various researchers have formed complex concepts of medical service quality. Complexity is explained by the fact that the concept of quality of medical service must include the concepts of quality of medical care and medical service. The author highlighted the key aspects of determining the quality of the medical service of the authors, which is presented in Table 1.1.

[10] SHEWHART, W.A. *Economic Control of Quality of Manufactured Product. 50th Anniversary Commemorative reissue*. New York: ASQ Quality Press, 1980, 240 p. ISBN 978-0873890205.
[11] DONABEDIAN, A. *Evaluating the quality of medical care*. In: The Milbank Quarterly, 2005, nr.83(4), p. 691-729. ISSN 0887-378X.
[12] BERWICK D., Fox D. M. *"Evaluating the quality of medical care": Donabedian's classic article 50 years later*. In: The Milbank Quarterly, 2016, nr. 94(2), p. 237-241. ISSN 0887-378X.

Table 1.1. Definitions of the quality of medical services [developed by the author]

Author	Definition	Key aspects
Mashouf M., Ayatollahi H., Khorasani-Zavareh D. [13]	the extent to which health services provided to individuals and populations increase the likelihood of achieving desired health outcomes and are consistent with evidence-based professional knowledge	desired outcome in healthcare; professionalism of medical staff.
Subhash S. [14]	Everything a healthcare organization does to meet the needs of its customer, whether that be a patient, a receiving physician, an employer, or an internal customer within the organization	organization efforts; client needs (patient, doctor, etc.)
World Health Organization (WHO)[15]	a set of several indicators: efficiency – the ratio of expended resources to the obtained clinical results; profitability – the ratio of resource costs to standard costs; adequacy – the relationship between the medical care provided and the required (standard): use of evidence-based technologies, time of care; accessibility to assistance, sufficiency of medical services, etc.	set of indicators
Kim C.E. [16]	The quality of medical services depends on various factors: treatment offered by a medical institution, patient care services, services offered by doctors, nurses, administrative staff, premises and environment, patient care procedures	Influencing factors
Endeshaw B. [17]	The quality of health care services depends on the process of providing health care services, the interaction of patients and health care providers.	service delivery process; interaction between external (patients) and internal (employees) persons.

[13] MASHOUF, M., AYATOLLAHI, H., KHORASANI-ZAVAREH, D. *Data quality assessment in emergency medical services: an objective approach.* In: BMC Emergency Medicine, 2023, nr.1, p. 2-9. ISSN 1471-227X.
[14] DODWAD, S.S. *Quality Management in Healthcare.* In: Indian Journal of Public Health. 2013, nr.57(3), p.138–143. ISSN 0019-557X.
[15] *World Health Organization*. Patient safety: making health care safer. 2017. [accessed 22.11.2020]. Available at: https://apps.who.int/iris/handle/10665/255507
[16] KIM, C.E., et al. *Quality of medical service, patient satisfaction and loyalty with a focus on interpersonal-based medical service encounters and treatment effectiveness: a cross-sectional multicenter study of complementary and alternative medicine (CAM) hospitals.* In: BMC complementary and alternative medicine, 2017, nr.17(1), p. 1-12. ISSN 2662-7671.
[17] ENDESHAW, B. *Healthcare service quality-measurement models: a review.* In: Journal of Health Research, 2021, nr. 35(2), p. 106-117. ISSN 2586-940X.

The main aspects of the quality of medical services are, according to the author, the specificity of healthcare services; patient satisfaction; different interests of health care providers; differences in the qualifications, experience, skills and personal characteristics of health workers in providing services to the patient.

The main thing in the first definition is that the quality of medical services is assessed according to two main criteria: the results achieved by the patient and the professionalism of the medical staff. However, the quality of medical services is also based on the needs and expectations of the patient being served. Needs may be met by the core service, but the patient's expectations for the service are not limited to this[18]. Most of the expectation depends on secondary factors, the presence of which in a certain quantity and in an appropriate form will provide an increased degree of satisfaction with the quality of the medical service. The second definition emphasizes that the health care system must meet both the demands of health care providers and the expectations and needs of patients. At the same time, support and commitment from management is important for the organization of quality medical services, efficient use of resources, meeting the needs of patients and the effectiveness of treatment. It is noteworthy that researchers give clearer definitions of the quality of medical services, while the World Health Organization (WHO) does not give an exact definition of quality, but only recommends defining the concept of quality of medical services as a set of specific indicators. WHO defines quality medical services through such characteristics of the quality of medical care as efficiency, cost-effectiveness, adequacy, accessibility and others. WHO's approach to health care quality is consistent with global health goals and the principles of patient- centered care, evidence-based practice, safety, equity and effectiveness.

The quality of health care services is a multifaceted construct shaped by many different interrelated factors. The quality of health care is inextricably linked to the dynamic process of service delivery, where interaction between patients and providers plays a central role. Thus, the quality of a health care service depends on how to apply medical science and technology to maximize benefits without increasing risks to consumers. Quality is a representation of that attribute of a medical service that has two sides: "doing what is right" and "how to do it correctly". Quality as a multifaceted concept requires combining the creative potential and practical experience of many specialists[19].

Based on the studied approaches to determining the quality of medical services and the

[18] LAKIN, K., KANE, S. *Peoples expectations of healthcare: A conceptual review and proposed analytical framework.* In: Social Science & Medicine, 2022, nr. 292, p. 114636. ISSN 0277-9536. https://doi.org/10.1016/j.socscimed.2021.114636

[19] LAPUSHIN, R., BLAGORAZUNMNAYA, O., DREIHER, D. *Needs and opportunities the implementation of the quality system at enterprises of the republic of Moldova*. In: The 4th Contemporary Issues in Economy & Technology Conference – CIET 2020 29 - 30 May 2020. Split: University Department of Professional Studies, 2020, p.109-117. ISSN 978-953-7220-52-5.

conclusions formulated, the author made an attempt to supplement the definition of the quality of medical services. The quality of medical services, according to the author, is a personalized approach to each patient, based on his genetic, biological, psychological and social characteristics, taking into account compliance with the requirements of quality standards, which increases the likelihood of achieving the desired results in the field of healthcare in general and specific patients in in particular. It is important to emphasize that this definition is based on a personalized approach, that is, quality is inextricably linked with the set of expectations of each individual patient, who in his own (individual) way represents the process and result of the provision of medical services in the context of medical care and medical care.

Of scientific interest within the framework of this study is that in the early 1970s the dual nature of the quality of medical services was identified[20] [21]: technical and interpersonal side. It is impossible to draw a clear line between these two components of health care, since they are interconnected [22]. However, this has influenced the prevailing medical paradigm in defining and measuring quality. The technical side of healthcare refers to the accuracy of the diagnostic and treatment processes[23], and quality is assessed in comparison with best practices or their benchmarking[24]. This side evaluates the competence and professionalism of medical personnel, the accuracy of diagnosis, the effectiveness of treatment and other[25] technical aspects medical care. This traditional quality component is the most widespread in medical practice when assessing the quality of a medical service. The interpersonal aspect of healthcare is represented by the humanistic elements of healthcare, the social and psychological relationships established between the patient and the medical staff (explaining the disease, the treatment process and receiving other information from the healthcare provider). As can be noted, the interpersonal aspect concerns medical care, which helps to improve the patient-centeredness of medical services, find an individual approach and increase patient satisfaction.

[20] DONABEDIAN, A. *The definition of quality and approaches to its assessment*. Michigan: Health Administration Press, 1980. 163 p. ISBN 9780914904472.
[21] ČUČKOVIĆ, D. et al. *Influence of Interpersonal Processes on the Performance of Primary Health Care Organizations.* In: Sustainability, 2021, nr. 13(21), p. 12243. https://doi.org/10.3390/su132112243.
[22] ZACHARIAE, R., PEDERSON, C. G., JENSEN, A. B., EHRNROOTH, E., ROSSEN, P. B., VON DER MAASE, H. *Association of perceived physician communication style with patient satisfaction, distress, cancer-related self-efficacy, and perceived control over the disease*. In: British Journal of Cancer, 2003, nr. 88, p. 658-665. ISSN 0007-0920.
[23] LAND, K.J., et al. *REASSURED diagnostics to inform disease control strategies, strengthen health systems and improve patient outcomes*. In: Nature microbiology, 2019, nr.4(1), p. 46-54. ISSN 2058-5276.
[24] PENG, D.X., et al. *The impact of hospital complexity on the quality of the experience: mitigating the role of information technology*. In: Decision sciences, 2020, nr. 51(3), p. 500-541. ISSN 0011-7315.
[25] AYER T., AYVACI M.U.S, KARACA Z., VLACHY J. *The impact of health information exchanges on emergency department length of stay.* In: Production and Operations Management, 2018, nr.28, p. 740-758. ISSN 10591478.

Personalizing patient care means recognizing that each person's health journey is unique and tailoring care to their specific needs and preferences[26], as shown in Figure 1.2.

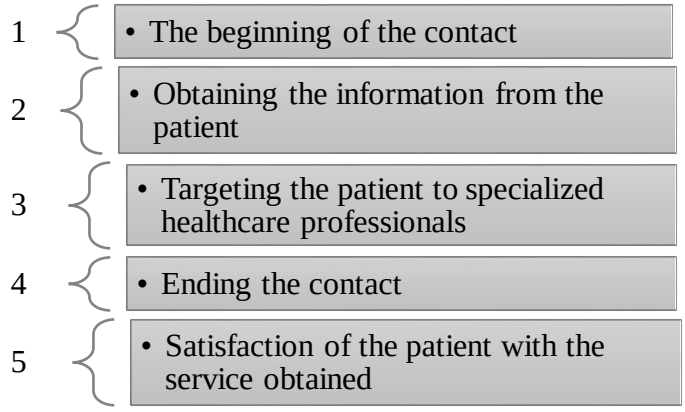

Figure 1.2. Stages of giving attention to the patient [developed by the author based on[27]]

Thus, for completeness and accuracy of understanding and subsequently measuring the quality of a medical service, it is necessary to take into account both sides - technical and interpersonal. Therefore, quality assessment should be objectively formed on these two aspects, paying attention to both quantitative and subjective aspects (attitudes, interpersonal relationships)[28] [29]. This approach to understanding the quality of a medical service allows us to gain insight into how the service is perceived by patients, as well as how effectively and professionally it is provided. The scientific literature provides various characteristics of the quality of medical services that will help to understand the dual nature of the quality of medical services. Some authors identify four characteristics (effectiveness, safety, culture of excellence and desired results)[30]; others are six characteristics (safety, effectiveness, patient-centeredness, timeliness, efficiency and equity)[31]. Specification of the quality of medical services within the technical and interpersonal aspects can be carried out by highlighting quality characteristics in the field of medicine, which is presented in Figure 1.3.

[26] DREIHER, D. *Quality of care and patient safety in Israeli hospitals*. In: EcoSoEn. Chisinau: ULIM, 2022, an. 5, nr. 3-4, p. 57-63. ISSN 2587-344X.
[27] BLAGORAZUMNAYA, O., DREIHER, D. *Patient satisfaction with the quality of the services provided as an important aspect of management in a medical organization*. In: EcoSoEn, 2019, an. 2, nr. 3-4, p. 37-45. ISSN 2587-344X.
[28] JURAN, M.J. *Quality Planning and Analysis.* New York: McGraw-Hill, 1970, ch. 1 "Identification of customer needs", p. 50, 65. ISBN 0071129928.
[29] HANNAWA, A. F. et al. *The aspects of healthcare quality that are important to health professionals and patients: A qualitative study*. In: Patient education and counseling, 2022, nr. 105(6), p. 1561-1570. ISSN 0738-3991.
[30] ALLEN-DUCK, A., ROBINSON, J.C., STEWART, M.W. *Healthcare quality: A concept analysis*. In: Nursing forum, 2017, nr. 52(4), p. 377-386. ISSN 17446198.
[31] BAKER, A. *Crossing the quality chasm: a new health system for the 21st century*. In: BMJ, 2001, nr. 323(7322), p. 1192-1203. ISSN 0959-8138.

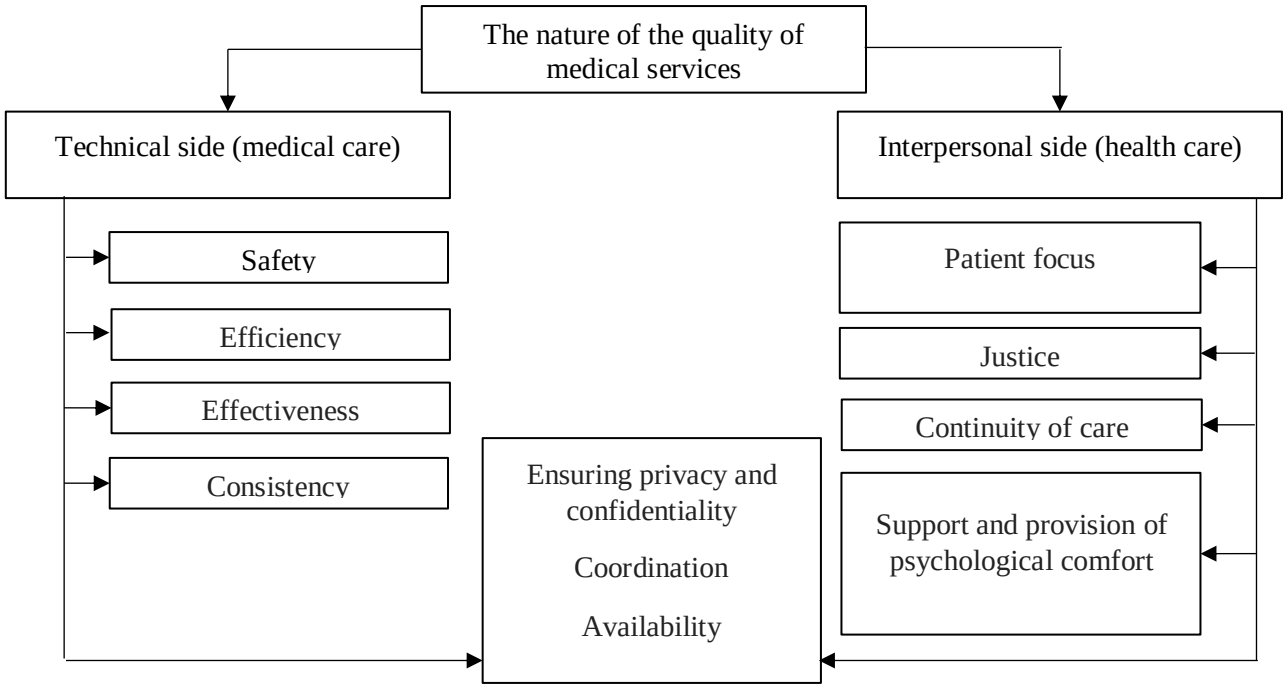

Figure 1.3. Characteristics of the quality of medical services

[developed by the author based on[32] [33]]

The divisions presented in the diagram are arbitrary and dictated by the predominance of technical aspects in the characteristics of medical care related to the organization of processes, resources and clinical practice. Characteristics of health care emphasize interaction with patients, where the emphasis is on communication, emotional support and consideration of individual needs. However, in actual medical practice, these aspects are often intertwined - the complex nature of providing quality medical services.

Quality health care is characterized by ensuring the safety of medical procedures, medications and surgical interventions. Patient safety is about ensuring that health care services are provided without causing harm or adverse events to patients, and that systems are in place to minimize errors and improve patient well-being[34]. Effectiveness is considered in the context of applying advanced diagnostic methods and appropriate treatment, achieving desired health outcomes based on evidence-

[32] BUSSE, R., PANTELI, D., QUENTIN, W. *An introduction to healthcare quality: defining and explaining its role in health systems*. In: Improving healthcare quality in Europe, 2019. [accessed 09.12.2020]. Available at: https://www.ncbi.nlm.nih.gov/books/NBK549I277/

[33] YOUNG, M., SMITH, M. A. *Standards and evaluation of healthcare quality, safety, and person centered care*. 2022. [accessed 07.02.2023]. Available at: https://www.ncbi.nlm.nih.gov/books/NBK576432/

[34] GANDHI, T. K., et al. *Transforming concepts in patient safety: a progress report*. In: BMJ Quality & Safety, 2018, nr. 27(12), p. 1019-1026. ISSN 2044-5415.

based practice[35]. Efficiency means assessing the use of resources (time, money, personnel) to achieve the best results in medical practice. It is also important that medical practice adheres to evidence-based standards, protocols and best clinical practices[36].

For quality medical care, it is important to take into account the wishes and needs of the patient, create a trusting relationship between medical staff and the patient, and provide information. Providing equal access to health services for all groups of the population, regardless of socio-economic status or other factors, is becoming especially relevant. Coordination and consistency in the provision of medical services is also important. At the same time, support and emotional interaction with the patient are important.

Some characteristics, such as accessibility, coordination and ensuring privacy and confidentiality, may have both technical and interactional (interpersonal) aspects. Maintaining privacy and confidentiality primarily concerns the technical side, namely the development of a data protection system and ensuring the security of electronic medical records. But it also concerns ensuring comfortable interpersonal interaction between the patient and the doctor. Coordinating medical procedures, analyzing data, and managing schedules are technical, while communication between different specialists and coordinating care to ensure continuity is interpersonal. The technical side of accessibility consists of the geographical location of medical institutions, the availability of medical equipment and technical means for diagnosis and treatment. At the same time, the interpersonal sphere is reflected in the assessment of the availability of information and the patient's understanding of the services provided, ensuring the individual needs of patients.

Many researchers emphasize that the quality of medical services is influenced by many factors[37] [38]: qualifications and professionalism of medical staff, availability of equipment and technologies, organization and management of medical services, timeliness of provision of medical services, degree of patient involvement, taking into account procedures and standards.

The degree of customer satisfaction rests entirely with the medical staff[39]. This indicates the

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35 BLAGORAZUMNAYA, O., ROBU, E. *Elements of the quality management system of medical care.* In: EcoSoEn, 2023, nr. 1, p. 13-21. ISSN ISSN 2587-344X.

36 FULOP, N. J., RAMSAY, A. I. G. *How organisations contribute to improving the quality of healthcare*. In: BMJ, 2019, nr. 365. ISBN 0959-8138. DOI: https://doi.org/10.1136/bmj.l1773.

37 ZAMIR, F., JAAFAR, S., ISMAIL, M. *Factors influencing medical services quality on patient satisfaction towards loyalty*. In: International Medical University (IMU), 2022, nr.3, p. 30-39. ISSN 2519-139X.

38 MOSADEGHRAD, A. M. *Factors affecting medical service quality*. In: Iranian journal of public health, 2014, nr. 43(2), p. 210-220. ISSN 2251-6085.

39 KO, D. G. et al. *Operational efficiency and patient-centered health care: A view from online physician reviews.* In: Journal of Operations Management, 2019, nr. 65(4), p. 353-379. ISSN 0272-6963.

importance of two key aspects in ensuring the proper level of staff qualifications: quality selection and training of staff[40]. The availability of modern equipment and technology can also significantly affect the quality of medical services, as it allows for more accurate diagnosis and treatment of diseases. When organizing and managing medical services, the problem of an integrated approach to the quality of medical services arises. This is because health professionals and other stakeholders have different views on the meaning of this concept[41]. Quality improvement researchers have identified six core components common to these institutions involved in achieving results[42]: presence of visionary managers; patient orientation; problem solving in a team; involvement of doctors and medical staff in quality issues; use of a recognized process model; Aligning departments with certain criteria such as vision statement, patient expectations, etc.

The timeliness of the provision of medical services depends on the organization of the health care system, financing, resource availability, priorities, and a number of other aspects. From a government or third-party payer perspective, timeliness of health care services is associated with efficiency and efficient utilization of resources. In this context, health professionals emphasize professional competence, the adaptability of physical means to processes (technical equipment) and the consequences of these processes for the health of patients.

An analysis of various scientific sources indicates a growing interest in the quality of medical care in all its aspects, namely in the terminological definition of the concept of quality in healthcare. Despite this, there is no clear understanding of which approaches best cope with the task of managing the quality of medical services, because this is one of the main indicators of healthcare efficiency. The author has formulated her own definition of the quality of medical services, which consists in a personalized approach to each patient, based on his genetic, biological, psychological and social characteristics, taking into account compliance with the requirements of quality standards, which increases the likelihood of achieving the desired results in the field of healthcare in general and specific patients in in particular.

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[40] ZAHARIA, R., et al. *Association of the physician's perceived communication style with patient satisfaction, distress associated with cancer self-efficacy and perceived disease control over the disease.* In: British journal of cancer, 2003, nr. 88(5), p. 658-665. ISSN 658-665.

[41] GARDNER, J.W., BOYER, K.K., GRAY, J.V. *Operational and strategic information processing: Complementing the Healthcare IT Infrastructure*. In: Journal of Operations Management, 2015, nr. 33, p. 123-139. ISSN 0272-6963.

[42] JURAN, M.J. *Quality planning and analysis.* New York: McGraw-Hill, 1970. 640 p. ISBN 0071129928.

1.2. Characteristics of the process of assessing the quality of medical services

In today's dynamic healthcare environment, the need to provide high quality healthcare services has become increasingly urgent. Effective measurement of quality of care is becoming an integral part of the pursuit of continuous improvement of medical practice and providing the best outcomes for patients. Quality assessment in the medical field is a comprehensive approach based on objective methods and clearly defined criteria and indicators. This is not just a formal part of the quality management system, but an important component of the process of ensuring safety, efficiency and patient satisfaction.

The purpose of this paragraph is to identify and systematize fundamental methodological approaches, methods, types and types of assessing the quality of medical services. This provides a reasonable basis for carrying out an objective and comprehensive assessment of the quality of medical practice as part of the design of a quality management system for medical services. The results of the study provide an opportunity to carefully identify specific scenarios and contexts in which each of the presented approaches to assessing the quality of health services can be most effectively applied.

Evaluating the standard of healthcare services is a crucial component within the framework of quality management. How effectively it will be carried out depends on the decision-making of the heads of medical institutions regarding improving the provision of medical services, increasing patient focus and strengthening the positioning of medical institutions in the market. Assessing the quality of medical services allows you to systematically analyze, measure and improve the processes and structure of medical practice, ensuring optimal patient care. The author analyzed the different views of researchers on determining quality assessment in the field of medicine. From among them, several directions can be distinguished in determining the assessment, which are presented below.

Assessing the quality of medical services is a systematic research activity aimed at measuring and evaluating the processes and results of a medical service in order to determine the degree to which patients' expectations meet the standards of medical practice[43]. This definition emphasizes the importance of measuring the processes and outcomes of a health care service and takes into account two key aspects of quality assessment: patient expectations and medical standards.

This opinion is shared by another author, noting that assessing the quality of medical care is the process of collecting and analyzing information to determine the degree of patient satisfaction with

[43] MCDONALD, K. M., SCHULTZ, E. M., CHANG, C. *Evaluating the state of quality-improvement science through evidence synthesis: insights from the closing the quality gap series*. In: The Permanente Journal, 2013, nr. 17(4), p. 52-61. ISSN 1552-5775.

medical care, as well as the compliance of this care with established medical standards and indicators[44].

It is worth giving another definition, according to which assessment of the quality of medical care is a set of measures to determine the degree of compliance of the actual medical care provided with accepted norms and standards[45]. In this case, the role of the consumer as a person dictating the level of quality is excluded, and the assessment is based on checking compliance exclusively with established norms and standards.

Assessing the quality of medical care can also be considered as a process of measuring the quality of the activities of medical structures, processes and results using certain criteria and methods in order to improve the quality of healthcare as a whole[46]. This definition highlights the importance of measuring both structural and procedural aspects of health care in order to improve the overall quality of health care.

As can be seen from the analyzed definitions, quality assessment is considered broadly - as a systematic research activity, and more narrowly as a measurement process, a set of activities, a process of collecting and analyzing information. Based on this, the author made an attempt to create her own definition of assessing the quality of medical services in order to specify and at the same time generalize the various approaches of researchers on this issue. According to the author, assessing the quality of medical services is a multidimensional and systematic process, including the collection and analysis of information about the structure, processes and results of the provision of medical services using targeted methods and tools focused on measuring the degree of compliance with the expectations and needs of patients, high medical standards, as well as innovative practices. In this way, the existing theoretical framework will be complemented by a more complete definition.

In general, the aim of evaluating the quality of healthcare services is to guarantee a superior level of safety and excellence in healthcare, while also addressing patient requirements and perpetually enhancing the healthcare system. Thus, assessment is necessary to achieve the following

[44] DONABEDIAN, A. *The quality of care: how can it be assessed?* In: Jama, 1988, nr. 260(12), p. 1743-1748. ISSN 0098-7484.
[45] HANEFELD, J., POWELL-JACKSON, T., BALABANOVA, D. *Understanding and measuring quality of care: dealing with complexity*. In: Bulletin of the World Health Organization, 2017, nr. 95(5), p. 368. ISSN 0042-9686.
[46] BERWICK, D. M. *Quality comes home*. In: Annals of Internal Medicine, 1996, nr. 125(10), p. 839-843. ISSN 0003-4819.

quality aspects of a health service[47]: Improvement of medical processes (identify bottlenecks and optimize procedures to improve the efficiency of patient care); improving safety (identify potential risks and errors associated with medical practice and make adjustments to the system); patient satisfaction (taking into account patient opinions and expectations); maintaining medical standards (ensuring practice conforms to evidence-based recommendations and procedures); application of innovations; efficient resource management.

Summarizing the above points, from the author's point of view, it becomes obvious that the assessment of the quality of healthcare services is carried out to ensure patient safety, improve the healthcare system from various points of view (resources, innovation, process of healthcare delivery) and check compliance with quality standards. It is worth adding to this that conducting quality assessments improves the transparency and openness of the medical system, which contributes to the trust of patients and society. Assessing the quality of medical services and managing the quality of medical services are interconnected processes aimed at ensuring a high standard of medical services. Quality assessment serves as a tool for implementing and maintaining the effectiveness of the quality management process. First of all, assessing the quality of health care services helps to identify needs and problems, areas where there are shortcomings or discrepancies between expectations and actual practice. These results then become the basis for establishing standards and criteria for the quality of medical services. Quality management involves developing medical standards, procedures and criteria that must be met. Quality assessment, on the one hand, serves as a source for development, and on the other, uses these standards as a basis for comparison and evaluation of actual practice. Thus, health care quality assessment plays a key role among the elements of quality management, providing information for defining, planning, implementing and maintaining quality health care.

The classic procedure for assessing the quality of medical services includes the steps of the algorithm presented in Figure 1.4

[47] BUSSE, R. et al. *Improving healthcare quality in Europe: Characteristics, effectiveness and implementation of different strategies*. World Health Organization. Regional Office for Europe, 2019. [accessed 27.01.2023]. Available at: https://www.ncbi.nlm.nih.gov/books/NBK549260/

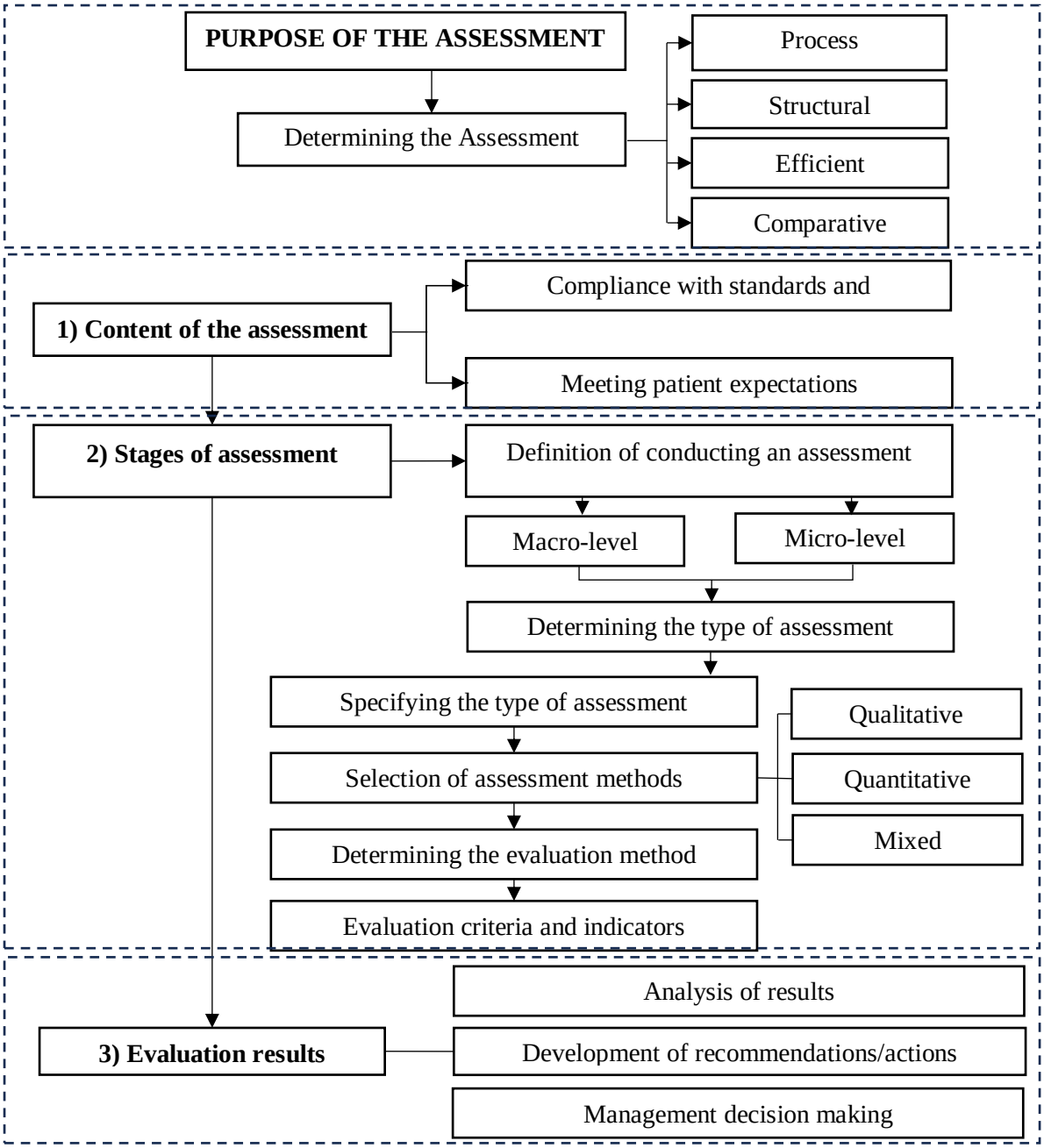

Figure 1.4. The algorithm for assessing the quality of medical services [developed by the author on the basis of [48]]

According to the WHO concept, there are three aspects of quality[49]: quality of structure; process quality; quality of outcomes. Also, the triad (methodology) of Donabedian A. seems to be the most

[48] MULESA, O. et al. *Development of models and algorithms for estimating the potential of personnel at health care institutions*. In: Восточно-Европейский журнал передовых технологий, 2019, nr. 4 (2), p. 52-59. ISSN 1729-3774.
[49] *Types of Health Care Quality Measures*. Agency for Healthcare Research and Quality, 2023. [accessed 27.01.2023]. Available at: https://www.ahrq.gov/talkingquality/measures/types.html

valid, based on a complex of structural, procedural and effective components of analyzing the quality of the medical service provided[50].

Accordingly, the measures taken to control the quality of medical care should also be considered within the framework of three components: the quality of the structure (assessment of the material and technical base, equipment, human resources), the quality of the process (the completeness and sufficiency of diagnostic, therapeutic, preventive and rehabilitation measures), the quality outcomes (assessment of the performance of a doctor, department or service, institution, health care system). According to these components, in theory there are three approaches to assessing the quality of medical services: structural, process and outcome.

Determining the Assessment. The structural approach focuses on the resources and organizational infrastructure of a country's health care facilities/health system[51]. Of the existing approaches to assessing the quality of medical services, the most complete information about the quality of the professional activities of doctors, medical departments and institutions is provided by the process approach, which is a necessary component of the modern concept of total quality management (Total Quality Management - TQM)[52]. An effective approach evaluates the achieved results and outcomes of medical services[53].

According to the author's point of view, it is necessary to add one more approach - a comparative one, since none of the listed ones contains an assessment of best practices and modern approaches to the provision of medical services. For this reason, it can become a separate approach, which is especially relevant for assessing the quality of medical services at the macro level (at the level of regions, countries, cities). The comparative approach is based on comparing medical institutions, hospitals or world experience in order to determine the best practices and exchange modern cases.

The author comes to the conclusion that it is impossible to use these approaches together, since each of them is focused on solving specific problems. Obtaining a comprehensive view of the quality of medical services is possible by analyzing various aspects of processes, structures and outcomes, as

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[50] DONABEDIAN, A. *Evaluating the quality of medical care*. In: The Milbank Quarterly, 2005, nr.83(4), p. 691-729. ISSN 0887-378X.

[51] KUNKEL, S., ROSENQVIST, U., WESTERLING, R. *The structure of quality systems is important to the process and outcome, an empirical study of 386 hospital departments in Sweden*. In: BMC health services research, 2007, nr. 7(1), p. 1-8. ISSN 1472-6963.

[52] JONES, M. R. et al. *Evaluation of a health care transition improvement process in seven large health care systems*. In: Journal of pediatric nursing, 2019, nr. 47, p. 44-50. ISSN 0882-5963.

[53] MOORE, Jr D.E., GREEN, J.S., GALLIS, H.A. *Achieving desired results and improved outcomes: integrating planning and assessment throughout learning activities*. In: Journal of continuing education in the health professions, 2009, nr. 1, p. 1-15. ISSN 0894-1912.

well as conducting comparative analyzes, and is realized subject to the need for a generalized assessment, for example, to formulate hypotheses, determine patterns, form theoretical concepts, etc. In other scenarios, the best practice would be to choose a specific approach in order to achieve the objective of assessing the quality of medical services. This will provide highly specialized and accurate analysis, which, in turn, will make it possible to formulate specific recommendations for quality improvement.

Based on the chosen approach, the type, methods and ways of assessing the quality of medical services are determined. Types classify areas of assessment, and types specify specific aspects within each area, then methods define general assessment strategies, and methods define specific steps. Types of assessment of the quality of medical services determine the areas or aspects that are assessed[54].

These are more general categories or areas that help classify different aspects of healthcare and those that can be studied. Types of assessment may include clinical judgment, patient safety, patient experience, treatment effectiveness and outcome, compliance with medical standards, resource utilization, and many others.

Types of assessment of the quality of medical services represent specific subcategories within each type of assessment[55]. These are more granular breakdowns that help you focus on specific aspects of healthcare within a selected category. For example, within the "patient experience" type there may be types such as satisfaction with service, availability of information and services. The types within the type of assessment of the quality of medical services can be described in more or less detail depending on how comprehensive the analysis is necessary.

Methods for assessing the quality of medical services are a system, procedures or approaches that are used to assess and measure the quality of a medical service [56]. At the moment, there is no single unified method and no single appropriate criteria for assessing the level of quality of medical care[57]. Methods for assessing the quality of medical services are traditionally divided into qualitative,

[54] LEE, D. H., KIM, K. K. *Assessing healthcare service quality: a comparative study of patient treatment types*. In: International Journal of Quality Innovation, 2017, nr. 3(1), p. 1-15. ISSN 2363-7021.
[55] FRANKEL, B. A., BISHOP, T. F. *A cross-sectional assessment of the quality of physician quality reporting system measures*. In: Journal of general internal medicine, 2016, nr. 31, p. 840-845. ISSN 15251497.
[56] RAHIMI, M., SOLYMANI, F. *Quality Assessment Methods of Hospital Services from the Viewpoint of Patients Based on Standard Assessment Models in Iran: A Narrative Review*. In: Modern Care Journal, 2022, nr. 19(3), p.106-117. ISSN 2423-7876.
[57] ENDESHAW, B. *Healthcare service quality-measurement models: a review*. In: Journal of Health Research, 2021, nr. 35(2), p. 106-117. ISSN 2586-940X.

quantitative and mixed[58], which is presented in Figure 1.5.

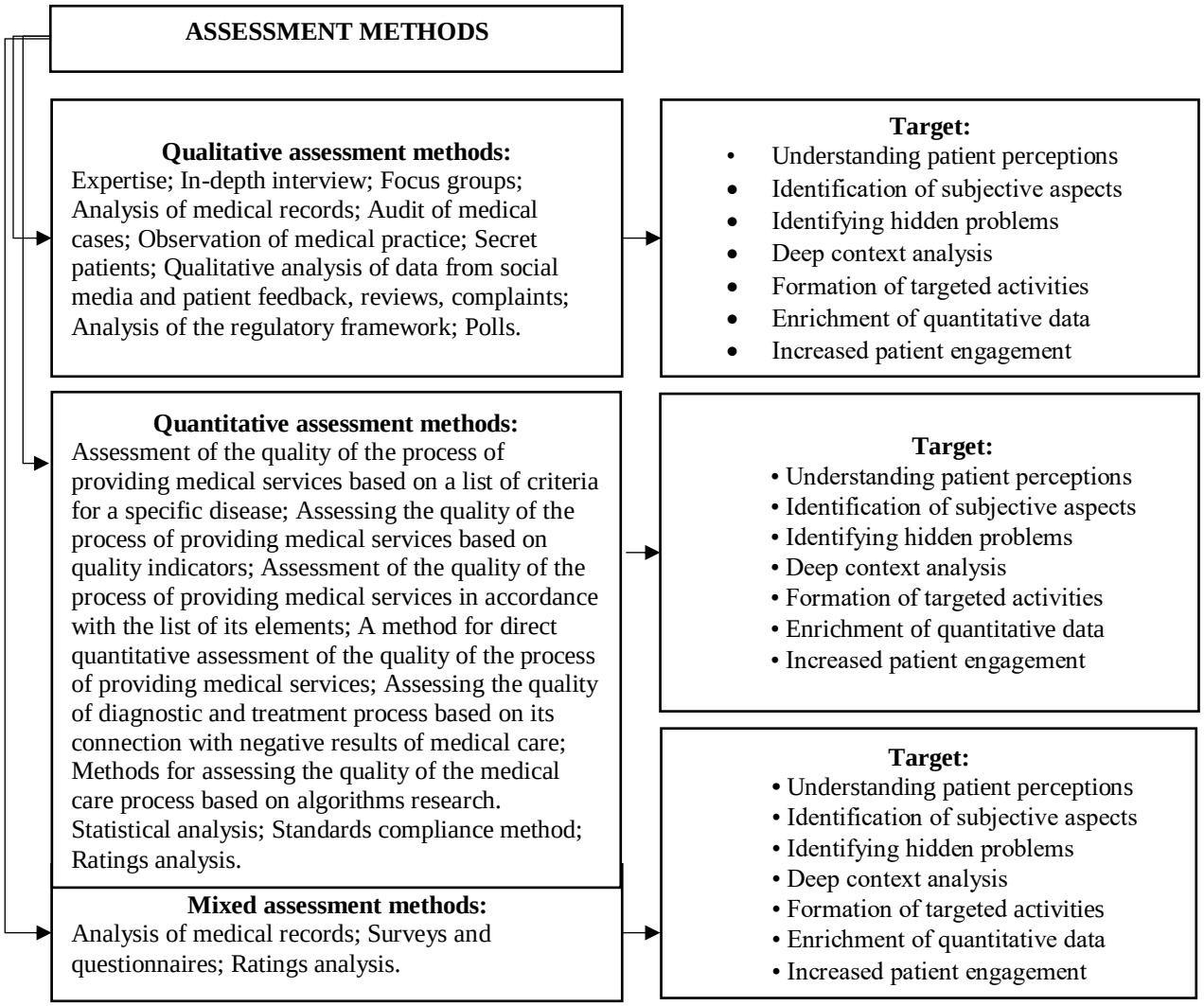

Figure 1.5. Methods for assessing the quality of medical services [developed by the author based on [59] [60]]

The use of both types is mandatory to achieve objectivity of results. To ensure high quality assessment, a variety of **qualitative assessment methods** are used: examination, in-depth interviews, focus groups, analysis of medical records, audit of medical cases, observation of practice, use of secret patients, analysis of data from social media and feedback, study of reviews and complaints, analysis

[58] BOWLING A. *Research methods in health: investigating health and health services*. McGraw-hill education (UK), 2014. 512 p. ISBN 978-0-3352-6274-8.
[59] CURRY, L. A., NEMBHARD, I. M., BRADLEY, E. H. *Qualitative and mixed methods provide unique contributions to outcomes research*. In: Circulation, 2009, nr. 119(10), p. 1442-1452. ISSN 0009-7322.
[60] RENJITH, V. et al. *Qualitative methods in health care research*. In: International journal of preventive medicine, 2021, nr. 12, p.20-28. ISSN 20088213.

of the regulatory framework, etc. (Appendix 1). Qualitative methods for assessing the quality of health care services enrich the understanding of many aspects that may be missed in purely quantitative assessments. In-depth interviews, regulatory analysis, review and inspection of physical infrastructure, and other qualitative methods provide the opportunity to identify the subjective opinions, expectations, experiences and emotions of patients, medical staff and other stakeholders.

However, the use of only qualitative methods may limit the objectivity of the assessment. **Quantitative assessment methods**, in turn, provide a structured and numerical basis for comparison and analysis. They allow you to measure and standardize results, identify trends and identify statistically significant differences: a method for assessing the quality of the process of providing medical services based on a list of criteria for a particular disease; a method for assessing the quality of the process of providing medical services based on quality indicators; a method for assessing the quality of the process of providing medical services in accordance with the list of its elements; method of direct quantitative assessment of the quality of the process of providing medical services; a method for assessing the quality of the diagnostic and treatment process based on its connection with negative results of medical care; a method for assessing the quality of the medical care process based on research algorithms; method of statistical analysis; method of compliance with standards; method for analyzing ratings in the field of medicine (Appendix 2).

While examining various quantitative and qualitative methods used to assess the quality of medical services provided to a community, it became clear that to solve various problems it is advisable to use various combinations of methods. In this way, a unique research design will be compiled, adapted to achieve the goal of assessing and solving a particular task or problem.

The scope of some methods is limited to the ability to solve specific problems. A number of methods can be used for a preliminary analysis of the situation in order to identify potential problems in the quality of medical services and set expert tasks, as well as to monitor the state of the quality of medical services and intermediate control of the effectiveness of management decisions made. Methods focused on obtaining information on more specific issues can be used to solve this problem with or without restrictions.

In addition to qualitative and quantitative methods, there are also **mixed approaches** that combine elements of both types of analysis. Mixed methods assessment combines both qualitative and quantitative aspects, which allows for a more complete and in-depth understanding of the phenomena under study: a method of analyzing medical records; survey; questionnaire; analysis of

ratings (Appendix 3). Mixed methods research allows you to combine the advantages of both approaches and obtain a more comprehensive view of the assessed aspects of the quality of health services. Each of the above methods has a set of tools and special application techniques. Methods for assessing the quality of health care services are the specific tools, techniques or methodologies that are used within the selected methods to collect data and information. These are more specific steps to take within the chosen method. For example, using a questionnaire to interview patients, checklists to analyze medical documents, etc.

The described stages of assessing the quality of medical services are relevant both for the macro level (regions of the world, countries) and for the micro level (hospitals, healthcare institutions).

Macro-level health care quality assessment is a systematic and comprehensive study of the status and effectiveness of health care at a broader geographic and demographic level, such as a region or a country. This process is aimed at assessing the entire healthcare system as a whole and includes the analysis of many parameters, indicators and factors that affect the overall quality of the medical service provided. The purpose of such assessment is that it helps shape health strategies and policies, optimize resource allocation, improve health system efficiency, and ensure better health outcomes for populations at the regional or national level. Based on the analyzed theoretical studies regarding the approaches, types, types, methods and methods of assessing the quality of medical services, the author developed a structure for conducting such assessment at the macro/micro level. Based on the analyzed theoretical studies, the author has developed a structure for assessing the quality of medical services at the macro and micro levels, in which x presents the relationship of approaches, types, types, methods and methods of assessment (Appendix 4).

Micro-level assessment of the quality of medical services is the process of systematically and comprehensively assessing the quality of the provided medical service at the level of individual medical institutions, for example, hospitals, clinics or medical centers. Evaluation is carried out with the goal of creating more efficient and quality health care services for patients and ensuring the successful functioning of health care facilities. The author has developed a structure for conducting assessments at the micro level (Appendix 5).

The problem of assessing the quality of medical services has become not only one of the important, but also difficult tasks directly related to health policy and strategy. According to the author, it would be methodologically more correct not to simply combine many different methods (qualitative and quantitative), but to develop a conceptually sound approach to assessing the quality

of medical services, which would systematize theoretical concepts and combine methods and tools into a certain mechanism in accordance with the goals and objectives facing the healthcare system or hospital. Various approaches and methods are used to assess the quality of medical services. The choice of method depends on the goals and objectives of assessing the quality of medical services. The author presented a comprehensive overview of the approaches and methods that are used to assess the quality of medical services and provides a brief description of each method, which allows us to get a general idea of how the quality of medical services is assessed.

1.3. The role of management tools in improving the quality of medical services

Healthcare quality management tools play a direct and critical role in providing and maintaining high levels of healthcare services and patient satisfaction. Today's realities of medical practice dictate the need for a systematic approach to quality management, within which a wide range of tools and associated mechanisms and methodologies become integral elements of the successful functioning of healthcare organizations.

The purpose of this paragraph is to identify the role of management tools in improving the quality of medical services through their analysis and systematization, as well as to identify their impact on ensuring and improving the standards of medical services. The theoretical study will examine the principles of using quality management tools, their impact on various aspects of medical practice, as well as the prospects and challenges facing medical organizations in improving the quality of medical services.

The author examined various definitions of the concept of quality management of medical services. During the analysis, similarities and features of these definitions were identified, which made it possible to more deeply understand the essence of quality management of medical services and its important role in ensuring the efficiency and safety of healthcare.

Quality management of medical services includes the organization and control over the activities of the healthcare system in meeting the needs of the population in receiving quality medical care[61].

This definition is quite comprehensive and broad, covering key aspects of the organization and control of the health system. These aspects are aimed at ensuring that medical services meet high

[61] European Union. *The management of health systems in the EU Member States-the role of local and regional authorities*, 2012. 127 p. ISBN 978-92-895-0717-2.

quality standards, as well as meeting the growing needs of the population for effective and safe medical care.

Another definition is that in modern conditions, the quality management system of medical care is a set of management structures and algorithms of actions aimed at providing patients with quality medical care[62].

This system is based on the following principles: the use of evidence-based medicine; conducting an examination of the quality of medical care based on medical standards (protocols); the use of administrative, economic and legal methods to manage the quality of medical care; analysis of cost-effectiveness of costs to achieve the optimal level of quality of medical care; conducting sociological monitoring of the quality of medical care.

Another interesting point of view is that health care quality management is a set of strategies, processes and tools used to assess, control and improve the quality of health care, including the development of standards, staff training and patient feedback[63] [64]. In this case, the definition emphasizes that managing the quality of health care services includes a wide range of activities, ranging from the establishment of standards and procedures, as well as the training of health care personnel and interaction with patients. The main emphasis is on processes of assessment, control and continuous improvement to ensure continuous improvement in the quality of services. Quality management in the field of medicine is a systematic approach to managing the quality of medical services, which includes the design, development, implementation and control of quality assurance processes in a medical organization[65] [66]. It follows that the goal of quality management in medicine is to achieve the maximum level of quality of medical services provided and patient satisfaction. Another view is that quality management in medicine is an integrated approach to managing a medical institution, aimed at providing the most effective and high-quality medical care to patients[67]. The

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[62] ХАБРИЕВ, Р.У., СЕРЕГИНА, И.Ф. *Контроль и надзор - неотъемлемые элементы обеспечения доступности и качества медицинской помощи.* В: Здравоохранение, 2006, № 1, с. 23 – 25. ISSN

[63] LEE, T., PORTER, M. *The strategy that will fix healthcare*. In: Harvard Business Review, 2013, nr. 91, p. 1-19. ISSN 0017-8012.

[64] KIENY, M. P. et al. *Delivering quality health services: a global imperative for universal health coverage*. Washington, DC: World Bank Group, 2018. 99 p. ISBN 978-92-4-151390-6.

[65] SPATH, P., KELLY, D. L. *Applying quality management in healthcare: A systems approach*. Chicago: Health Administration Press, 2017. 280 p. ISBN 978-1567938814.

[66] SEELBACH, C. L., BRANNAN, G. D. *Quality management*. In: StatPearls [Internet], 2023. [accessed 11.12.2022]. Available at: https://www.ncbi.nlm.nih.gov/books/NBK557505/

[67] KORZHOVA, G. A. *Improving an integrated approach to managing a medical organization*. In: Conference GCPMED 2020 Global Challenges and Prospects of the Modern Economic Development, December 15-16, 2020. European Proceedings of Social and Behavioural Sciences, p. 900-906. ISSN 2357-1330. DOI:10.15405/epsbs.2021.04.02.107

presented view of quality management in medicine emphasizes its importance as an integrated and targeted approach to the management of medical institutions. The main goal of this view is to achieve maximum efficiency and a high level of quality in the provision of medical care to patients.

Quality management of medical services is aimed at meeting the needs of patients, increasing efficiency[68] and quality of medical activities[69]. The presented definition of healthcare quality management emphasizes its priority on meeting the needs of patients, which is a central aspect of medical practice. Focusing on the consumer, in this case the patient, emphasizes the need to create conditions for the provision of medical care that not only meets the standards, but also satisfies the individual expectations and requirements of each patient.

Quality management in the medical field is the process of managing the resources and processes necessary to ensure a high level of quality of medical services, meeting the needs of patients and achieving the business goals of a medical institution[70]. The presented definition of quality management in the medical field will indicate its role as a systematic and targeted approach to managing resources and processes in medical institutions. Emphasis is placed on the importance of providing a high level of quality in health care services, which includes not only medical efficiency, but also patient satisfaction and achievement of business goals. In general, all these definitions have a common basis, which is a management system aimed at meeting patient needs and reaching a high level of quality of healthcare services. However, each author highlights his own characteristics and emphasizes various aspects of this process: a process approach, systemic, comprehensive, focuses on the consumer or the content of the medical service, which is the focus of the management process.

Based on the analysis of the definitions of quality management of medical services, we can conclude that they are aimed at achieving the following objectives: improving the quality of services (through compliance with standards and monitoring their compliance); meeting the needs of patients (while taking into account expectations and striving to meet them); ensuring efficient use of resources (when optimizing their use). The objectives facing the management of the quality of medical services are achieved through the use of various management tools, the correct application of which allows

[68] DREIHER, D., ROBU, E. *Quality management in healthcare: concepts, principles and standards*. In: The international scientific conference „The modern paradigms of the national and global economy development" 30 – 31.10. 2020. Chisinau: Moldova State University, 2020, p.26-33. ISSN 978-9975-152-70-9.
[69] ABBASI-MOGHADDAM, M. A. *Evaluation of service quality from patients' viewpoint*. In: BMC health services research, 2019, nr. 19(1), p. 1-7. ISSN 1472-6963.
[70] BUTTIGIEG, S. C., DEY, P. K., GAUCI, D. *Business process management in health care: current challenges and future prospects*. In: Innovation and Entrepreneurship in Health, 2016, nr.3, p. 1-13. ISSN 2324-5905.

medical institutions to increase the efficiency and quality of the services they provide.

At the present stage of development, there has been a transition from simple quality control to quality management in the medical field. Quality management of medical services reflects a deeper understanding that achieving and maintaining a high standard of medical services requires a more systematic and multifaceted approach. Simple monitoring, although important for detecting deviations from established standards, is limited to identifying problems, not always providing a comprehensive understanding of possible ways to solve them.[71] Quality management provides the opportunity to more actively influence processes and take measures aimed at continuous improvement and optimization. The transition from control to quality management served as the basis for the reasoning of authors and expert organizations on the content of the quality management of medical services. There is a need to reveal what types of activities are included in the concept of quality management of medical services. According to Juran, quality management of medical services occurs through three processes: planning, control, improvement. These processes make up Juran's "quality triad"[72], presented in Figure 1.6.

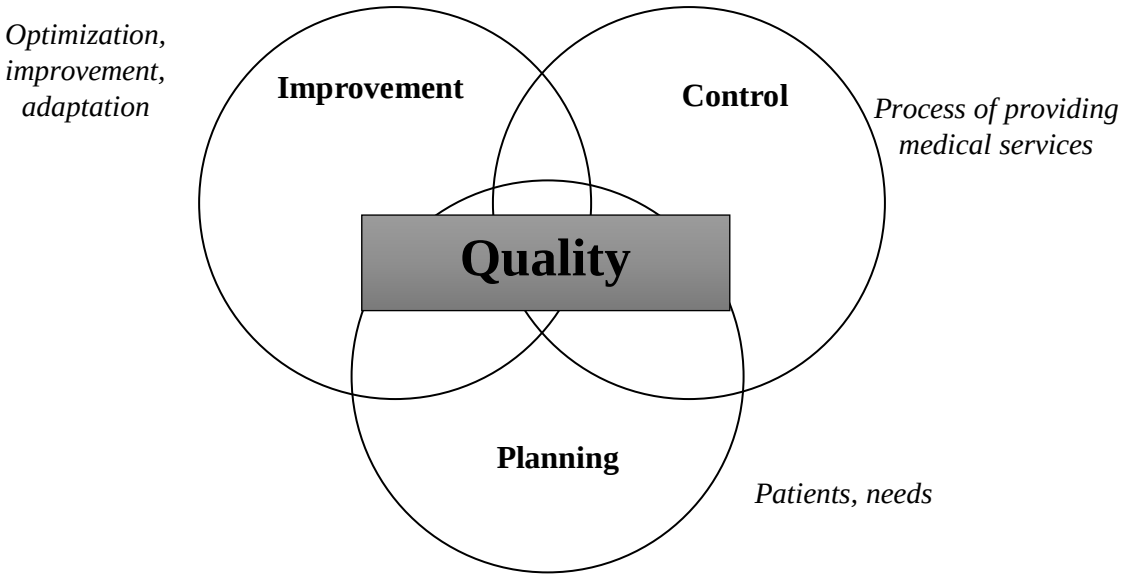

Figure 1.6. Juran's Triad [developed by the author based on[73]]

Quality planning is about identifying potential customers and how to best meet their needs. Quality control is about maintaining the core process in good condition. Quality improvement is about

[71] OZARKAR, A. *Quality Control of Healthcare Systems*. In: Journal of Multidisciplinary Engineering Science and Technology (JMEST) 2016, nr. 3(12), p. 6272-6280. ISSN 2458-9403.
[72] JURAN, J. M. *The quality trilogy*. In: Joseph M. Juran: critical evaluations in business and management, 2005, nr. 19, p. 54. ISBN 978-0415325714.
[73] JURAN, J.M, GODFREY, A.B, HOOGSTOEL, R.E, SCHILLING, E.G. *Juran's quality handbook*. New York: McGraw–Hill, 1999. 1698 p. ISBN 0-07-034003-X.

optimization, improvement and adaptation. Also, according to several authors, the transition from control to planning, control and improvement of quality through the process of quality management served as the impetus for the formation of an industrial model of quality management. The scheme of the industrial model is presented graphically in Figure 1.7.

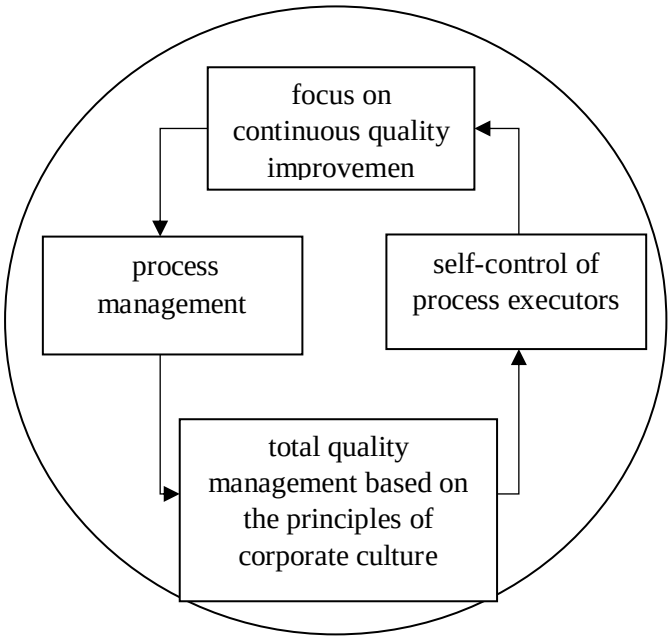

Figure 1.7. Scheme of the industrial model of quality management [developed by the author based on[74]]

The basis of the industrial model of quality management is a model of continuous quality improvement (CQI) adapted to healthcare[75], model based on the following management principles[76]: constancy of purpose; new philosophy (complete rejection of traditional management methods and implementation of changes); exclusion of mass inspection control; purchase only high-quality equipment and supplies; continuous improvement of each of the processes; continuous professional development of staff; the establishment of leadership as the main form of management as opposed to collective forms; eliminating punishment and fear as a way of relationships between the manager and staff; eliminating barriers to work between departments and developing horizontal connections; rejection of slogans and appeals; rejection of arbitrary standards in favor of standards developed on the basis of in-depth scientific analysis and the experience of specialists; providing employees with

[74] FUKEY, L. N. et al. *Service delivery quality improvement models: a review*. In: Procedia-Social and Behavioral Sciences, 2014, nr. 144, p. 343-359. ISSN 1877-0428.
[75] MAYER, T. A. *Industrial models of continuous quality improvement: implications for emergency medicine*. In: Emergency medicine clinics of North America, 1992, nr. 10(3), p. 523-547. ISSN 0733-8627.
[76] DEMING, W.E. *Out of the crisis, reissue*. MIT press, 2018. 448 p. ISBN 0262535947.

the opportunity to be proud of the results of their work; encouraging the pursuit of education; management's unwavering commitment to quality improvement. Based on this, the author of the model identifies four main characteristics of the industrial model of quality management: focus on continuous quality improvement; the basis of quality management is process management; total quality management is implemented based on the principles of corporate culture; rejection of external control in favor of self-control of process performers[77]. One of the main features of the industrial model is the universal participation of the organization's employees in quality management. In a medical organization, along with doctors, nurses, orderlies, transport teams, and support staff play an important role in ensuring quality. This idea is confirmed in the Japanese model of quality management by K. Ishikawa[78], in which quality management begins with quality training of all staff and ends with staff training[79]. Currently, the industrial model of quality management remains the most widespread in the global community. The theory also describes two more models of quality management of medical services: professional and administrative[80]. The professional model of quality management is a form of management that has developed in the medical environment, where the quality criterion is the individual professional skill of a medical worker, the level of his theoretical knowledge and practical skills[81].

This management model, based only on the intuitive thinking of the doctor, turned out to be ineffective in the provision of high-tech types of medical care that require the coordinated participation of a large number of specialists in various specialties and increasing the intellectual level of medical work.

The administrative (bureaucratic model) of quality management of medical services is based on two conceptual approaches to quality management: standardization of the scope of work and results of medical care and quality inspection control[82]. Health authorities are responsible for overseeing the management of healthcare service quality, administration and heads of medical and diagnostic units

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[77] TILLINGHAST, S.J. *Can Western quality improvement methods transform the Russian health care system?* In: The Joint Commission journal on quality improvement. 1998, nr. 24(5), p. 280–298. ISSN 1070-3241.

[78] HARSOYO, R. *Model Pengembangan Mutu Pendidikan (Tinjauan Konsep Mutu Kaoru Ishikawa).* In: Southeast Asian Journal of Islamic Education Management, 2021, nr. 2(1), p. 95-112. ISSN 2716-0599.

[79] *Contributions of Kaoru Ishikawa to Quality Management Essay*. [accessed 15.09.2021]. Available at: https://ivypanda.com/essays/contributions-of-kaoru-ishikawa-to-quality-management/

[80] PILIGRIMIENĖ, Ž., BUČIŪNIENĖ, I. *Exploring managerial and professional view to health care service quality*. In: Ekonomika ir vadyba, 2011, nr.16, p. 1304-1315. ISSN 2424-337X.

[81] PRICE, D. *Continuing medical education, quality improvement, and organizational change: implications of recent theories for twenty-first-century CME*. In: Medical Teacher, 2005, nr. 27(3), p. 259-268. ISSN 0142159X.

[82] ANDREASSON, J. et al. *Professional bureaucracy and health care managers' planned change strategies: Governance in Swedish Health Care*. In: Nordic Journal of Working Life Studies, 2018, nr. 8(1), p. 23-41. ISSN 22450157.

of health care institutions. The organizational and administrative approach, based on the authority of the authorities (decrees, instructions, duties, etc.), predominates, while retaining all the attributes of a professional management model.

The above quality management models are only a part of all existing ones. Therefore, it was advisable to analyze the whole variety of quality management models. The author noted the advantages and disadvantages of these models in the context of their application in ensuring the quality of medical services (Appendix 6).

A variety of quality management models and their adaptation to the medical field proves that quality management of medical services plays a crucial role, both for a particular medical institution and for the healthcare system as a whole. The organization of quality management processes for medical services helps medical institutions improve the quality of services provided, meet the needs of patients and increase the efficiency of their activities.

Summarizing theoretical studies, it is possible to single out certain types of activities within the framework of quality management of medical services: quality planning and design; quality assurance; quality control; quality improvement (Appendix 7). These types of activities for quality management of medical services are directly related to quality management tools, which in turn dictate the use of certain criteria and indicators to evaluate the result of management. Each of the management functions is aimed at optimizing processes and resources, as well as ensuring continuous improvement in the quality of medical services[83]. The planning function allows you to define the design of quality, plan and define strategic goals and objectives, and develop action plans to achieve a high level of quality. The function of the organization includes structuring medical processes, resources and personnel in a way that ensures efficiency and consistency of activities[84]. An effective motivation function, combined with employee training and development, contributes to increased professionalism and responsibility. The control and coordination function is aimed at ensuring the proper execution of all stages of the medical process and compliance with established quality standards.

Quality planning and design, quality assurance, quality control, and quality improvement are the activities of managing the quality of healthcare services. Types of activities for managing the

[83] TULCHINSKY, T. H., VARAVIKOVA, E. A. *Planning and managing health systems*. In: The New Public Health, 2014. 912 p. ISBN 978-0124157668.
[84] HAMIDI, Y., ZAMAN, P. A. *Quality management in health systems of developed and developing countries: which approaches and models are appropriate?* In: Journal of Research in Health Sciences, 2008, nr. 8(2), p. 40-50. ISSN 22287809.

quality of medical services are presented in the form of successive stages through which a medical organization must pass if it has set the goal of improving the quality of medical services. The author believes that it is worth emphasizing the need to use certain quality management tools, as well as measure the effectiveness of each stage using indicators. This is necessary, since the management process is not just the implementation of management itself, but also preparation and assessment of the effectiveness of this complex process.

Quality management tools for medical services are a set of specialized methods, techniques, techniques and technologies used by medical organizations to design, ensure, measure and control, improve and ensure a high level of quality of products, services and processes[85]. It follows that the purpose of using healthcare quality management tools is to ensure continuous improvement of processes, minimize variances, satisfy patient requirements and ensure efficient functioning of the hospital. Quality management tools provide a means to measure and analyze quality criteria.

Quality criteria for medical services are measurable and evaluable characteristics of medical services that determine their degree of compliance with established standards, requirements and expectations of patients. Quality criteria help determine how well services perform their function, provide safety, efficiency and meet user needs[86].

Thus, management tools and quality criteria for medical services are closely interrelated. Tools help measure, analyze and improve quality criteria, while quality criteria define the standards and expectations to be strived for when using tools.

It is important to note that the use of criteria is not enough to fully manage and assess healthcare services and their quality; you also need specific quality indicators. Quality criteria are general characteristics or requirements that define what makes a healthcare service itself or the process of providing it "quality" or "good" from both a consumer and a technical point of view. Quality criteria indicate which aspects must be met to consider the outcome of a health care service to meet patient expectations or quality standards[87]. Examples of quality criteria for medical services include reliability, safety, efficiency, customer satisfaction, etc. Quality indicators are specific, measurable

[85] World Health Organization et al. *Improving the quality of health services: tools and resources*. 2018. 59 p. ISBN 978-92-4-151508-5.
[86] ZHAO, B., ZHANG, R., XING, Y. *Evaluation of medical service quality based on a novel multi-criteria decision-making method with unknown weighted information*. In: Archives of Control Sciences, 2021, nr. 31(3), p. 645-685. ISSN 2300-2611.
[87] LEE, W. I., CHEN, C. C., HUANG, Y. B. *Establishing the Criteria for the Quality of Elderly Medical Care From the Multiple Perspectives*. In: Research Anthology on Supporting Healthy Aging in a Digital Society. – IGI Global, 2022, p. 133-143. ISBN 9781668457566.

parameters or values that are used to quantify the degree to which a medical service or process meets established quality criteria[88]. Examples of health service quality indicators may include wait time, repeat visit rate, compliance with standards, success rate of procedures or surgeries, etc.

Next, the author consistently reviewed the types of activities for managing the quality of medical services, and argued for the use of tools, criteria and quality indicators that correspond to them. As part of **quality planning and design**, strategic goals and directions for improving the quality of the medical service provided are determined. This type of activity includes the development of goals, standards, procedures and plans. An important part of this activity is the definition of quality criteria and indicators that will be used to evaluate the success of processes and results. Clinical protocols, safety standards, staff training plans, and other aspects are also reviewed at this stage. Quality design consists of the following elements: identifying the target group of consumers of medical services; studying consumer requests; determining the result that meets consumer needs; development of the mechanism necessary to achieve the result of quality management.

Quality engineering tools are a group of methods used in quality management to create products and processes that maximize customer value[89]. From the name of these quality tools it is clear that they are used at the first stage of creating design and quality planning. Common tools at this stage include marketing research tools (expert assessment, focus groups, questionnaires, surveys and others). These tools will help you study consumers, understand their needs and develop the mechanism necessary to achieve the expected result[90]. Next, direct quality engineering tools are used, which include the following: quality function deployment (QFD); theory of solving inventive problems; benchmarking; heuristic techniques (Appendix 8).

Quality assurance is determined by the types of activities planned and implemented within the framework of the quality management system for medical services. Activities to ensure the quality of medical services require: an appropriate legislative and regulatory framework for regulating mechanisms for ensuring the quality of medical services; structures and resources (human, financial, material and information) in accordance with the regulatory framework; technological and performance standards; effective control over the implementation of medical technologies, etc. This

[88] HAUGLAND, H. *Developing quality indicators for physician-staffed emergency medical services: a consensus process*. In: Scandinavian journal of trauma, resuscitation and emergency medicine, 2017, nr. 25, p. 1-8. ISSN 17577241.
[89] FEREDAY, S. *A guide to quality improvement tools*. HQIP, 2020. 30 p. ISBN NO 978-1-907561-05-4.
[90] JOHNSON, J. K., BARACH, P. *Tools and strategies for continuous quality improvement and patient safety*. In: Surgical Patient Care: Improving Safety, Quality and Value, 2017, p. 121-132. ISBN 9783319440088.

type of activity includes the following elements: development and implementation of process standards; conducting staff training; creation and maintenance of a document management system; establishing quality control procedures; monitoring and analysis of the results of medical processes.

Quality assurance tools are a set of tools that allow you to organize, structure information collected at the quality design stage and apply it to make informed management decisions in the field of ensuring the quality of medical services[91]. Most often, quality assurance tools are used to solve problems that arise during the design phase, although they can also be used at other stages of the life cycle. Such quality assurance tools include the following: training and education of personnel; affinity diagram; link diagram; tree diagram; matrix chart; process decision program chart (PDPC); network diagram (Gantt chart); priority matrix (Appendix 9). The use of these tools can help healthcare institutions more systematically and effectively manage the quality of healthcare services, as well as identify, solve problems and improve processes.

Quality control is aimed at continuous monitoring and evaluation of activities in order to identify problems and deviations, as well as take corrective measures[92]. This type of activity is determined by the fact that a system of operational measures is created that makes it possible to assess the implementation of the main components of the quality of medical services. The medical care quality control system consists of three elements: control participants; controls; control mechanisms. There are several approaches to monitoring the quality of medical services (Appendix 10). Approaches (medical, systems, patient-centered, etc.) use various tools to assess the quality of health services, which may vary depending on the specific task and context. Quality control tools are a group of tools that allow you to make management decisions. Most of the tools used for control are based on the methods of mathematical statistics. The most commonly used are simple statistical quality control tools, called the “seven tools of quality” or “seven tools of quality control.” These instruments were selected by Japanese Scientists and Engineers (JUSE). The peculiarity of these tools is their simplicity, clarity and accessibility for understanding the results obtained. Seven graphical tools for monitoring the quality of medical services include the following: histogram; Pareto chart; control chart; scatter plot; stratification; check sheet; Ishikawa diagram (Appendix 11). These tools help medical organizations systematically monitor the quality of medical services provided, as well as identify and

[91] ANTONY, J., MCDERMOTT, O., SONY, M. *Revisiting Ishikawa's original seven basic tools of quality control: a global study and some new insights*. In: IEEE Transactions on Engineering Management, nr.99, p.1-16. 2021. ISSN 0018-9391.
[92] AGGARWAL, A., AERAN, H., RATHEE, M. *Quality management in healthcare: The pivotal desideratum*. In: Journal of oral biology and craniofacial research, 2019, nr. 9(2), p. 180-182. ISSN 2212-4268.

solve problems that arise. To use the presented tools, no deep knowledge of mathematical statistics is required, and therefore they can be easily mastered through simple and short training.

Quality improvement is an ongoing cycle of continuous improvement in healthcare processes and services. In the process of improving the quality of medical services, two interrelated and interdependent components are clearly visible: a constant increase in the very level of standards (protocols) for patient management; a continuous process to achieve these standards. This type of activity of the medical service quality management process includes the following elements: data analysis; research, audits; application of various improvement tools and methodologies. Quality improvement tools include the following: Six Sigma; Lean Management; Theory of Constraints; Total Quality Management; Continuous improvement; DMAIC; PDCA; Hoshin Kanri; Value Stream Mapping (Appendix 12).

The presented tools are a set of methodologies and approaches that can help healthcare organizations strive for continuous improvement and achieve a high level of quality in the services they provide. Based on the analysis of quality management tools in the context of medical services, the author developed a diagram presented in Figure 1.8.

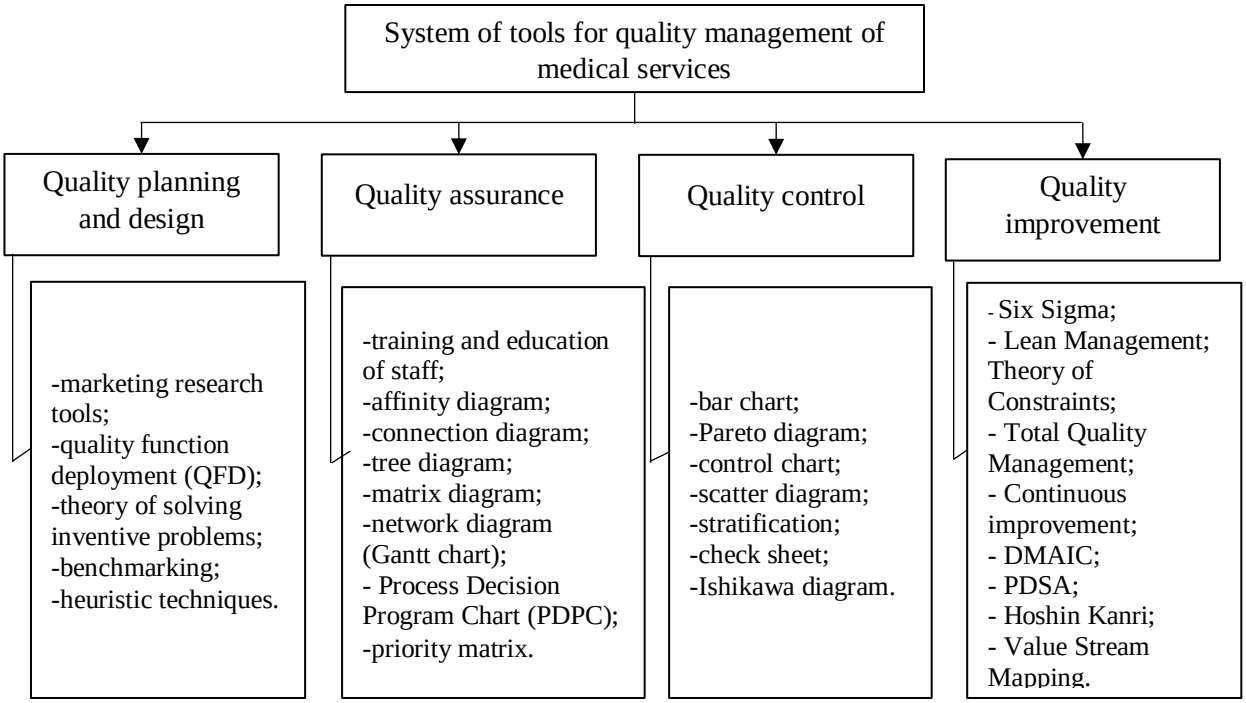

Figure 1.8. Diagram of tools for managing the quality of medical services [developed by the author]

The presented diagram of tools for managing the quality of medical services emphasizes their diversity. The tools can be used to plan for providing a high standard of healthcare and to monitor and

improve the quality of healthcare services. From planning to improvement, each tool plays a role in creating reliable, efficient and safe healthcare processes. The harmonious combination of these tools helps to provide quality medical services that meet the needs and expectations of patients.

From the theoretical material analyzed by the author, it follows that the process of quality management of medical services includes four sequential types of activities: quality planning and design, quality assurance, quality control, quality improvement. It is important to choose a well-chosen set of quality management tools that corresponds to one or another initial and expected situation in a medical institution in relation to quality management.

1.4. Conclusions to the first chapter

1. Based on the theoretical research and analysis of the conceptual apparatus of medical services, the author clarified the concept of quality of medical services. The quality of medical services, according to the author, is a personalized approach to each patient, based on his genetic, biological, psychological and social characteristics, taking into account compliance with the requirements of quality standards, which increases the likelihood of achieving the desired results in the field of healthcare in general and specific patients in in particular.

2. The relationship between the characteristics of the quality of medical services and medical care and medical care is presented, taking into account the dual nature of the quality of medical services, according to which, when providing these services, it is necessary to take into account technical (medical care) and interpersonal (medical care) aspects.

3. Assessing the quality of health care services helps to identify needs and problems, areas where deficiencies exist or discrepancies between expectations and actual practice. These results then become the basis for establishing standards and criteria for the quality of medical services. Subsequently, quality assessment, on the one hand, serves as a source for development, and on the other, uses these standards as a basis for comparison and evaluation of actual practice.

4. The procedure for assessing the quality of medical services includes determining the goals, objectives, choosing an approach to assessment, determining the type, type, selection of methods and methods of assessment, conducting research, collecting and analyzing data, identifying problems and points of development, developing measures to solve problems. These stages of assessing the quality of medical services are relevant both for the macro level (regions of the world, countries) and for the micro level (hospitals, healthcare institutions).

5. The relationship between management functions, types of quality management activities and tools for managing the quality of medical services is revealed. Each management function and activity is associated with certain tools for managing the quality of medical services. According to the author, based on this interaction, it is advisable to build a unified quality management plan, which can help coordinate the work of medical personnel and ensure that processes comply with established quality standards.

2. RESEARCH METHODOLOGY

2.1. Research methodology

Scientific research methodology is a fundamental aspect of the scientific process that allows the researcher to take a systematic approach to understanding the field under study and creating new knowledge. Scientific research methodology is a set of strategic and tactical methods that are used by researchers in the process of conducting scientific research[93]. As the basis for the methodology of this scientific research, the author identified methodological paradigms, research goals, formulated a scientific hypothesis, methods of data collection and analysis, and developed a research plan.

The author used the structure of the dissertation research methodology presented in Figure 2.1.

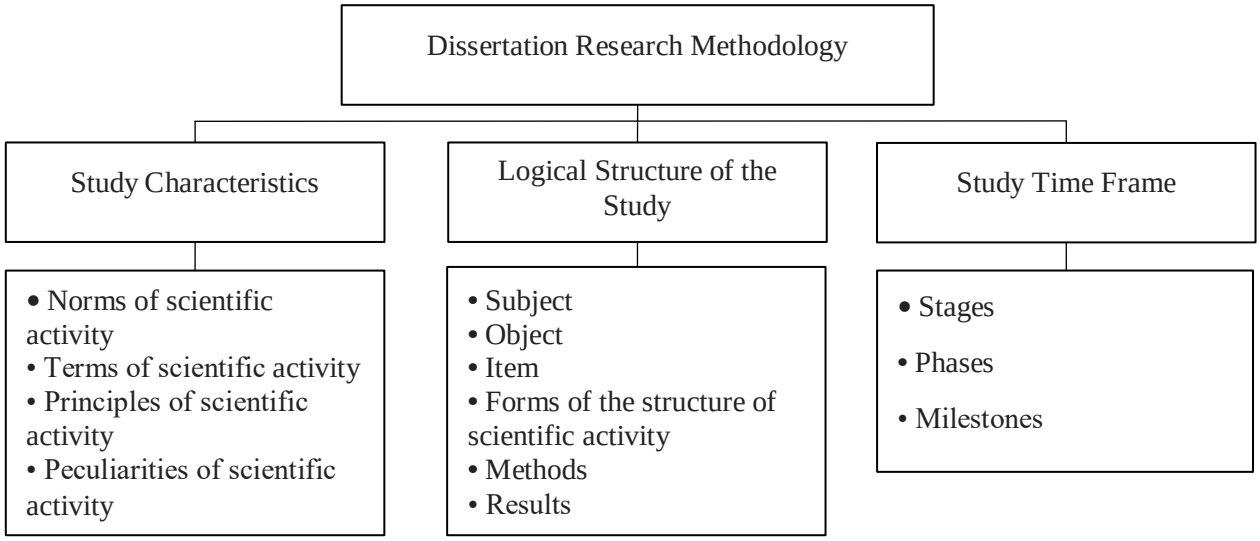

Figure 2.1. Methodology of scientific research in dissertation [developed by the author]

One of the key aspects of scientific research methodology is the choice of overall research approach. Qualitative research can be useful for gaining in-depth understanding of social phenomena and processes, while quantitative research is used to obtain more precise and quantitative data[94]. As part of this dissertation research, the author selected a mix of quantitative and qualitative research and, accordingly, the most appropriate methods of data collection (analysis of statistical data, analysis of thematic ratings, surveys, interviews, observation, questionnaires, secret patient, etc.). When choosing data collection methods, the author took into account the purpose and objectives of the study, the nature of the phenomena being studied and possible limitations.

[93] PATEL, M., PATEL, N. *Exploring Research Methodology*. In: International Journal of Research and Review, 2019, nr. 6, p. 48-55. ISSN 2349-9788.
[94] SMAJIC, E., AVDIC, D., PASIC, A. *Mixed Methodology of Scientific Research in Healthcare*. In: Acta Informatica Medica, 2022, nr. 3, p. 57-60. ISSN 03538109.

Another important aspect of scientific research methodology is the choice of data analysis methods. The author used various methods of data analysis, such as statistical analysis, content analysis, qualitative analysis and others. In addition, the dissertation research methodology includes defining criteria for assessing the quality of the research. The researcher must take into account such aspects as reliability, validity, representativeness when assessing the quality of his research[95]. This will help ensure that the results obtained are reliable and can be used in future studies. Based on the methodology of scientific research, the author developed a research plan, which includes a time frame, factor restrictions, research directions and target results.

Characteristics of the study. Scientific and research activities on this topic require high competence in the field of economics, health care and management, since these areas are interrelated. In this regard, the author must have a broad outlook, extensive knowledge and experience in the specified areas in order to conduct an in-depth analysis of the problems and potential solutions. In addition, the research work must be based on relevant and reliable data, which requires the ability to collect and analyze information. The author must also have skills in presenting and interpreting research findings to effectively present their findings and recommendations. Equally important is the ability to formulate hypotheses, develop and test models, as well as assess risks and predict the possible consequences of decisions made. All this requires high professional and research competence in order to achieve the goal of the dissertation research.

1) Norms of scientific activity.

The norms of scientific activity when writing a dissertation are established rules and requirements that must be followed by the author of the dissertation in order to ensure high quality of scientific research and the credibility of its results[96].

The author took into account the following norms of scientific activity: the integrity of scientific research, the mandatory presence of scientific novelty, the objectivity and reliability of the collected data, the reliability and accuracy of the argumentation of scientific results, ethics and respect for the rights of cited authors, openness and accessibility of research results.

2) Conditions for scientific activity

Based on the norms of scientific activity, conditions for scientific activity are built that must be

[95] PRUTHI, T., SRIVASTAVA, N., KAUSHIK, N. *Review Article Research methodology and design: A powerful tool for scientific data*. In: Journal of Advanced Medical and Dental Sciences Research, 2021, nr. 4, p. 52-57. ISSN 2348-6805.
[96] GUBANOV, N.I. *Basic norms of the scientific ethos*. In: Vestnik of Saint Petersburg University, 2021, nr.5, p. 91-97. ISSN 2587585X.

met in order to ensure high quality of scientific research and achievement of results recognized by the scientific community[97]. The conditions for scientific activity within the framework of this dissertation research included standard requirements, namely: the presence of a relevant and interesting topic that requires further research; the mandatory presence of a scientific supervisor who will monitor the progress of work and help in solving scientific problems; qualified scientific consultants who can provide support and assistance in conducting scientific research; the presence of a clear methodology and research plan that will serve as the basis for conducting scientific research; availability of literary sources necessary for scientific research; compliance with ethical and legal standards necessary for conducting scientific research, including the protection of personal data and confidentiality of information; the presence of publications, reports, reports and other forms of scientific activity that will serve as evidence of scientific results.

3) Principles of scientific activity

The author was guided by the following basic principles of scientific activity: objectivity (scientific activity in the dissertation research is based on facts and data), and not on the assumptions or prejudices of the author; systematic (the author's scientific activities were carried out systematically and consistently over four years using a research plan); reproducibility (the results of the author's scientific research are reflected in existing developments and research, as well as in works published by the author herself based on the results of the research); criticality (scientific activity was carried out with a critical attitude towards existing knowledge and assumptions of other authors and scientists, that is, the author analyzed and tested hypotheses and results of previously conducted research, as well as her own conclusions and recommendations); innovativeness (the author's scientific research was carried out with a search for new approaches to research, the author strived for new discoveries and the development of innovative methods and approaches within the framework of research work). These principles allowed the author to ensure the reliability and quality of research, obtain high-quality and relevant knowledge, and develop methods and approaches to research.

4) Features of scientific activity

The dissertation research is characterized by the following features:

- The necessity for employing various research approaches, including both qualitative and quantitative methods.

[97] SHMORGUN, I. *Fundamentals of scientific research*. In: Problems of Innovation and Investment Development, 2020, nr. 6, p. 55-60. ISSN 2224-1213.

- The need to use an interdisciplinary approach. The study of health services in public general hospitals requires a view from different perspectives, including economic, sociological, psychological and medical aspects.

- The need to consider the specific context on a national level. Israel has its own specific requirements for the organization of medical care and quality management of services in public general hospitals.

- Relevance and significance of the study. Managing the quality of healthcare services in public general hospitals in Israel is one of the key healthcare issues in the country.

Thus, taking into account these features, the author came to the conclusion that a multi-level, interdisciplinary, comprehensive research approach is needed, including analysis of the financial and economic aspects of medical activities, assessment of the quality of medical services, as well as the development of management tools for improving the quality of medical services.

The logical structure in a dissertation is a system that defines the order and ways of organizing the research, as well as the methods used to collect, process and interpret data[98]. This structure in this study is presented by the author as a chain of logically connected stages that lead to the achievement of the goals. The logical structure of scientific activity consists of several main stages. At the first stage, the author identified the research problem and formulated the goal. At the second stage, a research plan is drawn up, methods of data collection and analysis are determined. At the third stage, data was collected, and at the fourth stage, the data was processed and updated. At the last stage, the author drew conclusions and formulated recommendations for managing the improvement of service quality for general hospitals in Israel.

1) Subject: The subjects of the logical structure of the dissertation are the persons involved in the development of the study and obtaining the results: the researcher, the supervisor, scientific consultants, experts in the field of quality management of medical services and staff of Israeli hospitals.

2) Object: The object of the logical structure of scientific activity is what is studied and analyzed within the framework of scientific research[99]. The object in the context of the dissertation topic was

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98 *How to Write Research Methodology: Overview, Tips, and Techniques*. [accessed 15.10.2021]. Available at: https://research.com/research/how-to-write-research-methodology

99 DARWISH, M.A. *Methodology of scientific research and its modern divisions according to Withney, Marquis, good and scates, and Van Dalen*. In: International Journal of Cultural Inheritance & Social Sciences, 2022, nr.4, p. 65-85. ISSN 2632-7597.

the process of managing the improvement of the quality of medical services in public general hospitals in Israel, which requires a comprehensive study and development of effective management tools. In the framework of this study, the object represented the goal towards which the author's scientific activity was aimed.

3) Item: The subject in the context of the dissertation topic is the process of managing the quality of medical services in public general hospitals in Israel. In other words, the subject is a system of tools that improve the quality of medical services in public general hospitals in the country. This includes various management methods, approaches and strategies, as well as tools and technologies that can be used to improve the quality of health care in hospitals.

As a result of studying the subject of the study, the author came to the need to develop more advanced and innovative tools for managing healthcare services' quality, considering various factors which affecting the quality of these services. These factors include the qualifications of medical personnel, technical equipment of hospitals, availability of services, organization of hospital work, etc. Within the scope of the research, the author paid special attention to the quality management system of medical services at the global level. Strategic approaches and statistical data on indicators over time were studied.

4) Forms of the structure of scientific activity: The forms of the logical structure of dissertation research can be divided into main categories: conceptual, theoretical, empirical, applied. The conceptual framework was used in the initial phase of the study when data had not yet been collected and research had been conducted. It consists in formulating the author's concept or idea, on the basis of which initial hypotheses are then formulated and research methods are determined[100].

The theoretical form of the logical structure of scientific activity involves the study of a theory that explains observed phenomena and predicts the results of experiments. This form of scientific activity is often associated with the study of models and concepts that can be used to describe complex processes and phenomena and identify gaps in theory.

The empirical form represents the collection and analysis of data obtained from empirical research. It includes defining the sample, using data collection tools, processing and analyzing them. The empirical form of scientific activity requires care and precision in collecting and processing data, as well as assessing their reliability and significance.

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[100] AMEN, A. *Basic Research Methods*. [accessed 11.08.2021]. Available at: https://www.scribd.com/document/562113177/Basic-Research-Methods?language_settings_changed=English

The applied form of the logical structure of scientific activity is associated with the use of scientific research results to solve specific practical problems. It involves developing and testing ideas.

5) Research methods: The author used quantitative and qualitative types of research methods. An experimental method based on conducting certain experiments to study phenomena or processes[101]. This method allowed the author to obtain data that were used to formulate the working hypothesis of the dissertation. The historical method was used to study the evolution of phenomena and events in order to identify patterns. The statistical method helped in identifying patterns and dynamics in the study area. Peer review included a survey of experts in the field of medicine, in order to obtain qualified opinions and assessments. Comparative analysis involves comparative analysis of data and processes in different settings and contexts in order to identify differences and common patterns. The analysis of cases included a detailed study of specific cases or situations in order to identify causes and consequences.

6) The result of scientific activity: These research methods have allowed the author to obtain valuable results for science and practice. The results of scientific activity is the main product of scientific work and can take various forms, depending on the field of knowledge and the goals set[102]. In addition, the results of scientific research were presented in the form of scientific articles in scientific journals and speeches at industry scientific conferences.

Time frame of the study: The temporal structure of scientific activity is a sequence of stages, processes and events that arise and occur in the process of scientific work[103]. The phases of dissertation research include the following stages: preparatory stage (analysis of the subject area, problem definition, formulation of goals and objectives of hypotheses and development of a research plan); data collection stage (collection of information and data); data processing stage; stage of interpretation of the results (testing the validity of the hypothesis, realizing the purpose of the study); stage of writing a dissertation and preparing for defense.

Scientific research methodology plays an important role in the creation of new knowledge and scientific progress. Developing a proper methodology has helped the author to overcome various problems that may arise during the process of writing a doctoral dissertation and also improve the

[101] *The Research Methods Handbook*. [accessed 15.05.2021]. Available at: https://go-gn.net/wp-content/uploads/2020/07/GO-GN-Research-Methods.pdf
[102] UGWU, C., EZE, V. *Qualitative Research*. In: International Digital Organization for Scientific Research, 2023, nr.2, p. 20-35. ISSN: 2579-0803.
[103] MEISSEL, K., BROWN, G. *Quantitative Research Methods*. In: NZCER, 2022, nr.3, p. 45-53. ISSN 0110-6376.

quality of the results obtained.

The research methodology includes three parts: characteristics, structure and time frame of scientific research. This involves going through the main stages that are tied to the period of writing the dissertation: preparatory, data collection, data processing, interpretation of results, writing the dissertation and preparing for the defense.

In addition, scientific research methodology includes important aspects such as hypothesis testing, the use of theoretical and empirical methods of data analysis, and consideration of ethical standards. All these steps must be carried out in strict accordance with established scientific standards and requirements for writing a doctoral dissertation to ensure the accuracy and reliability of the results obtained.

2.2. Basic research methods

Research methods are an integral part of any scientific work. These methods may vary depending on the specific goals and objectives of the study, as well as on the chosen theoretical and methodological framework. It is also important to consider possible limitations in resources and data availability. The author presents a diagram of scientific research in Figure 2.2.

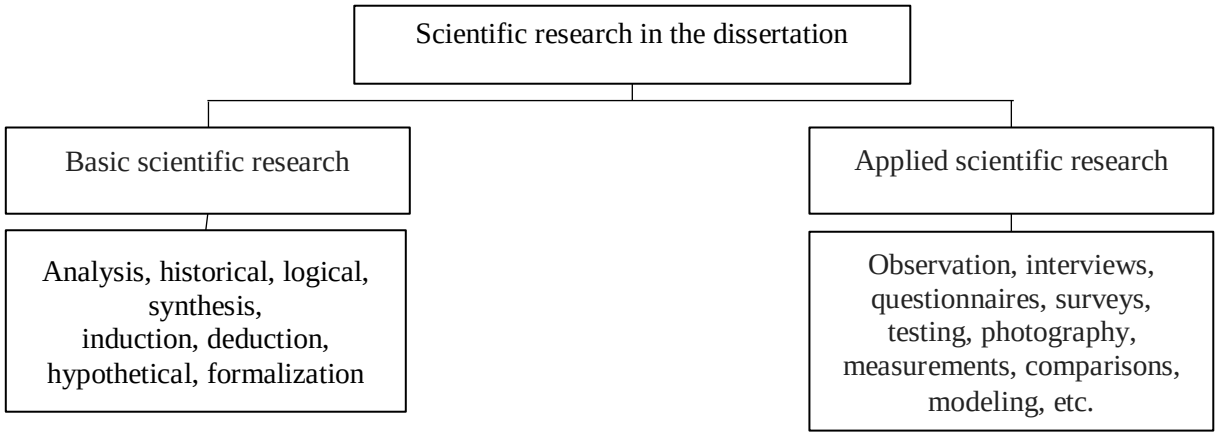

Figure 2.2. Scientific research in the dissertation [developed by the author]

Fundamental methods of scientific research are methods that underlie scientific knowledge and are used in many fields of science. These methods are highly general and abstract and are important tools for developing new theories, concepts and models[104].

The fundamental methods used in this dissertation research are the following: analysis,

[104] IGWENAGU, C. *Fundamentals of research methodology and data collection*. New York: Lambert Academic Publishing, 2016. 240 p. ISBN 978-3-659-86884-9.

historical, logical, synthesis, induction, deduction, hypothetical, formalization.

Analysis is a research method that is used to decompose a complex object into simpler elements and study their interaction. The analysis can be qualitative or quantitative. Qualitative analysis focuses on identifying the qualitative features of an object, while quantitative analysis uses mathematical methods to describe the quantitative characteristics of an object. Analysis is often used in science to identify patterns and principles underlying an object[105].

Historical research allows you to study historical phenomena, events and processes in the dynamics of their development. This method consists of collecting, analyzing and interpreting historical sources such as documents, artifacts, letters, memoirs, etc.[106].

The logical method, based on the use of logical laws and rules for analyzing and constructing logical chains of reasoning and conclusions, includes such sub-methods as deduction, induction, abstraction and formalization[107]. The logical method was used to construct rigorous and logically sound evidence and conclusions. He helped the author logically analyze data, find connections and patterns between them, and test hypotheses.

The abstraction method is the process of identifying and generalizing common features or properties of objects or phenomena, ignoring their specific details and differences. This method was necessary when it was necessary to identify general patterns or trends hidden behind many details.

Synthesis is a research method that is used to combine individual elements into a holistic system, creating a new object based on existing elements and connections between them. Synthesis has been used to create new solutions and technologies, as well as to improve and optimize existing ones.

Induction is a research method that is used to derive general patterns based on the analysis and generalization of particular cases. Induction was used to find general patterns in large amounts of data or observations. This method made it possible to formulate conclusions based on experience and generalization of data, which is key for scientific research.

A hypothetical method was also used, based on the creation of new assumptions, hypotheses, to identify cause-and-effect relationships between phenomena. A hypothesis is a scientific guess that is tested and confirmed or disproved through experiment or observation. The continuation used the

105 DEEPTI, V. *Basic Methods of Medical Research*. In: The National medical journal of India, 2023, nr.4, p. 35-41. ISSN 0970-258X.
106 WALLIMAN, N. *Research Methods: The Basics*. London: Routledge, 2021. 340 p. ISBN 9780367694074.
107 RAUDELIUNIENE, J. *Basic Research Methods*. London: Springer International Publishing, 2018. 250 p. ISBN 978-3-319-74172-7.

method of deduction, which is used for logical deduction from a general situation to particular cases. This method was used by the author to test the hypothesis.

A method of formalization, that is, turning unstructured data into formal models. This method allows you to create precise and formal definitions of objects and processes that can be used to study their properties of objects of study.

The author has developed an optimal sequence of fundamental methods of scientific research, which depends on the purpose and object of research. For the purpose of a general understanding of the logical connection between fundamental methods, the author provides a comparison of the classical and optimal sequence of application of fundamental research methods (Appendix 13).

The optimal sequence differs from the classical one in that it takes into account the context and goals of the study. For example, historical analysis can be useful when studying long-existing objects/phenomena, but is not applicable to new objects/phenomena, which is especially important for the rapidly evolving field of medicine. The optimal sequence proposed by the author involves first identifying the essential features of the research object, and then identifying patterns and developing a hypothesis. In general, optimal sequencing involves a more flexible and individualized approach to the study, which can improve the quality of the study and the results.

However, fundamental methods need to be supported by applied methods. These are methods used to solve practical problems that arise in various fields of science, technology, economics, social sphere and other areas of human activity. One of the basic principles of applied methods is the use of the results of fundamental research to solve practical problems. Therefore, the author paid special attention to the development and application of methods that were used to solve practical problems. Applied methods in this dissertation research include the following: observation, in-depth expert interview, questionnaire, survey, testing, photography, measurement, comparison, experiment, modeling.

Observation is a method of obtaining information about phenomena and processes, which consists of a systematic study of an object, collecting and analyzing data about its properties and behavior[108]. The method was used to obtain reliable results when conducting observations under controlled conditions, taking into account all possible factors that may influence the results.

An expert interview (in-depth interview) is a data collection method in which the researcher

[108] MCLEOD, S. *Qualitative Vs Quantitative Research: Methods & Data Analysis*. [accessed 15.05.2021]. Available at: https://www.simplypsychology.org/qualitative-quantitative.html#:~:text=The%20results%20of%20qualitative%20methods,act%20within%20the%20social%20world

asks questions of a research participant to obtain qualitative information about their experiences, opinions, and attitudes. Interviews were conducted both in person and remotely (video conference). A written survey method was also used. The questionnaire contained open and closed questions, as well as rating scales. In addition to the questionnaire, a survey (testing) was used in an oral, unstructured form.

Measurement was used to determine the quantitative characteristics and measurements of objects and phenomena in units of measurement, which was especially important in the analysis of statistical data. In combination with measurement, the comparison method was used as a method of scientific research, which is used to compare two or more objects, phenomena, processes, digital data phenomena in order to identify similarities, differences and features.

Rating analysis was used to assess and comparatively analyze the quality of medical services in different countries of the world; indicators of the quality of medical services within the Israeli healthcare system were assessed, as well as the rating of public general hospitals, which through certain indicators characterized the quality of medical care and service.

The modeling method consists of creating a model of an object, system or phenomenon in a simplified form for analyzing and predicting their behavior. Simulations have been used to study complex processes that are difficult to study in real-world settings.

In dissertation research, the use of applied research methods plays an important role in obtaining specific results and in developing practical recommendations for use in medical practice when managing the quality of services. At the same time, to achieve the most effective results, it is necessary to consistently apply applied research methods (Appendix 14).

The selection and consistent application of applied methods is essential to achieving the desired results in the dissertation. The classical sequence of applied methods is suitable for the initial organization and design of the study, which can help to obtain a wider range of data. However, this sequence does not take into account the specifics of a particular study, and therefore is not always optimal. In turn, the optimal sequence of applied methods is optimized by the author for conducting research in the field of medicine and can lead to more accurate and useful results.

The author has developed optimal sequences for conducting fundamental and applied research, which involves the use of both quantitative and qualitative research methods. The importance of the harmonious application of these methods lies in the fact that it allows you to get a more complete and accurate understanding of the phenomena and processes studied in the framework of the study. Thus,

the optimal combination of various research methods contributes to improving the quality of scientific research and its results.

2.3. Approaches to the analysis and presentation of research results

Analysis and presentation of research results are an important part of the process of scientific knowledge. After the study, it is necessary to analyze and interpret the data obtained, as well as present the results in a convenient and accessible form. To do this, in scientific practice there are several approaches to the analysis and presentation of research results, each of which has its own advantages and disadvantages. In this paragraph, the author considered the main approaches to the analysis and presentation of research results in the framework of this dissertation.

There are many approaches to the analysis of the results of scientific research, each of which can be applied depending on the specific task of the study. The author applied the most common approaches to the analysis of the results of a scientific study:

- ✓ Quantitative analysis - an approach that is based on a statistical analysis of data obtained during the study. Quantitative analysis was employed to establish relationships among variables and investigate disparities among groups, assess the likelihood of events, etc.
- ✓ Qualitative analysis - an approach that is based on the analysis of textual data obtained during the study. Qualitative analysis was used to identify trends, thematic analysis, assess qualitative characteristics, etc.
- ✓ Combined analysis - an approach that combines quantitative and qualitative analysis to better understand the results of the study. Combined analysis was used to confirm or refute hypotheses, investigate causal relationships, assess the influence of factors on the results, etc.
- ✓ Meta-analysis - an approach that allowed us to combine the results of several studies on the same topic to obtain generalized conclusions. Meta-analysis was used to identify common patterns and trends, as well as evaluate the effectiveness of various methods and technologies.

Each of these approaches has its own advantages and limitations, which the author took into account when using them and is presented in Table 2.1. This table provides a brief comparison of the main advantages and disadvantages of the four approaches used by the author to analyze the results of scientific research. Quantitative analysis allows the use of statistical methods to process and analyze

data, which makes it possible to obtain accurate and objective results [109]. However, it is not flexible enough to account for all differences in studies, and it may not be possible to collect enough data for statistical analysis. Qualitative analysis, in turn, allows you to get a deep understanding of the phenomenon under study and reveal unexpected aspects, but is subjective due to the influence of the researcher on the result and does not take into account contextual information[110].

Table 2.1. Advantages and disadvantages of approaches to analyzing the results of scientific research [developed by the author]

	Quantitative Analysis	Qualitative analysis	Combined analysis	Meta-analysis
Advantages	- Allows you to use statistical methods for data processing and analysis	- Allows you to gain a deep understanding of the phenomenon under study	- Combining quantitative and qualitative data allows you to gain a more complete understanding of the phenomenon	- Allows you to analyze multiple studies and highlight common patterns
	- Allows you to get accurate and objective results	- Allows you to identify unexpected aspects of the phenomenon under study	- Allows the use of a variety of data, including qualitative data that cannot be measured quantitatively	- Makes it possible to synthesize the results of many studies to obtain more accurate and generalized conclusions
Flaws	- May not take into account contextual information	- May be subjective due to the influence of the researcher on the result	- Can be difficult to use due to differences in methods	- May not be flexible enough to accommodate all differences across studies
	- It may not be possible to collect sufficient data for statistical analysis	- May not take into account all opinions of the persons studied	- Can be difficult to interpret due to differences in data types	- Can be costly to use and time consuming

Combined analysis combines quantitative and qualitative data, which allows you to get a more complete picture of the phenomenon. However, this approach is relatively difficult to use due to differences in methods and data types. Meta-analysis allows you to synthesize the results of many studies to obtain more accurate and generalized conclusions, but is time consuming and difficult to interpret due to differences in studies. In general, the choice of approach to the analysis of the results of scientific research depended on the tasks set, the methods used and the types of data obtained. To

109 CARDENAS, C. E. et al. *Prospective qualitative and quantitative analysis of real-time peer review quality assurance rounds incorporating direct physical examination for head and neck cancer radiation therapy*. In: International Journal of Radiation Oncology Biology Physics, 2017, nr. 98(3), p. 532-540. ISSN 1879-355X.

110 KÖTTER, T., BLOZIK, E., SCHERER, M. *Methods for the guideline-based development of quality indicators-a systematic review.* In: Implementation Science, 2012, nr. 7, p. 1-22. ISSN 1748-5908.

a greater extent, the author used a combined analysis, since a mix of different approaches led to more objective complete results. Scientific research does not end once the results are obtained. An important step is analyzing and presenting the results. Any scientific research ends with the presentation of the results, as a logical conclusion to the research process. In order to present the results of a scientific study, the author used the following two approaches:

1. Scientific articles and publications. Scientific articles and publications contain a detailed description of the research process and results, as well as the interpretation of the data obtained. Publications allow researchers to share knowledge and the results of their research with other scientists and the general public.

2. Presentations. This is the most effective way to communicate the main results of the research to the target audience. The dissertation defense presentation included graphs, tables, charts, data visualizations and other elements that helped visualize the results.

In addition, interactive forms of presentation of scientific research results, such as websites, multimedia applications and other forms that allow users to interact with data and receive information in a more interactive format, have become increasingly important[111]. The author considered the possibility of using these approaches, but in the case of continued research in this area.

Methods for analyzing results and methods for presenting scientific research are closely related because the choice of analysis method can influence how the results are presented, and the choice of presentation method can influence how the results are understood and interpreted by target audiences. In addition, there are various methods for presenting the results of scientific research, which have their own characteristics and require a certain approach. In this context, it is important to understand that the choice of methods for analyzing results and presentation methods depends on the purpose of the study, its audience, the type of data and other factors. The correct choice of methods and their appropriate harmonious combination can provide a more complete and accurate representation of the results of scientific research. The relationship between methods of analysis and presentation of scientific research results is presented in Table 2.2.

The table demonstrates the relationship between methods for analyzing results and methods for presenting the results of scientific research.

[111] ROBERT, K.Y. *Qualitative Research from Start to Finish. New York: The Guilford Press*, 2016. 386 p. ISBN 978-1-4625-1797-8.

Table 2.2. The relationship between methods for analyzing results and methods for presenting the results of a scientific study [developed by the author]

Methods for analyzing results	Methods for presenting results
Quantitative Analysis	Graphs, charts, tables
Qualitative analysis	Quotes, cases, thematic maps
Combined analysis	Infographics, charts, tables
Meta-analysis	Review articles, meta-analyses
Discourse analysis	Content analysis, verbal portraits

The choice of methods for analyzing and presenting results depends on the specific field of study and requires appropriate data analysis and the experience of the researcher. Combination analysis can combine both quantitative and qualitative analysis to provide a more complete understanding of the data being studied.

2.4. Conclusions to the second chapter

1. It has been determined that the methodology of scientific research, which is an important element of scientific knowledge, plays an important role in the development of a dissertation. It includes characterization, logic structure and time frame. The research stages, according to the methodology, must be completed in accordance with established scientific standards and ethical norms.

2. Optimal methods and their sequence of use are proposed, which include quantitative and qualitative analysis. The importance of using these methods in a harmonious manner is that they can provide a more complete and accurate understanding of the phenomena and processes being studied in the research. Combining different research methods helps improve the quality of scientific research and its results.

3. It was revealed that approaches to analyzing and presenting research results can be different and the choice of methods depends on the goals of the study, the type of data and the target audience. Quantitative analysis, qualitative analysis, mixed analysis, meta-analysis are the main methods of analyzing the results of scientific research. At the same time, methods of presenting results, such as graphs, diagrams, tables, infographics, can help present the results of the study in the most visual and understandable form.

4. It is recommended to select methods for analysis and presentation of results reasonably in accordance with the objectives and goals of the study. It is also important to consider possible limitations of analysis and presentation methods (such as data bias or lack of information content) and carefully select methods for analyzing and presenting research results.

3. ANALYSIS OF THE DEVELOPMENT OF THE MARKET FOR MEDICAL SERVICES IN ISRAEL IN THE CONTEXT OF QUALITY ASSURANCE

3.1. Comparative analysis of healthcare systems in terms of improving the quality of medical services in countries around the world

Annually, approximately 5.7 to 8.4 million individuals lose their lives as a result of inadequate healthcare in low- and middle-income nations, accounting for up to 15% of total deaths in these countries. Lost productivity due to poor quality care in these countries is estimated at approximately $1.4–1.6 trillion per year. In this regard, the quality of health services is critical to achieving effective universal health coverage. As countries commit to achieving health for all, it is critical to ensure that health services are effective, safe and people-centered.

The author conducted quantitative research, expressed in the study of ratings and statistical data, and qualitative research, which made it possible to critically evaluate the healthcare systems characteristic of countries around the world in terms of ensuring the quality of medical services. This approach to research made it possible to identify trends and problems in the development of the quality of medical services in regions of the world, highlight the successful experience of countries around the world and formulate scientific conclusions.

In the modern world, the healthcare system has become one of the most important indicators of the welfare and social responsibility of states. Ratings of healthcare systems in countries around the world provide an opportunity to evaluate the quality of medical services that states provide to their citizens. The data analyzed by the author from the NUMBEO rating (the world's largest statistical database providing information on quality of life) was obtained from surveys conducted in countries around the world. The author analyzed the health care index, which is an assessment of the overall quality of the health care system, including factors such as health workers, equipment, staff, doctors and costs. The index provides an assessment of the health infrastructure, services and resources available in a particular location. The index is a tool for assessing and comparing healthcare systems in different regions and countries around the world. The author analyzed the Health Care Index in the following regions of the world: Africa, America, Asia, Europe and Oceania. The dynamics of the index in the African region from 2019 to 2023 (Appendix 15) are presented in Figure 3.1.

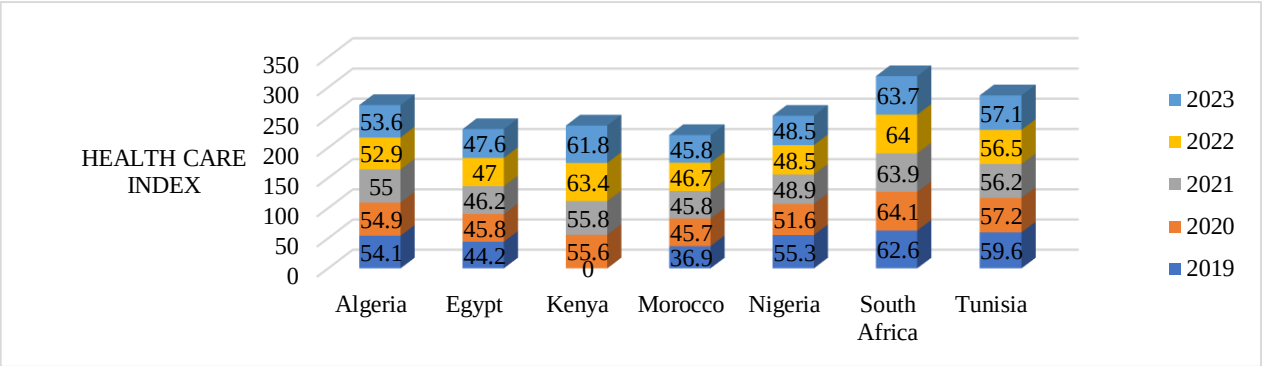

Figure 3.1. Health care index in the African region, 2019-2023 [112]

South Africa's dominant leadership over the past five years is clear. This is because healthcare in this region is characterized by gradual improvements, the introduction of modern medical technologies and disease prevention programs. Tunisia and Algeria demonstrate that countries are paying enough attention to medical infrastructure, education and access to health services. Morocco stands out for its poor performance, indicating serious health challenges. Active efforts and investments are needed to improve the medical infrastructure, increase the level of medical knowledge and ensure the availability of quality medical services to the population. However, active collaboration, sharing of experience and innovation are needed to achieve sustainable improvements in healthcare. Dynamics of the Health Care Index in America from 2019 to 2023. (Appendix 16) are presented in Figure 3.2.

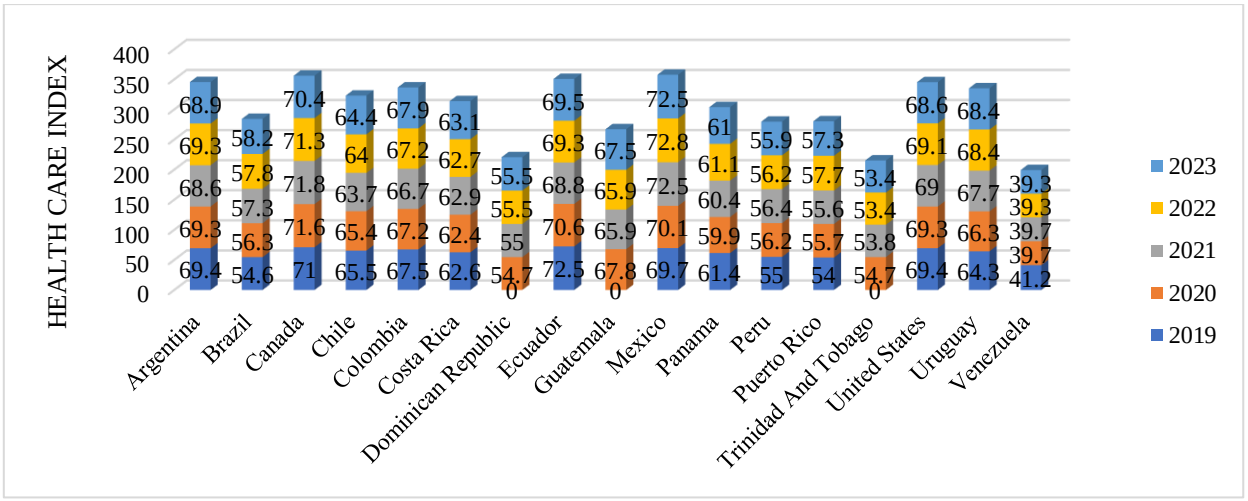

Figure 3.2. Health care index in the Americas region, 2019-2023 [113]

[112] *Rating Numbeo.* Health Care Index. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

[113] *Rating Numbeo*. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

This graph clearly shows the trend of Mexico's leadership among other countries in the region. This is due to the high level of quality of the healthcare system, which has made significant efforts to improve medical services, access to treatment and disease prevention. Then come Canada, the USA, Uruguay, and Ecuador, which are at approximately the same level of development of healthcare quality. This indicates the readiness of these countries to provide their citizens with high-quality medical services, paying attention not only to treatment, but also to prevention and a healthy lifestyle. The lowest indicators in this chart are the Dominican Republic and Trinidad and Tobago. Dynamics of the Health Care Index in Asian countries from 2019 to 2023. (Appendix 17) are presented in Figure 3.3.

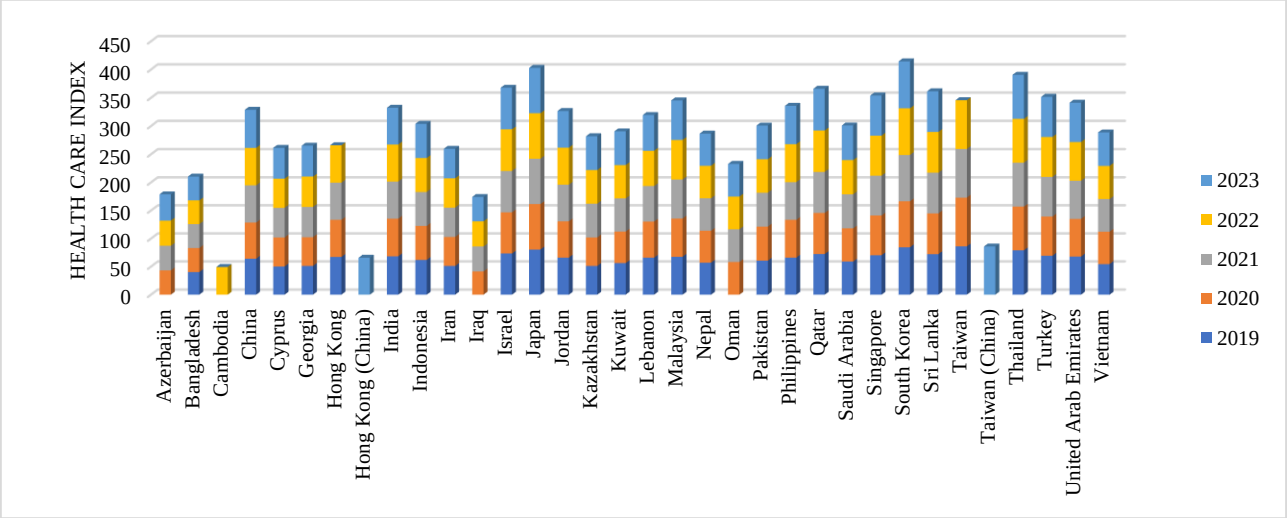

Figure 3.3. Health care index in the Asian region, 2019-2023 [114]

Steady dynamics are obvious, which indicate South Korea's significant leadership among other countries in the Asian region due to the high quality of healthcare. Next comes Japan, which also demonstrates a high healthcare index due to its innovative and unconventional methods of providing healthcare services. Israel implements advanced treatment and diagnostic methods, which helps maintain a high healthcare index, and is also actively developing medical infrastructure and scientific research in the field of medicine. Taiwan (China), Hong Kong (China) and Cambodia are noticeably behind in this chart. Data are not available for all five years, and the low health index indicates a need to improve and update health services. On average, the region has a relatively high level of development of the quality of medical services. The quality of health care services in the Asian region is characterized by a variety of achievements and innovative approaches.

[114] *Rating Numbeo*. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

Dynamics of the Health Care Index in Europe in the period from 2019 to 2023 (Appendix 18) is shown in Figure 3.4.

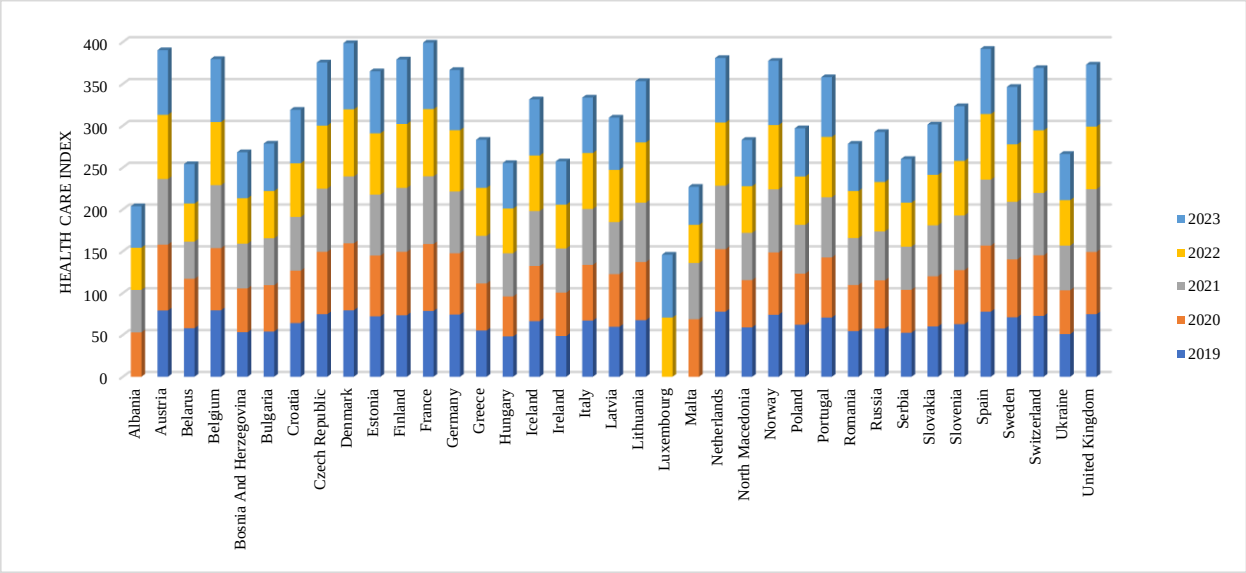

Figure 3.4. Health care index in the European region, 2019-2023 [115]

The high health care index in the European region is explained by the active implementation of innovations and the desire to maintain high quality standards in the provision of medical services. The leadership of Denmark, France, Austria and Spain over other countries in the region underlines the successful functioning of the healthcare system. An average level of development is observed in countries such as Bulgaria, Greece, Ireland, Italy, Russia, Serbia, Slovakia and others. The lowest index scores in Malta and Luxembourg are due to missing data for several years. This highlights the importance of proper statistical reporting and information sharing.

Dynamics of the Health Care Index in Oceania from 2019 to 2023. Appendix 19) is presented in Figure 3.5.

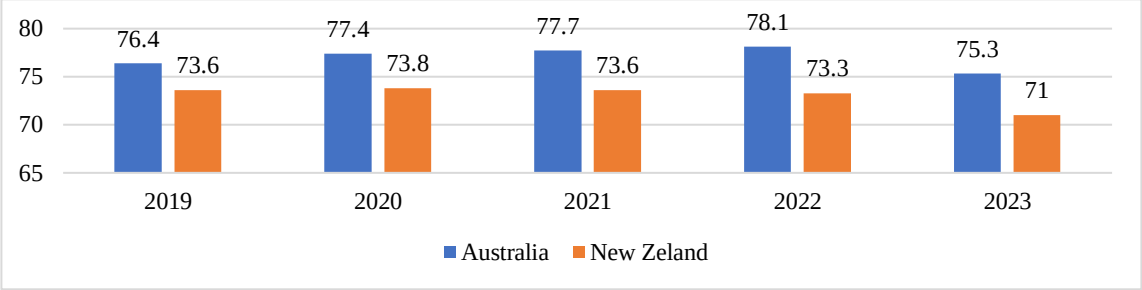

Figure 3.5. Health care index in the Oceania region, 2019-2023[116]

[115] *Rating Numbeo*. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp
[116] *Rating Numbeo*. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

This graph shows the dynamics of healthcare quality in Australia and New Zealand. The availability of data for all five years indicates openness and transparency in the healthcare system. Australia surpasses New Zealand in terms of quality of medical services. Despite this, both regions provide access to high-quality medical services to the population, but Australia has shown a more sustainable and ever-growing trend in improving its healthcare system over the past five years. Both regions are making significant strides in ensuring a high level of quality healthcare. However, further development and improvement of the healthcare system must remain a priority.

Based on the rating data, the author compiled a summary table that made it possible to group the countries of the world analyzed above into three categories: High Health Care (69.6-85.9), Middle Health Care (59.0-68.6), Low Health Care (39.2-58.9). Countries that have been categorized as High Health Care are shown in Figure 3.6.

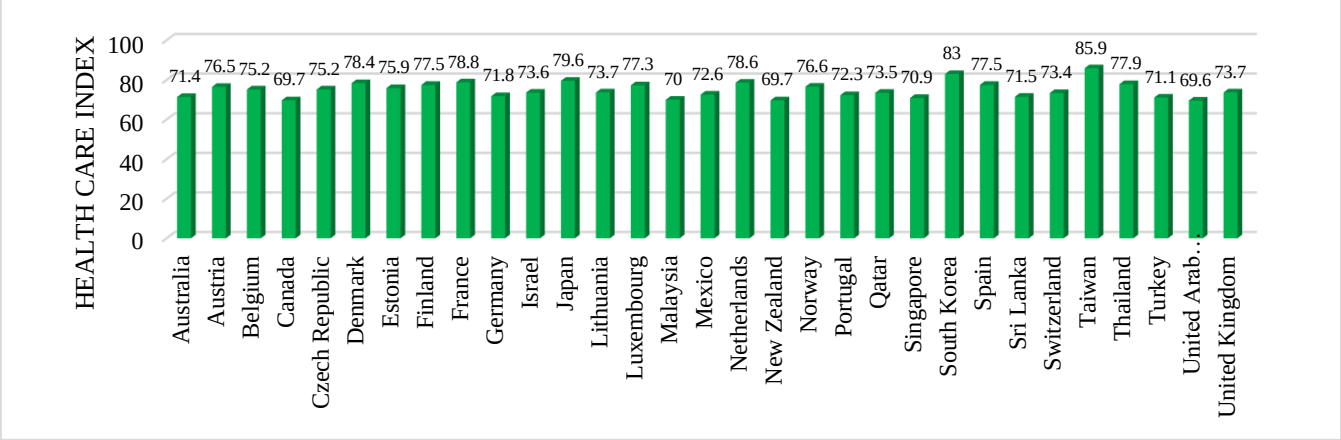

Figure 3.6. High Health Care [developed by the author based on[117]]

The "High Health Care" category includes countries that demonstrate significant results in the field of health and medical care (Appendix 20). This is due to effective healthcare systems, high-quality medical infrastructure, accessibility of medical services, high standards of treatment and prevention, as well as innovative methods. Particularly noteworthy countries are South Korea, Israel, Canada, Denmark, Japan, etc. The leadership of South Korea emphasizes the high quality of healthcare in the country. Innovative methods used in medical practice and active disease prevention programs have made South Korea one of the countries with a high health care index. Japan is also known for its advanced medical care and longevity of its population. Israel actively invests in medical research and development of healthcare infrastructure, which allows it to achieve high standards of

[117] *Rating Numbeo*. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

medical care. Denmark is known for its comprehensive healthcare system. Canada's healthcare system can also be held to a high standard. Countries included in the "High Health Care" category can serve as an example for other countries seeking to improve their healthcare systems and provide their population with high-quality medical care.

Countries that were classified in the Middle Health Care category are presented in Figure 3.7.

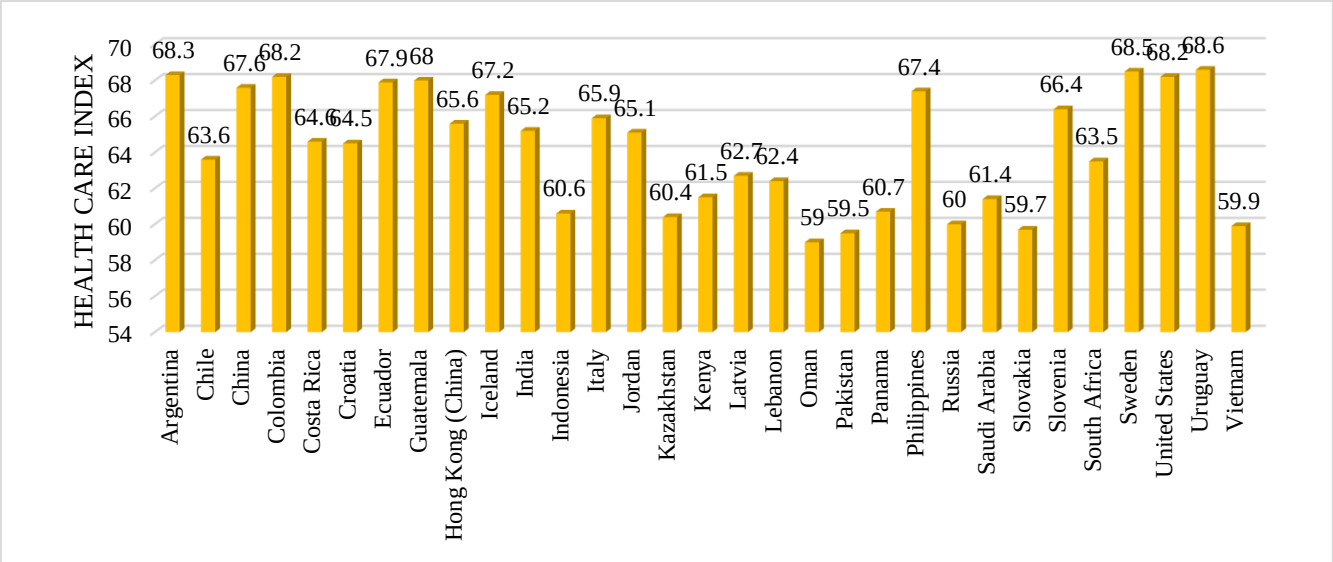

Figure 3.7. Middle Health Care [developed by the author based on[118]]

The "Middle Health Care" category includes countries that usually have a level of health care quality that is at an average level of development (Appendix 21). This is because these countries generally provide access to basic health services, but there are some shortcomings that prevent them from being included in the top category. Russia, a country with a diverse medical infrastructure, has differences in the availability and quality of healthcare in different regions. Economic, organizational and cultural factors influence the provision of high-quality health care services. The United States, despite its high level of medical innovation and advanced treatment methods, also has a difficult situation in the area of access and cost of medical services. Argentina, a country of moderate economic development, may provide basic health services, but may face limitations in the availability of certain types of health services. In the case of Sweden, a country with a high level of development, the position may be determined by the balance between high standards of medical services and accessibility for the population. Countries in the "Middle Health Care" category may have the potential to improve health systems, introduce innovations and reforms to improve the quality and

[118] *Rating Numbeo*. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

accessibility of health services.

Countries that were categorized as Low Health Care are shown in Figure 3.8.

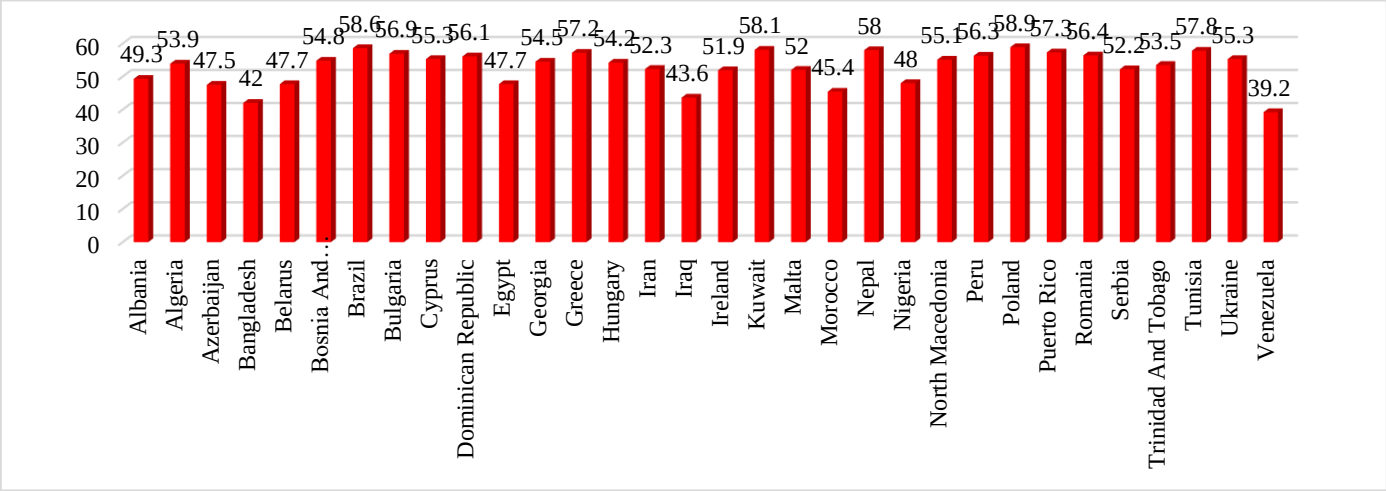

Figure 3.8. Low Health Care [developed by the author based on[119]]

The "Low Health Care" category identifies countries that face significant challenges in providing a high standard of quality health care services to their populations (Appendix 22). This category may be characterized by limited access to medical care, insufficient medical infrastructure, low quality standards of treatment and prevention, and limited resources for the development of the health care system. Countries classified as "Low Health Care" often require systemic reforms and investments to improve access and quality of care. These countries can strive to improve health education, develop medical infrastructure, and raise standards of medical practice to provide their citizens with more reliable and quality health care.

The Numbeo ranking data analyzed is based on a massive survey regarding the quality of the healthcare system. In this regard, according to the author, it was necessary to analyze another rating, which is based on specific indicators of the quality of healthcare and consider a narrower sample of countries, which also includes Israel. The analyzed rating is based on OECD statistics (an online platform for collecting, analyzing data and providing information to harmonize and streamline work with data in the context of the mission to promote health and safety). The author analyzed two complex indicators of the quality of medical services, reflecting the quality of medical care: patient experiences and patient safety. The patient experiences indicator consists of the following indicators: The patient experiences indicator comprises the subsequent elements: missing consultations due to financial

[119] *Rating Numbeo*. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

constraints; doctor facilitating questions or concerns from patients; doctor engaging patients in care or treatment decisions; doctor offering clear and understandable explanations; doctor allocating sufficient time during consultations; omissions of medical tests, treatments, or follow-ups due to financial constraints; skipped prescriptions due to financial limitations; regular doctor affording opportunities for questions or concerns; regular doctor involving patients in care or treatment decisions; regular doctor providing comprehensible explanations; regular doctor dedicating sufficient time. with patients during the consultation (Appendix 23). A summary graph for the patient experiences indicator is presented in Figure 3.9.

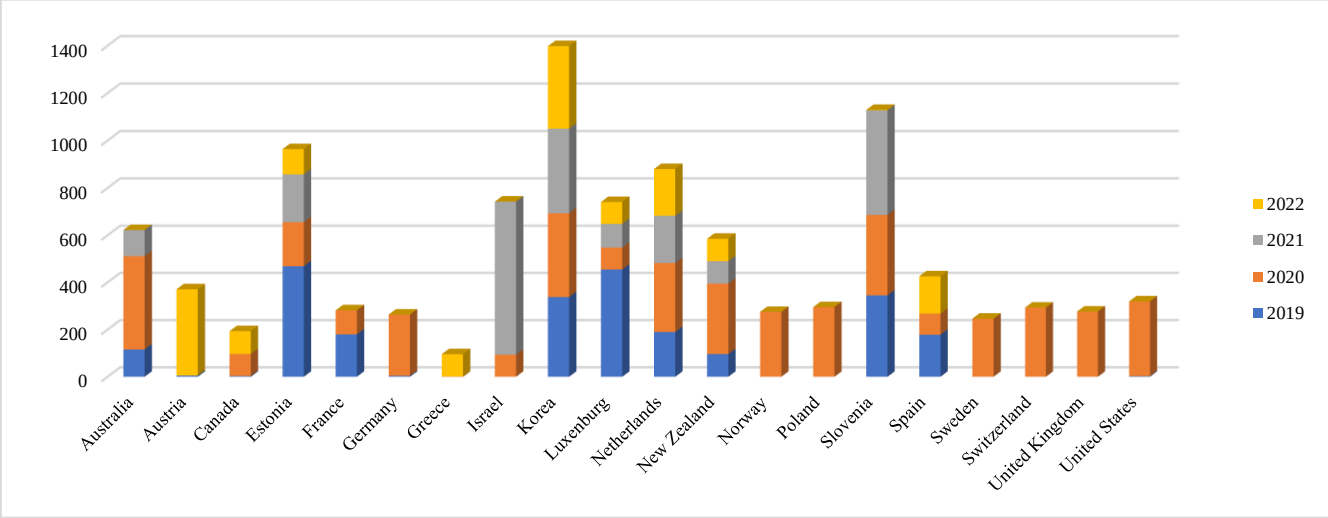

Figure 3.9. Patient experiences, 2019-2022[120]

The study of the patient experience indicators is aimed at solving the problem of assessing the quality of healthcare in terms of the level of patient satisfaction (medical care). The results of the graph showing the dynamics of this indicator over four years indicate that economic factors influence the results of the patient experience indicators through the cost of medical services and the availability of medical care. Countries with a high proportion of patients missing consultations or treatment due to cost may experience negative impacts on indicators related to patient involvement in decision-making, medical explanations, and time spent in consultations. In countries where medical care costs are lower, more patients receive the necessary medical care and interact with doctors (Poland, Greece). Balanced interaction between doctors and patients is Slovenia, Korea, Estonia. The quality of the medical infrastructure, the availability of medical services and the efficient organization of healthcare can also influence the level of patient satisfaction. Countries with a well-developed and coordinated

[120] *OECD statistics*. [accessed 21.03.2023]. Available at: https://stats.oecd.org/

medical system can better meet the needs of patients and provide them with a more meaningful interaction with doctors (Luxembourg, New Zealand, Israel). Depending on how affordable the insurance is, the patient satisfaction rate will be higher (Germany, France, Norway). Differences in cultural, social and educational aspects can also influence the interaction of patients with doctors and their level of satisfaction with medical services (Israel, USA, UK).

The patient safety indicator consists of the following indicators: post-operative deep vein thrombosis - hip and knee replacement discharges, post-operative pulmonary embolism - hip and knee replacement discharges, post-operative sepsis - abdominal discharges. (Appendix 24). New Zealand has the highest patient safety record, which can be attributed to a combination of factors that include a developed medical infrastructure, strict adherence to clinical protocols and standards, extensive training of medical personnel, an emphasis on the prevention of complications after operations, and active work on monitoring and managing risks in medical institutions. The average patient safety score in countries such as the UK, Israel, Australia and others may be due to a balance between factors: the availability of medical care, standards of clinical practice, the efficiency of the healthcare system, and others. The low patient safety score in countries such as Poland, Italy, Costa Rica, Portugal, etc. may be due to various factors, including limited resources for the development of medical infrastructure, insufficient attention to clinical standards, limited access to education and training of medical personnel, and organizational and cultural aspects that influence clinical practices and risk management.

In order to conduct a deeper analysis and understand the trends reflected in the rankings, the author analyzed the health care systems of the countries. Health systems are complex structures, organizations, resources and processes aimed at providing medical care and public health[121]. Today in world practice there are three main healthcare systems: budgetary (state), social insurance and private (market).

The budgetary (state) system assumes a significant role of the state as a buyer and provider of services in ensuring financing of healthcare from tax revenues (from 70%), providing medical services to the entire population on a free basis (the share of total expenditures from public sources in GDP is usually 8-11%), leaving private insurance and other co-payments on the periphery. The bulk of medical services are sold in state medical organizations included in a single centralized management

[121] LIPSITZ, L. A. *Understanding health care as a complex system: the foundation for unintended consequences*. In: Jama, 2012, nr. 308(3), p. 243-244. ISSN 0098-7484.

system, in connection with which the state exercises control over the market for medical goods and services, establishes rules for admission and access to the market, creates lists of reimbursement using tariff policies and pricing, as well as determines the scope of medical services provided; controls the quality of medical care through a system of accreditation of healthcare institutions and licensing of doctors. Examples of countries with a public health care system include France and the UK (Appendix 25). In France, a medical service is considered a quasi-public good. Compulsory health insurance programs (CHI) reimburse only part of the costs of medical care. The share of healthcare expenditures in GDP is 8.5%. Sources of financing include compulsory medical insurance (50%), voluntary health insurance (VHI) (20%), state budget (10%) and personal funds (20%). Control over the efficiency of spending funds is carried out by private insurance companies and the state social insurance organization. Prices for medical services are regulated by the government and are revised 2 times a year. In the UK, the share of healthcare spending in GDP is 6.0%. Sources of funding include the state budget. Control over the efficiency of spending funds is carried out by the state represented by the Ministry of Health[122]. Medical care is universally available. Thus, in the budget system, the main emphasis is on insurance in the field of medicine and everything connected with it: cost control, targeted investments in healthcare, the development of mainly state insurance programs, etc.

The insurance (social insurance) system is based on the principles of a mixed economy, combining market relations with government control, forming a system of regulated health insurance. Compulsory medical insurance (compulsory health insurance) programs cover almost the entire population, involving government funding of insurance funds (government spending on healthcare can vary from 9 to 13% of GDP), as well as a co-payment system. The main role in the distribution of funds is assigned to numerous private non-profit or for-profit insurance funds, the role of government intervention is less significant compared to the budgetary model of health care. Patients have the right to choose insurance companies and service providers when receiving medical care. In general, this model can be characterized as decentralized due to the large number of participants in the medical services market. Most types of medical care are provided by private non-profit organizations, primary medical care is provided by private family doctors. Vivid examples of countries can be countries such as Germany, Japan, Canada and Israel (Appendix 26). In Germany, healthcare is seen as a factor determining the quality of "human capital". The main sources of financing are compulsory health insurance (60%), voluntary health insurance (10%), state budget

[122] *UK Department of Health*. [accessed 09.01.2023]. Available at: https://www.health-ni.gov.uk/

(15%) and personal funds (15%). Monitoring the efficiency of spending funds is carried out by both private and public insurers. Access to medical care covers 90% of the population through compulsory health insurance programs and 10% under VHI programs, while 3% of those insured under compulsory health insurance have VHI. A wide range of medical services is provided through a combination of compulsory medical insurance and voluntary medical insurance programs, and the use of new technologies is stimulated by the demand for a variety of medical services. Prices for medical services in Germany are expressed in "points", and the price of "points" is revised as the economic situation changes.

In Japan, a medical service is considered quasi-public good, and compulsory medical insurance programs reimburse part of the costs of medical services. The main sources of financing are compulsory health insurance (60%), state budget (10%), public funds (10%) and personal funds (20%). Control over the efficiency of spending funds is carried out by insurance companies - private insurers. Availability of medical care covers 40% of the population by the national insurance system and 60% by the vocational insurance system. Canada's health care system relies on federal and provincial funds. 90% of funding comes from federal and provincial government budgets. This indicates a high degree of state involvement in providing medical care to citizens. Private insurance companies and voluntary donations account for only 10% of funding. According to data, 98-99% of the Canadian population is covered by compulsory health insurance programs (CHI). Another country with a social insurance health care system is Israel, whose system is based on the principles of universal health care coverage for all residents of the country. Israel has a National Health Law[123], which provides universal access to health care and coverage of all Israeli citizens with compulsory national insurance. As part of the social insurance health care system in Israel, there are public medical institutions, as well as many private medical centers. The social health insurance system is primarily a more liberal choice of insurance with relatively less government pressure. Also, with this system, decentralization is manifested, due to the large number of participants in the healthcare market.

With the dominance of the **private (non-state or market) health care system**, medical services are usually provided on a paid basis, at the expense of private insurance and personal funds of citizens (from 50% and more). There is no unified system of state medical insurance, because the powers of the state include the provision of medical services mainly to socially vulnerable categories of citizens

[123] LEVI, B., DAVIDOVITCH, N. *The Healthcare System in Israel: An Overview*. In: State of the Nation Report: Society, Economy and Policy 2022. [accessed 21.03.2023]. Available at: https://www.taubcenter.org.il/wp-content/uploads/2022/12/Health-Overview-ENG-2022.pdf

(the unemployed, the disabled, the elderly, the poor). Examples of countries that were considered in this research study are the following: USA, Brazil, Australia (Appendix 27). It can be concluded that the United States considers a medical service as a private good that can be bought or sold. The share of healthcare spending in GDP in the US in 2022 is 16.6%, which is the highest in comparison with France and the UK[124]. In 2021, the U.S. federal government had a 34% share of national healthcare spending, a 27% share of private insurance (households), followed by private businesses (17%), state and local governments (15%), and other private income (7%)[125]. Private insurance companies monitor the efficiency of spending funds. Unlike France and the UK, access to health care in the US is limited by patients' ability to pay. However, the United States provides the widest range of curative and preventive health services and invests the most in health research and development. Prices for medical services in the United States are practically not regulated by the government and are formed on the basis of an agreement between the patient, the insurer and the health care facility (health care facility). Brazil's healthcare system is a mixed model, with compulsory public and private insurance coexisting. Health care financing accounts for about 13% of GDP, indicating significant spending on the health sector in the country[126]. This indicates that healthcare has a high priority in the national economy. A diverse funding system can create challenges in ensuring equal access and equity. Brazil's healthcare system, based on a private market model, faces challenges related to inequality, access and diversity of financing. Although a variety of services and innovative technologies are available, they may not be accessible to large parts of the population due to economic barriers.

Australia's healthcare system is a unique combination of compulsory private insurance and the national health system. The share of GDP allocated to health is approximately 16.8%[127]. This indicates significant funding for the health sector in the country, which indicates a high priority for the health of the national population. The system is financed through mandatory insurance contributions, taxes,

[124] *Health expenditure as a percentage of gross domestic product (GDP) in selected countries in 2022*. [accessed 17.02.2023]. Available at: https://www.statista.com/statistics/268826/health-expenditure-as-gdp-percentage-in-oecd-countries/

[125] *US: Health system financing*, 2022. [accessed 17.02.2023]. Available at: https://healthsystemsfacts.org/the-us-health-system/us-health-system-financing/

[126] *Health in Brazil - Statistics & Facts*. [accessed 17.02.2023]. Available at: https://www.statista.com/topics/5030/health-in-brazil/#topicOverview

[127] *Health overview.* [accessed 10.03.2023]. Available at: https://www.aph.gov.au/About_Parliament/Parliamentary_departments/Parliamentary_Library/pubs/rp/BudgetReview202223/HealthOverview#:~:text=Total%20spending%20on%20health%20in,and%20outlook%3A%20budget%20paper%20no.

private insurance and payments for medical services. A feature of the private healthcare system is its focus on the provision of paid medical services by private organizations. In this regard, the problem of states is to provide financially and socially vulnerable categories of the population with medical services.

It is important to understand that each of the above systems has its pros and cons, and their impact on quality depends on many factors both within the country and external influences, as presented in Table 3.1.

Table 3.1. Advantages and disadvantages of global health systems

[developed by the author based on[128] [129]]

Health system type	Advantages	Disadvantages	Opportunities for countries
Market-based healthcare system	• Competition can stimulate innovation and improve the quality of services. • Possibility of choosing medical services and providers.	• Uneven availability of medical care due to limited accessibility for low-income segments of the population. • High administrative and advertising costs. • Profit orientation can lead to distortions in the allocation of resources.	-Innovative development; -Increasing resource efficiency.
Budgetary (state) healthcare system	• Guaranteed coverage of basic health services for all citizens. • Equal distribution of medical resources. • Potentially more efficient planning and cost control.	• Possibility of bureaucracy and complicated procedures in the state system. • Limited financial resources, which may limit access to high-tech medical care.	-Increasing universal access to medical services. services; -Reducing inequality
Social health insurance system	• Providing medical care to all citizens, regardless of their financial situation. • Widespread access to basic health services. • Relatively lower costs for administrative functions.	• Limited coverage for specialized and advanced procedures. • Possibility of waste of medical resources due to lack of individual responsibility for costs.	Development of public, social support; -Striving for stability of financing.

Taking into account the advantages, disadvantages and capabilities of each healthcare system, you can develop your own unique development path and increase the efficiency of ensuring the quality of medical services. The quality of health care services often does not depend on the type of health

[128] WANG, Z., NORRIS, S. L., BERO, L. *The advantages and limitations of guideline adaptation frameworks*. In: Implementation Science, 2018, nr. 13, p. 1-13. ISSN 1748-5908.

[129] KURPAS, D. et al. *The Advantages and Disadvantages of Integrated Care Implementation in Central and Eastern Europe–Perspective from 9 CEE Countries*. In: International journal of integrated care, 2021, nr. 21(4), p.14-22. ISSN 1568-4156.

care system, but rather on the conditions in which this system is practically implemented. The author made an attempt to find the correspondence between the healthcare system and those approaches to managing the quality of medical services that are most typical for these systems, which is reflected in Figure 3.10.

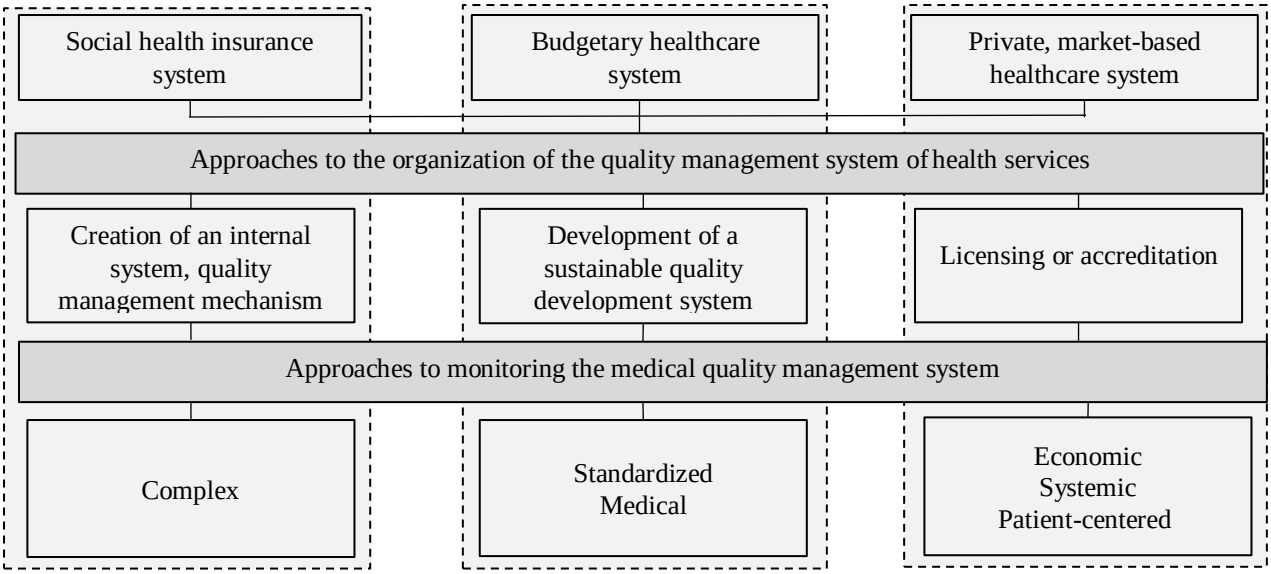

Figure 3.10. Interrelation of health care systems and approaches to the organization of management and quality control of medical service [developed by the author based on [130] [131]]

The connections presented in the diagram are conditional in nature due to the large number of individual country-specific features characteristic of managing the quality of medical services. This diagram has been compiled to demonstrate the path of development of the healthcare system in terms of ensuring the quality of medical services with the conditional "choice" of one system or another. In this case, the path of development refers to general directions and activities contained in approaches to organizing a quality management system for medical services. It is obvious that each healthcare system is characterized by the use of all approaches to organizing the quality management of medical services. The diagram shows the approach that is dominant compared to the others. There are three principal approaches to organizing a quality management system:

1. Assessment of quality control of medical care by third parties, that is, assessment of quality during licensing or accreditation;

[130] CINAROGLU, S., BASER, O. *Understanding the relationship between effectiveness and outcome indicators to improve quality in healthcare*. In: Total Quality Management & Business Excellence, 2018, nr. 29(11-12), p. 1294-1311. ISSN 14783363.
[131] CLARKSON, J. et al. *A systems approach to healthcare: from thinking to practice*. In: Future healthcare journal, 2018, nr. 5(3), p. 151-155. ISSN 25146645.

2. Creation of an internal quality management system in medical organizations based on standards;

3. Development of a system of sustainable development of the organization and, as a result, an increase in the efficiency of internal processes responsible for the quality of medical services.

The differences between the quality management systems of the countries of the world mainly lie in the application of approaches to quality control of medical services. In a market system, the quality of medical services can be regulated to a large extent by market mechanisms and competition, so this system is characterized by the following control approaches: economic, systemic, patient-oriented. Service providers and insurance companies strive to offer high quality care in order to attract and retain patients. Competition between providers creates an incentive to innovate and improve quality. A marketplace system can use patient reviews, ratings, and quality of service reports to evaluate and select providers.

In the budgetary health care system, the state can actively control the quality of medical services through the development of standards, inspections and monitoring. Therefore, approaches to quality control are standardized, medical. The control of licenses and accreditation of medical institutions also helps to ensure a high standard of quality.

In the social insurance system, quality control is carried out through the control of social insurance companies and government agencies. The approach to quality control of medical services is an integrated approach. The state can establish mandatory quality standards that all insurance companies and medical providers must comply with. The effectiveness and quality of services can also be monitored through the analysis of morbidity data, treatment outcomes and patient satisfaction. Taking into account the approaches to the organization and quality control of medical services, typical for healthcare systems, the author designed a quality management system for medical services and concluded that the quality management system is most often used (Appendix 28). This diagram demonstrates the key aspects of a quality management system that, according to the characteristics of health systems, can be applied in medical institutions around the world. "Quality Policy", "Consumption Orientation", "Performance Evaluation" and "Improvement of Organizational Environment" emphasize the importance of focusing on patient needs and improving the quality of healthcare services, as well as evaluating and improving the processes and results of healthcare delivery. Health Service Life Cycle Processes and Resource Management highlight the importance of understanding and optimizing the entire health care delivery process, including resource management

and documenting information. It should be taken into account that the implementation of a full-fledged system may require additional resources and efforts on the part of the state for the successful implementation of quality management at the level of healthcare facilities and models for improving the quality management process of medical services (Appendix 29).

The author analyzed the use of various tools for managing the quality of medical services in some countries of the world, as well as in Israel (Appendix 30). A comparative analysis indicates that these tools are widely used in other countries and allow achieving high results in ensuring the quality of medical services. Thus, the adaptation of these tools to Israeli medical institutions, as well as the procedure for assessing their implementation, can help improve the quality of medical care and improve the health of the population.

The author also carried out a general analysis of the healthcare system in the Republic of Moldova in order to assess the development potential of the country in the context of ensuring the quality of medical services. This study is necessary along with a global analysis of the regions of the world, including for a general idea of the world level of development approaches to ensuring the quality of medical services.

The Republic of Moldova (RM) belongs to a mixed type of healthcare system - public-private. The country has both public and private medical institutions. The health care system includes several levels of health care, ranging from primary health care, which is provided in clinics and medical posts, to specialized medical institutions, as shown in Figure 3.11.

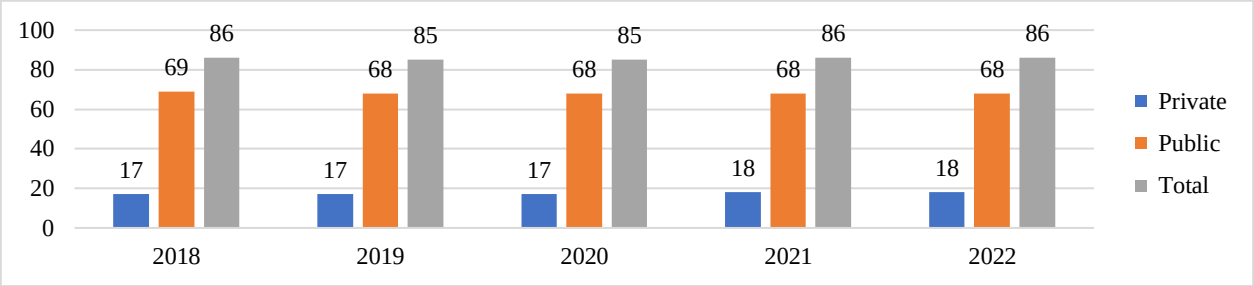

Figure 3.11. Medical institutions, by forms of ownership in the Republic of Moldova, 2018-2022[132]

Public institutions are mainly financed from the budget, and private clinics can provide higher quality services, but for an additional fee. The Republic of Moldova has a healthcare system that

[132] *National bureau of statistics of the republic of Moldova* [accessed 21.03.2023]. Available at: https://statbank.statistica.md/PxWeb/pxweb/en/30%20Statistica%20sociala/30%20Statistica%20sociala__08%20SAN__SAN060/?rxid=2345d98a-890b-4459-bb1f-9b565f99b3b9

provides free medical services to all citizens, including foreigners with legal status in the country. In accordance with the law, the healthcare system must guarantee the availability, quality and effectiveness of medical care. In order to receive free medical care, citizens of Moldova must go to a clinic and receive a referral from a doctor for a free consultation with a specialist. However, many residents of Moldova prefer to go to private clinics, where they are provided with services at a higher price, but in more comfortable conditions. In this regard, it is advisable to provide data on the financing of the health care system, which is presented in Figure 3.12.

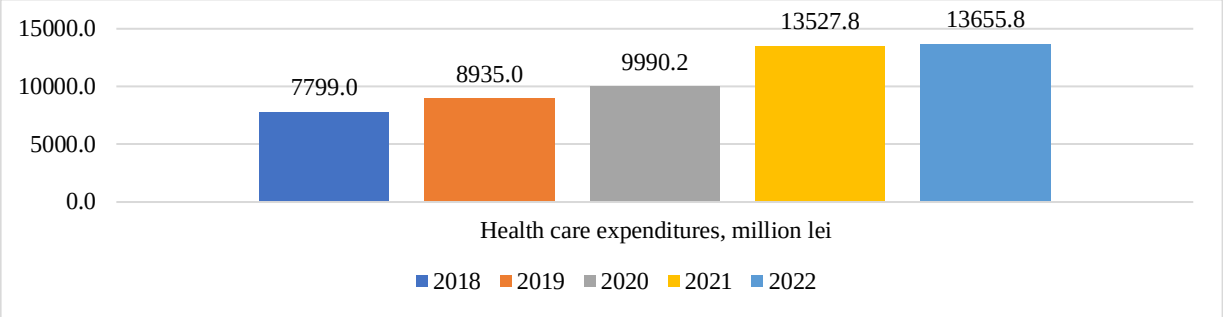

Figure 3.12. Health care expenditures in the Republic of Moldova, million lei, 2018-2022[133]

Despite the fact that in the Republic of Moldova costs in the health care system have been increasing in recent years, many citizens of the Republic of Moldova express dissatisfaction with the work of the health care system. Some health-related issues include expanding access to health services in response to demographic trends[134], lack of qualified medical staff (Appendix 31), poor quality of equipment[135] and lack of funding. In the National Strategy for Public Health of the Republic of Moldova for the period 2018-2027. there is a separate section dedicated to the quality assurance system for medical services[136].

According to this section, the system for ensuring the quality of medical services in Moldova should include the following main components: accreditation of medical institutions and professional licensing of medical workers; a system for monitoring and evaluating the quality of medical services; training of medical workers and their professional development; development and implementation of

[133] *National bureau of statistics of the republic of Moldova*. [accessed 21.03.2023]. Available at: https://statbank.statistica.md/PxWeb/pxweb/en/30%20Statistica%20sociala/30%20Statistica%20sociala__08%20SAN__SAN060/?rxid=2345d98a-890b-4459-bb1f-9b565f99b3b9

[134] DRAGOMIR, L. *Etapele principale ale procesului de îmbunătățire a calității serviciilor medicale în Republica Moldova*. In: Administrarea Publică, 2021, nr. 4(112), p. 94-99. ISSN 1813-8489.

[135] CARP, M. *Theoretical approaches on the efficiency of medical services in the Republic of Moldova*. In: Revista de Ştiinţe ale Sănătăţii din Moldova, 2022, nr. 3 An.1(29), p. 87. ISSN 2345-1467.

[136] *Strategia națională „Sănătatea 2030”.* Ministerului Sănătății al Republicii Moldova, [accessed 21.03.2023]. Available at: https://ms.gov.md/comunicare/comunicate/strategia-nationala-de-sanatate-sanatatea-2030-aprobata-de-executiv/

national clinical guidelines and treatment protocols; ensuring accessibility and awareness of patients about the quality of medical services and patient rights. The issues of introduction of personalized medicine are considered[137], public-private partnership in the social sphere[138], improvement of the quality management system[139]. To implement these activities, special structures and programs were created, such as the National Center for Expertise of Medical Technologies and Medicines[140], the National program for advanced training of medical workers[141], the National Center for Accreditation of Medical Institutions[142] etc. The activities of medical institutions of the republic are checked for compliance of activities and their employees with established regulations and standards by the National Council for Assessment and Accreditation in Healthcare of Moldova[143]. However, despite existing efforts, the issue of ensuring the quality of medical services remains relevant for the Republic of Moldova, and requires additional efforts from the state, medical workers and society as a whole.

Based on the rating data, it seems possible to divide the countries of the world into three conditional categories: High Health Care, Middle Health Care, Low Health Care. High Health Care is characterized by effective healthcare systems, high-quality medical infrastructure, accessibility of medical services, high standards of treatment and prevention, as well as innovative methods. Middle Health Care is characterized by providing access to basic health services. Low Health Care is characterized by serious problems in providing a high standard of quality health care services to its population. The quality of health care services often does not depend on the type of health care system, but rather on the conditions in which this system is practically implemented. A high degree of patient safety is characteristic of countries that have a developed medical infrastructure, strict adherence to clinical protocols and standards, extensive training of medical personnel, and active efforts to monitor

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137 ZARBAILOV, N., GUȘILĂ, I., KUROCHKIN, G. S., ȚOPA, A. *Personalized medicine – perspectives for integration into health care systems*. In: Revista de Ştiinţe ale Sănătăţii din Moldova, 2022, nr. 3 An.1(29), p. 79. ISSN 2345-1467.

138 CĂLUGĂREANU, I. *Particularities of public-private partnership in the social field of the Republic of Moldova*. In: The 13th International Conference on Business Excellence "Sustainable Business Models and Innovation in the Knowledge Economy", 21-22 March 2019, Bucharest, Romania, p. 411-420. ISSN 2558-9652. DOI:10.2478/picbe-2019-0036

139 ȚURCANU, G., ȚURCANU, I. *Direcții de îmbunătățire durabilă a sistemelor de management*. In: Sustenabilitatea: îmbunătățirea produselor destinate consumatorilor și planetei [online]: simp. șt.practic dedicat Zilei mondiale a calităţii, ed. a 7-a, 11 noiembrie 2021. Chișinău: ASEM, 2021, p. 174-182. ISBN 978-9975-155-58-8.

140 *Agenţia Medicamentului şi Dispozitivelor Medicale* (AMDM). [accessed 21.03.2023]. Available at: https://amdm.gov.md/public/en

141 *Programului naţional de dezvoltare a asistenţei medicale de urgenţă pentru anii 2021-2025*. [accessed 21.03.2023]. Available at: https://cancelaria.gov.md/sites/default/files/document/attachments/1008-msmps.pdf

142 *Centrul Naţional de Acreditare din Republica Moldova* (MOLDAC). [accessed 21.10.2022]. Available at: https://acreditare.md/

143 BLAGORAZUNMNAYA, O., SOCOLOV, V., SOCOLOVA, L. *Quality management of medical services in health care institutions of Moldova*. In: Revista ştiinţifică «EcoSoEn», 2019, an. 2, nr. 3-4, p. 26-37. ISSN 2587-344X.

and manage risks in medical institutions. Low – countries that have limited resources to develop medical infrastructure, insufficient attention to clinical standards, limited access to education and training of medical personnel, and organizational and cultural aspects influencing clinical practices and risk management.

3.2. Identification of trends in improving the quality of medical services in Israel

Israel has long been at the forefront of global medicine, and there are now a number of successful practices and innovations to further improve medical practice and health care in the country. The author considered the main directions and factors contributing to these positive trends in the continuous improvement of the quality of medical services in the country. Particular attention during the study was paid to the process of management and quality control of medical services in hospitals in Israel.

The analysis of statistical data was based on the criteria used by the WHO to quantify the quality of health care: health expenditure and financing, health workforce, health infrastructure. General demographic information was also presented, reflecting the effectiveness and efficiency of the Israeli healthcare sector: the country's population, annual population growth rates, mortality, life expectancy. An analysis of the criterion for spending and financing in health care makes it possible to assess the possibilities and potential of the country not only in ensuring the quality of medical services, but also to provide for a process of improving quality. The author analyzed the sources of funding in the Israeli healthcare system and presented its dynamics from 2019 to 2022 in Figure 3.13.

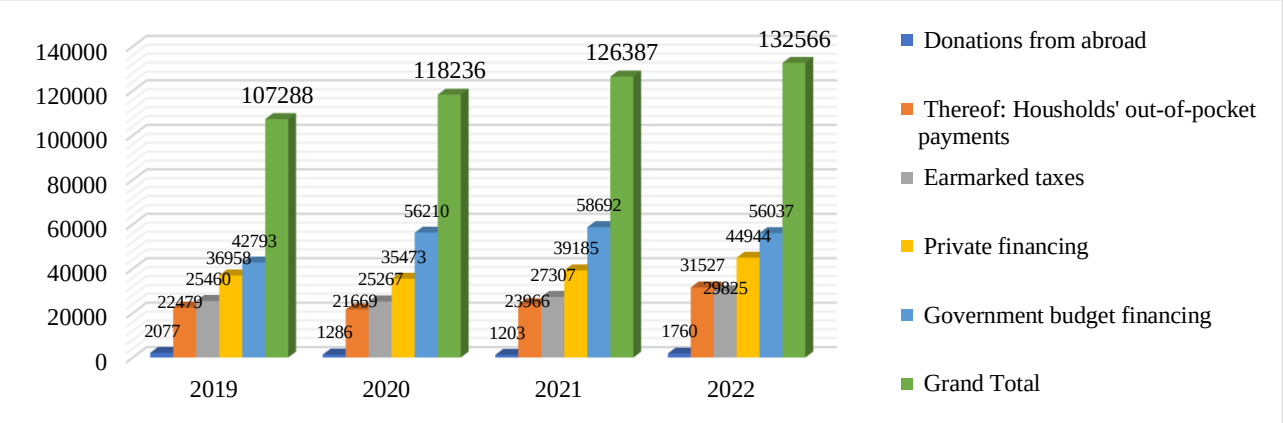

Figure 3.13. National expenditure on health of Israel, in million US$, 2019-2022[144]

[144] *Central Bureau of Statistics of Israeli*. [accessed 21.12.2022]. Available at: https://www.cbs.gov.il/en/Statistics/Pages/Generators/Time-Series-DataBank.aspx?level_1=4

The graph shows a steady growth trend in total investments in the sector over four years (Appendix 32). This trend is emphasized by the priority of healthcare in the country and the desire to provide high quality medical services to citizens. A significant portion of the funding comes from public capital investments budgeted by the Israeli government. This indicates a high level of state responsibility for providing the population with access to quality medical services. Private financing refers to paid medical services, insurance programs or other forms of financial support from individuals and organizations. This indicates the wide availability of medical services for different segments of the population. External funding, although minor in the overall flow of funds, can be important for specialized projects, research or programs that require additional resources. At present, there are no clear monetary motivations for hospitals and health plans in Israel to enhance the quality of healthcare services. In recent years, the Ministry of Health has introduced several pay-for-performance incentives (patient safety, infection prevention and control, quality of care). The diversity of funding sources highlights a comprehensive approach to ensuring the sustainability and efficiency of the health system in the country. Current national health expenditure in 2022 as a percentage of GDP in Israel (7.3%) was lower than the OECD average (9.3%)[145].

In addition to the analysis of funding sources, attention should be paid to the workforce of the Israeli health care system. The author carried out a comparative analysis of the number of doctors per 1000 patients in a sample of countries around the world, including Israel (Appendix 33). Analyzing the number of doctors per 1000 patients presented in the graph, it can be seen that Israel ranks above the average compared to other countries in the sample. Note that the highest rates of this parameter are typical for countries such as Austria, Norway, Spain and Switzerland. In the context of this analysis, it is emphasized that Israel, being in the above average range, performs quite well in comparison with these leading countries. In order to form a more detailed analysis, the author analyzed the dynamics of the situation regarding licensed physicians employed in the Israeli healthcare system (Appendix 34), presented in Figure 3.14.

[145] *Central Bureau of Statistics of Israeli*. [accessed 21.12.2022]. Available at: https://www.cbs.gov.il/en/mediarelease/pages/2023/national-expenditure-on-health-2022.

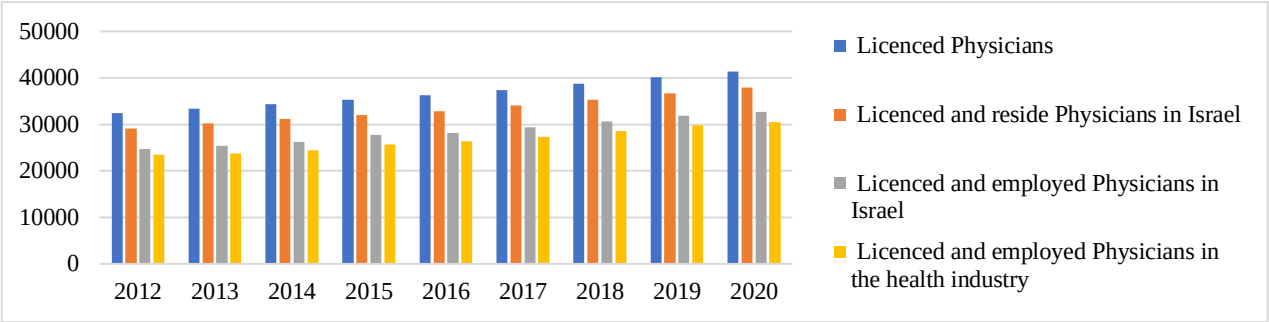

Figure 3.14. Licensed physicians employed in Israel, 2012-2020[146]

It can be concluded that there has been a systematic increase in the number of doctors holding a medical license over time. This observed increase indicates positive dynamics and high quality of medical services provided in this country. This phenomenon can be explained by the fact that the health care system is focused on the constant improvement of the qualifications and professional growth of doctors, which in turn leads to an expansion in the number of medical licenses. In Israel in 2020 there are 3.3 practicing doctors per thousand population and 5.1 nurses per thousand population. If the number of doctors, Israel is somewhere close to the OECD average (3.7 doctors per thousand population)[147], but the Israeli healthcare system lags behind in terms of the number of nurses (OECD average — 8.7)[148]. Israel ranks second after Italy in the number of doctors at pre-retirement and retirement age. Every second Israeli doctor is over 55, many of them are over 67[149]. It is also important to note that while the number of licensed doctors in the health care system has seen more modest growth over the nine-year period, the growth is still noticeable. This suggests that having a medical license does not always carry a direct link to actual work.

Consequently, the data shows two important trends: the number of doctors with a medical license is noticeably increasing; possession of a license does not necessarily indicate affiliation with a health care system or location in a country. In the author's opinion, it is possible to reallocate existing staff to better serve the current needs of hospitals with some flexibility in the number of employees in each department.

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[146] *Central Bureau of Statistics of Israeli*. [accessed 25.02.2023]. Available at: https://www.cbs.gov.il/en/subjects/Pages/Health.aspx

[147] *OECD report on medical education and training in Israel*. OECD, 2023. [accessed 21.12.2022]. Available at: https://www.oecd.org/health/OECD-report-on-medical-education-and-training-in-Israel.pdf

[148] *Israel: Nurses per 1,000 people*. [accessed 21.12.2022]. Available at: https://www.theglobaleconomy.com/Israel/nurses_per_1000_people/

[149] *OECD warns of shortage of doctors in Israel; new immigrant physicians face "insane bureaucracy"*. [accessed 21.12.2022]. Available at: https://main.knesset.gov.il/en/news/pressreleases/pages/press13623r.aspx

Healthcare infrastructure has become an integral part of Israel, where the medical sector demonstrates a high level of development and innovation. An analysis of Israel's healthcare infrastructure not only illuminates important aspects of the organization of the medical system, but also reveals the close connection between its development and the provision of high-quality medical services. The author analyzed the dynamics of the number of hospitals in Israel by type and form of ownership (Appendix 35). According to the data, the number of hospitals is declining overall, with the number decreasing by 2 hospitals since 2019. As of 2021, there are a total of 313 hospitals in Israel, of which 22 are public hospitals, 172 are private hospitals, and Clalit health service owns 14 hospitals. 46 hospitals are classified as general hospitals and the rest, as can be seen in the graph, are distributed according to target areas. The stability and slight decline in the number of public hospitals in Israel indicate careful regulation and planning of the medical infrastructure. There is also an increase in the number of private hospitals in Israel. This growth indicates the increasing role of private investors and entrepreneurial activity in the medical field. This is likely due to the increased need for additional medical services, innovative treatment methods and an individual approach to patients.

An analysis of the infrastructural development of the Israeli healthcare system brings up an important indicator on the agenda - the number of beds per 1000 patients (Appendix 36). Through a comparative analysis with various countries of the world, it is possible to identify the countries that are leaders in this indicator: Japan, Korea and Bulgaria. Israel, despite its achievements in the medical field, is not among the countries with a high rate of beds per 1000 patients. In Israel, special emphasis is placed on optimizing the health care system, aimed at efficient allocation of resources. The number of hospital beds per 100 000 population in Israel is well below the average for the EU and the WHO European Region as a whole[150] [151]. The author considers the same indicator, but only for Israel (Appendix 37). As of 2022, there are 46,206 hospital beds in Israeli hospitals, of which 10,946 are public and 16,402 are private. The rest is redistributed among specialized healthcare institutions. It is noted that a significant proportion of hospital beds are in private medical institutions, which may indicate the active involvement of the private sector in the country's medical infrastructure. This may be due to the growing need for additional and specialized medical services that private clinics can provide. On the other hand, public hospital beds play an important role in ensuring the availability

[150] *Health Systems in Action Israel*. World Health Organization 2022. 28 p. ISBN 978 92 890 5913 8.
[151] *Israel hospitals Beds*. [accessed 05.12.2022]. Available at: https://tradingeconomics.com/israel/hospital-beds

and wide coverage of medical care for the population. The presence of a significant number of public beds may be due to the emphasis on providing basic health care.

Analysis of demographic characteristics is an important component of assessing and understanding the quality of a health care system. The author analyzed the average population of Israel, which is presented in Figure 3.15.

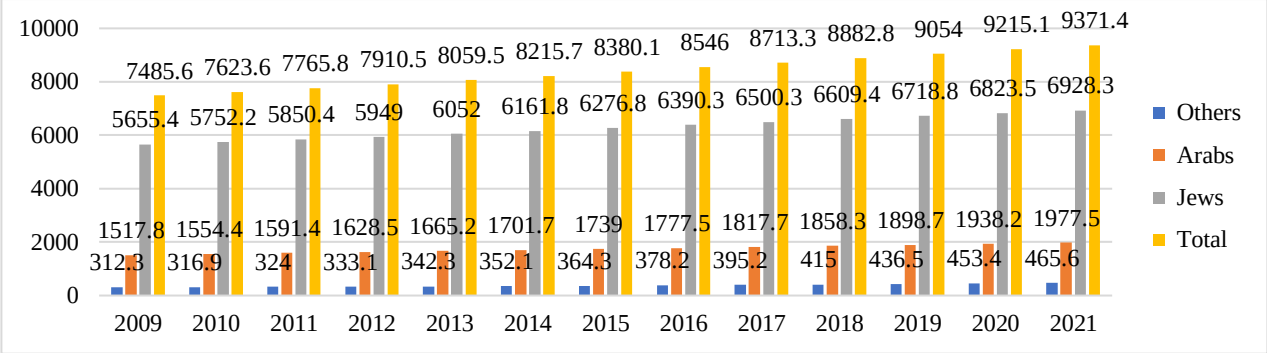

Figure 3.15. Average Population, Israel [152]

The average population size can have a significant impact on the quality of medical services for a number of reasons: availability and access to medical services, queues and waiting, resources and financing, staffing and overload of medical staff. This indicator can also characterize the quality of the healthcare system. It is noted that the population of Israel is growing slightly every year.

Life expectancy is a complex indicator that depends on many factors, including medical services, social environment, economic conditions, lifestyle, genetic background and much more (Appendix 38). Life expectancy in Israel is high, reaching 85.5 years. Although life expectancy depends on many factors, including lifestyle, social conditions and genetic background, the Israeli health care system has a number of characteristics that may contribute to this high rate: universal health care, preventive measures and health-saving programs, use of technology, availability of hospitals general profile.

The mortality rate can indicate the effectiveness and quality of the healthcare system. Mortality is a complex indicator that depends on many factors, including medical services, lifestyle, access to treatment, genetic background, social conditions and much more. The dynamics of this indicator from 2014 to 2022 are presented in Figure 3.16.

[152] *Central Bureau of Statistics of Israeli*. [accessed 25.02.2023]. Available at: https://www.cbs.gov.il/en/subjects/Pages/Health.aspx

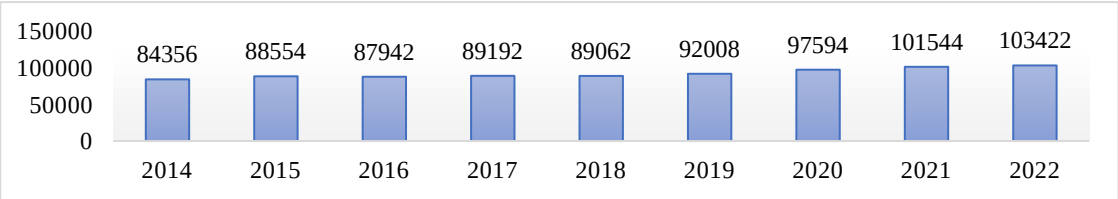

Figure 3.16. Number of Deaths in the Israeli population, per year, 2014-2023 [153]

According to data, mortality in Israel is increasing every year, due, among other things, to the consequences of the Covid-19 pandemic[154] [155], however, even before it begins, a slight annual increase in this indicator can be observed. Preventable mortality, as defined by the OECD, is lower in Israel (125 per 100,000 people compared to 203 per 100,000 in the OECD) as of 2022.

The Israeli healthcare system is of the social insurance type. Healthcare is universal, available to all Israeli citizens and provides compulsory health insurance. The Israeli health care system is diagrammed in Figure 3.17.

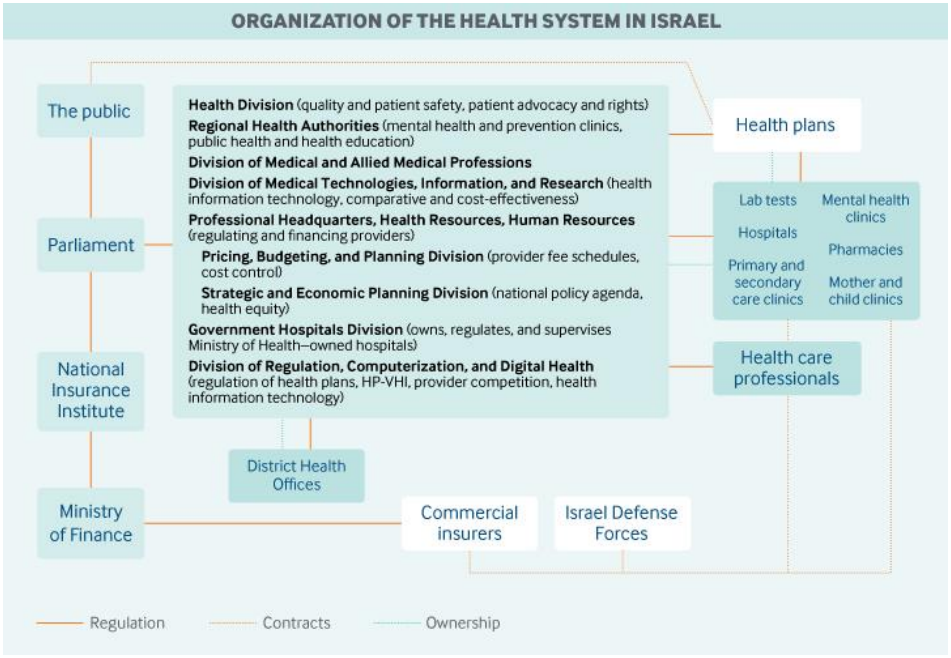

Figure 3.17. The Israeli healthcare system [developed by the author based on[156]**]**

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[153] *Central Bureau of Statistics of Israeli*. [accessed 25.02.2023]. Available at: https://www.cbs.gov.il/en/subjects/Pages/Health.aspx

[154] DREIHER, D. *The impact of the Covid-19 pandemic on the quality of care in Israeli hospitals*. In: Revista Sănătate Publică, Economie și Management în Medicină, 2022, nr.2 (93), p.5-10. ISSN 1729-8687.

[155] DREIHER, D., BLAGURAZUMNAYA, O., DREIHER, J. *The influence of the COVID-19 Pandemic on Quality Improvement and Patient Safety in Israeli Hospitals.* In: 28th Conference of the Israeli Society for Quality in Healthcare, Tel Aviv, 2023, p. 263 [Hebrew]. Available at https://qmed2023.b2b-wizard.com/expo/posters/13471

[156] TIKKANEN, R., et al., 2020. *International profiles of health care systems*. In: The Commonwealth Fund, 2020. [accessed 16.08.2021]. Available at: https://www.commonwealthfund.org/international-health-policy-center/countries/israel

Israel's healthcare system is managed by the Ministry of Health[157]. The core principles of the Israeli health care system include providing high-quality health care services, increasing access to them, recognizing patients' rights and maintaining ethical standards[158] [159]. In Israel's healthcare system, there exists a mix of both public and private hospitals. Private hospitals offer additional services such as commercial insurance[160], treatment on request and additional medical services. The activities of hospitals are controlled by the Israeli Ministry of Health. Public and non-profit hospitals follow a nationwide hospital fee schedule, but prices for commercial hospitals are not regulated. Physicians are primarily salaried workers with limited mechanisms for additional payment for services performed outside of office hours. The Israeli healthcare system is also a leader in the use of modern technology in the medical field. It widely uses electronic medical records, which improves the quality of medical care and reduces the time spent on information processing. In addition, the Israeli healthcare system has a high level of research and development activities in the field of medicine and pharmaceuticals.

Clalit (Kupat Holim "Clalit")[161], "Maccabi" (Kupat Holim "Maccabi")[162], "Meuhedet" (Kupat Holim "Meuhedet")[163] and "Leumit" (Kupat Holim "Leumit")[164] - these are the four main public health organizations in Israel, providing health services to their members. Each of these organizations operates its own network of medical facilities, doctors and specialists, providing various medical services. These organizations offer a variety of health programs, including medical assistance, diagnostics, preventive care and other health services. They also actively use modern technologies and methods to improve the quality of services and meet the needs of their members.

Most public hospitals are managed by four major healthcare organizations, which are responsible for providing healthcare services to Israeli citizens. The organizations Clalit, Maccabi,

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157 *Ministry of Health of Israeli*. [accessed 12.09.2022]. Available at: https://www.gov.il/en/departments/ministry_of_health/govil-landing-page

158 Quality Assurance in the Health System. Israel. [accessed 22.03.2023]. Available at: https://www.gov.il/en/departments/guides/patientsafety

[159] DREIHER, D. *The role of the service quality management system in medical institutions*. In: The international scientific - professional conference „Economic development and research" 21-23.06.2023. Chisinau: Trade Co-operative University of Moldova, 2023, p. 108-116. ISSN 978-9975-81-149-1

160 MICHAEL, T., FILC, D., DAVIDOVITCH, N. *What motivates physicians to propose private services in a mixed private-public healthcare system? A mixed methods study*. In: BMC Health Services Research, 2022, nr. 22, p. 1-11. ISSN 1472-6963.

161 *Clalit*. [accessed 11.01.2023]. Available at: https://www.clalit.co.il/he/Pages/default.aspx

162 *Maccabi.* [accessed 11.01.2023]. Available at: https://www.maccabi4u.co.il/1781-he/Maccabi.aspx

163 *Meuhedet*. [accessed 11.01.2023]. Available at: https://www.meuhedet.co.il/en/

164 *Leumit*. [accessed 11.01.2023]. Available at: https://www.leumit.co.il/eng/home/

Meuhedet and Leumit play a key role in the Israeli healthcare system, ensuring access and quality of medical care for the country's population.

The author conducted a study of regulations and documents regulating the process of quality management of medical services in Israel. The Ministry of Health issues licenses to most medical institutions, inspects them and considers complaints. The Ministry of Health can also require hospitals to follow certain procedures and maintains regular dialogue with the four health plans to address gaps and improve quality[165].

Israel discussed passing the National Quality in Health Care Law, which would establish the National Institute for Quality Improvement, a government-sponsored body[166], but it was not yet enacted. The functions of such an entity would include assessing the quality of care in several areas, with public reporting as a primary role, as well as overseeing quality improvement initiatives. The Ministry of Health's Quality and Services Division assumes some of these functions, including managing the National Quality Indicators Program for Hospitals, conducting national quality surveys, leading the National Patient Safety Program, improving the patient experience within the Israeli healthcare system, handling complaints and public inquiries, and improving the internal services of the Ministry of Health. Over the years, several regulations and directives from the Ministry of Health have been published. The National Health Insurance (Quality Scores and Disclosures) Regulations 2012 sets the framework for the National Hospital Quality Scores Program[167]. These rules state that the Director General of the Ministry of Health, in consultation with an advisory committee, will develop a list of quality indicators that will be published on the Ministry's website. Representatives from the Department of Health, health plans, academia, and non-health plan hospitals all participate in the advisory committee.

Medical Division Directive "National Hospital Quality Indicators Program: Monitoring and Follow-up"[168] defines "excellence" and "failure to achieve goals" related to national goals, as well as

[165] *Health Systems in Action Israel*. World Health Organization 2022. 28 p. ISBN 978 92 890 5913 8.

[166] TIKKANEN, R., et al., 2020. *International profiles of health care systems*. In: The Commonwealth Fund, 2020. [accessed 16.08.2021]. Available at: https://www.commonwealthfund.org/international-health-policy-center/countries/israel

[167] *Ministry of Health of Israeli*. National Health Insurance Regulations: Quality Indicators and Disclosure, 2012. [accessed 12.03.2020]. Available at: https://www.gov.il/he/Departments/legalInfo/bituah15

[168] *Ministry of Health*, Medicine Division directive 22/2014, The National Program for Quality Indicators in Hospitals: Monitoring and Follow-up. Jerusalem: Ministry of Health; 2014. [Hebrew]. [accessed 12.03.2020]. Available at: https://www.gov.il/he/departments/policies/mr22-2014.

various sanctions for hospitals that consistently fail to meet national goals [169].

Other directives form the basis for the accreditation of hospitals by the Joint Commission International (Division of Medicine directive 38/2012[170]); define the structure of the Patient Safety Department in hospitals and health plans (Medical Department Directive 35/2012 [171] and 48/2013[172]); and define a list of "never events" (directive of the Director General 09/2011[173]) and adverse events that must be reported to the Ministry of Health (directive of the Medical Department 2/2021[174]).

The Ministry of Health, being a leading and professional ministry, studies the changes that have taken place in the health care system and the problems facing it every few years, and develops a strategy for the ministry[175] [176]. Thus, the analysis showed that Israel has a developed legislative system that regulates the quality of medical services and ensures and protects the rights and interests of patients.

Considering in more detail the issues of ensuring the quality of medical services in Israel, it is worth studying the extensive and successful program for monitoring the quality of medical care in the community, operating for more than 15 years[177]. This program was initiated in 1998 under the Clalit program, the largest of the four health provide organizations in Israel. The National Quality Indicators in the Community Program was launched in 2003. It started as a collaborative research initiative between the Department of Industrial Engineering and the Faculty of Health Sciences at Ben-Gurion

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[169] DREIHER, D., BLAGORAZUMNAYA, O., BALICER, R., DREIHER, J. *National initiatives to promote quality of care and patient safety: achievements to date and challenges ahead*. In: Israel Journal of Health Policy Research, 2020, nr. 9(62). ISSN 2045-4015. https://doi.org/10.1186/s13584-020-00417-x

[170] *Ministry of Health of Israeli*. Ministry of Health, Medicine Division directive 38/2012, Accreditation / Certification Process in General Hospitals. Jerusalem: Ministry of Health; 2012. [Hebrew]. [accessed 12.03.2020]. Available at: https://www.health.gov.il/hozer/MR38_2012.pdf

[171] *Ministry of Health*, Medicine Division directive 35/2012, The Patient Safety Unit in Hospitals: Structure and Roles. Jerusalem: Ministry of Health; 2012. [Hebrew]. [accessed 12.03.2020]. Available at: https://www.health.gov.il/hozer/mr35_2012.pdf

[172] *Ministry of Health*, Medicine Division directive 48/2013, The Patient Safety and Risk Management Unit in Health Plans: Structure and Roles. Jerusalem: Ministry of Health; 2013 [Hebrew]. [accessed 12.03.2020]. Available at: https://www.gov.il/he/departments/policies/mr48-2013

[173] *Ministry of Health*, Director General directive 09/2011, "Never Events". Jerusalem: Ministry of Health; 2011 [Hebrew]. [accessed 12.03.2020]. Available at: https://www.gov.il/he/departments/policies/mk09-2011

[174] *Ministry of Health*, Obligation of the healthcare facility to report special events, Directive of the Medical Department 2/2021. [accessed 10.05.2022]. Available at: https://www.gov.il/he/Departments/policies/mr02-2021

[175] Israel Ministry of Health. Strategic planning process. [Hebrew]. [accessed 10.01.2023]. Available at: https://www.health.gov.il/About/Pages/StrategicPlanProcess.aspx

[176] Ministry of Health strategic process. [Hebrew]. [accessed 10.01.2023]. Available at: https://www.gov.il/BlobFolder/generalpage/strategic-plan-process/en/subjects_about_StrategicPlanProcess_Accessible.pdf

[177] OVČINA, A., et al. *Clinical Health Care Indicators Monitoring as an Indicatior of Health Services Quality and Safety*. In: Journal of Applied Health Sciences, 2019, nr. 5 (2), p. 153-162. ISSN 2459-5640.

University of the Negev. The program was declared a national program by the Ministry of Health in 2004, and since then it has operated through the voluntary cooperation of four health plans. Annual report[178] program progress is published after verification by an external auditor[179]. The National Program for Quality Indicators in the Community supports quality measurement in primary care and includes 76 quality measures related to well-being, health, and disease management in nine core clinical areas: health of children and adolescents; health promotion; cardiovascular diseases; cancer screening; respiratory diseases; diabetes; use of antibiotics; mental health; and the health of adults aged 65 years and older. Data are collected systematically for the entire population from electronic health records of the four healthcare provide organizations, or health plans. The program benchmarks itself with leading national programs on quality indicators, such as the US, Sweden, Australia, UK and OECD countries. The criteria used to select quality indicators are evidence base, importance and relevance, quantification, feasibility and the ability to effect change.

Israel has one of the most advanced quality monitoring systems for primary health care[180]. Many program indicators are based on definitions from existing international indicators, such as the National Committee for Quality Assurance (NCQA) Health Care Effectiveness Data and Information Set (HEDIS) in the US, and with the intention of improving quality indicators over time[181]. The quality of health care in Israel is considered "high"[182]. This achievement can be attributed both to the fact that health coverage is universal as of 1995, and the organization and structure of the health system, which uses a high professional standards of doctors, a reliable primary healthcare system, and supporting quality factors such as medical education and research.

The Israeli health care system is characterized by universal health insurance under the National Health Insurance Law of 1994 (came into force on 1995) (NHIL)[183]. Primary and secondary care is

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178 *The National Program for Quality Indicators for General and Geriatric Hospitals, Psychiatric Hospitals, Mother & Baby Health Centers and Emergency Medical Services* (Ambulances). [accessed 12.03.2020]. Available at: https://www.gov.il/en/departments/publications/reports/quality-national-prog-2013-2020

179COHEN, A. D. et al. *The quality indigators program in Clalit Health Services: the first decade.* In: Harefuah, 2010, nr. 149(4), p. 204-209. ISSN 0017-7768.

180 GLAZIER, R. H. *Reflections of the quality of primary care in Canada and Israel*. In: Israel Journal of Health Policy Research, 2018, nr. 7, p. 1-3. ISSN 2045-4015.

181JAFFE, D. H. et al. *Community healthcare in Israel: quality indicators 2007-2009*. In: Israel Journal of Health Policy Research, 2012, nr. 1, p. 1-10**.** ISSN 2045-4015.

182 ANGEL, Y., NIV-YAGODA, A., GAMZU, R. *Adapting the Israeli national health insurance law to the 21st century–a report from the 19th Dead Sea Conference*. In: Israel Journal of Health Policy Research 2021, nr. 10(1). ISSN 2045-4015. DOI: 10.1186/s13584-020-00432-y

183 *Israel National Health Insurance Law* of 1994. [Hebrew]. [accessed 12.03.2020]. Available at: https://www.gov.il/he/Departments/legalInfo/bituah01

provided by four health plans based on the Bismarckian model[184]. Four health insurance plans, or HMOs, are nonprofit and government-funded. Hospital services are provided by the government, health plans (mostly Clalit Health Services), and other private and public owners[185]. Advanced information systems, such as electronic health records exist in all health plans and hospitals. They all have data on services provided, quality of care and activity levels. The government uses regulation to ensure access to health care, quality of care, financial stability and equity[186].

In addition to extensive and long-term program for monitoring quality of care in community medicine, indicators for comparing the quality of hospital care were launched in 2013. The Department of Health's Office of Quality, Service and Safety publishes data on various hospital indicators[187]. The Israeli Ministry of Health provides information on the quality of care in its reports[188].

Joint Commission International (JCI) accreditation was first introduced for Clalit hospitals in Israel in 2006. A dedicated website was created on the Clalit intranet and pilot surveys were conducted in each hospital included in the accreditation process. Eleven committees with 150 representatives worked throughout the year to map the gaps between JCI standards and existing policy[189]. Directive 38/2012 of the Medical Division of the Ministry of Health states that from July 2015, all general hospitals were required to be JCI accredited or in the process of obtaining JCI accreditation as a prerequisite for licensing[190]. Today, most Israeli hospitals undergo the JCI accreditation process. Until May 2020, 29 Israeli hospitals were JCI accredited, as listed on the JCI website, however, as of December 2021, only 12 maintained their accreditation status[191]. Because reports issued by JCI are confidential, there is no available data demonstrating improvement over time. At the hospital level, a

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184 VAN DER ZEE, J., KRONEMAN, M. W. *Bismarck or Beveridge: a beauty contest between dinosaurs*. In: BMC health services research, 2007, nr. 7(1), p. 1-11. ISSN 1472-6963.

185ROSEN, B., WAITZBERG, R., MERKUR, S. *Israel: Health system review*. In: Health systems in transition, 2015, nr. 17(6), p.1-202. ISSN 1817-6127.

186CLARFIELD, A. M. et al. *Health and health care in Israel: an introduction*. In: The Lancet, 2017, nr. 389(10088), p. 2503-2513. ISSN 0140-6736.

187 *Health Systems in Action Israel*. World Health Organization 2022. 28 p. ISBN 978 92 890 5913 8.

188 *Annual Reports*. National program annual reports on measures of quality in public medicine. [accessed 12.03.2020]. Available at: https://en.israelhealthindicators.org/publications

189BAR-RATSON, E. et al. *The accreditation program in hospitals: Clalit Health Services experience*. In: Harefuah, 2011, nr. 150(4), p. 340-345. ISSN 0017-7768. [Hebrew].

190*Ministry of Health of Israeli*. Ministry of Health, Medicine Division directive 38/2012, Accreditation / Certification Process in General Hospitals. Jerusalem: Ministry of Health; 2012. [Hebrew]. [accessed 12.03.2020]. Available at: https://www.health.gov.il/hozer/MR38_2012.pdf

191 *Search for JCI-Accredited Organizations*. [accessed 12.03.2020]. Available at: https://www.jointcommissioninternational.org/about-jci/accredited-organizations.

key goal of the accreditation process is to create an improvement-oriented climate, encourage teamwork and quality improvement, and increase the technical and psychological readiness of staff for significant organizational change[192]. The author found a statistically significant difference in accreditation status by ownership: 91% of accredited public hospitals compared to 70% of hospitals owned by health insurance plans and 38% of other public hospitals[193]. This pattern is shown in Figure 3.18.

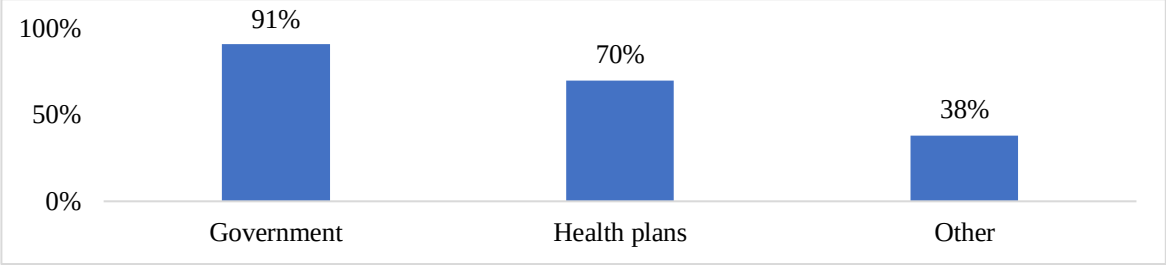

Figure 3.18. JCI Accreditation by Hospital Affiliation (p = 0.015)

[developed by the author based on[194]]

The author also showed differences between JCI accredited and non-accredited hospitals (p>0.1), with the exception of lower waiting times for hospitals accredited JCI (p=0.074), Figure 3.19.

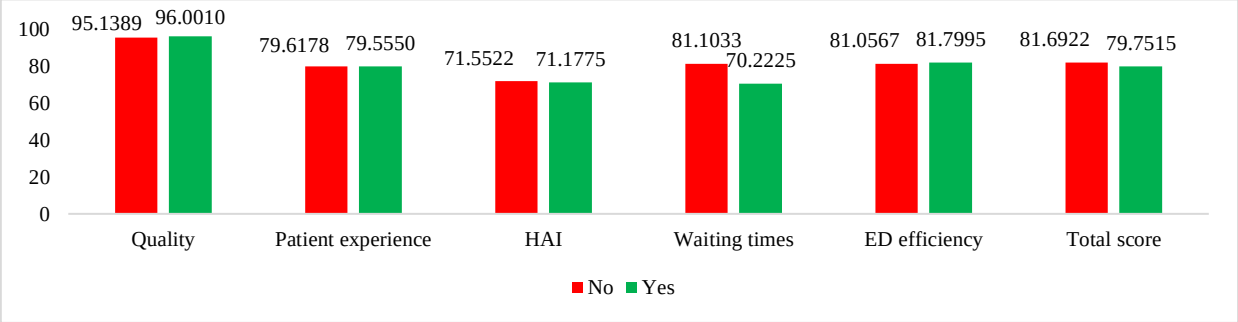

Figure 3.19. Hospital performance by accreditation status JCI

[developed by the author based on[195]]

Thus, JCI accreditation status had little to do with actual quality and patient satisfaction

[192] KAGAN, I., PORAT, N., BARNOY, S. *The quality and safety culture in general hospitals: patients', physicians' and nurses' evaluation of its effect on patient satisfaction*. In: International Journal for Quality in Health Care, 2019, nr. 31(4), p. 261-268. ISSN 13534505.

[193] BORD, S. et al. *Involvement and skepticism towards the JCI Accreditation process among hospital's four sectors employees: suggestions for cultural change*. In: Israel Journal of Health Policy Research, 2021, nr. 10, p. 1-12. ISSN 2045-4015.

[194] *JCI accredited hospitals and medical centers*. [accessed 08.01.2023]. Available at: https://www.health-tourism.com/jci-accredited-medical-centers/

[195] DREIHER, D. *Factors associated with the quality of medical services in Israeli hospitals*. In: EcoSoEn, 2021, an. 4, nr. 1-2, p. 114-121. ISSN 2587-344X.

ratings[196]. First, some hospitals that maintain accreditation status have actually left the plan, while non-accredited hospitals include both those that were never accredited and those that chose to leave the plan voluntarily. Second, some quality indicators may have target values so low that even low-performing hospitals will find it easy to achieve these goals.

To summarize the characteristics of the quality tools used in the field of medicine, it should be noted that they stimulate the development of quality levels. The Israeli healthcare system offers Israeli citizens high-quality medical services that reflect the potential centered on the progress of clinical medicine in recent years and the improvement of information infrastructures[197]. Every healthcare worker sees the importance of providing high-quality services within the healthcare system. The health system is committed to investing the necessary resources for providing care of the highest quality possible, with a focus on monitoring clinical quality indicators.

In Israel in 2012, there were improvements in the regulation of the legislative framework regarding the quality of medicine[198]. Decrees regarding public health insurance were formulated and adopted, and significant achievements were made in the field of the quality of services offered by hospitals: measuring the quality of services in public hospitals, creating an infrastructure that allows the transfer of information within the health system, and starting activities in the field of safe treatment in the Israeli health system. These achievements would not have happened if it were not for a system of three aspects: innovative equipment, specialists and modern medical technologies. The central principles guiding the Israeli Ministry of Health in the area of quality assurance[199]: monitoring of clinical quality indicators; ensuring safe treatment; improving patients' opinions of the Israeli health care system; ensuring continuous and consistent treatment. In accordance with these principles, the following quality trends in Israeli medicine find their practical manifestation: digital healthcare, a special individual approach to each patient, ensuring transparency in the healthcare system, public reporting, conducting quality courses, publishing quality recommendations and others. The author analyzed the trends that have the greatest impact on the quality component of medical services, which

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196 DREIHER, D. *Joint commission accreditation and the quality of medical services in Israeli hospitals*. In: Materials of the XXVI international scientific - practical conference «Problems of Economics, Organization and Management in Russia and the World» April 30, 2021. Prague: WORLD PRESS s.r.o., 2021, p. 22-28. ISSN 978-80-88005-64-2.

197 *Best Healthcare in the World*. Wisevoter. [accessed 10.11.2022]. Available at: https://wisevoter.com/country-rankings/best-healthcare-in-the-world/

198 *State health insurance regulations (quality indicators and information delivery),* 2012. [Hebrew]. [accessed 12.03.2020]. Available at: https://www.health.gov.il/LegislationLibrary/Bituah15.pdf

199 *Quality Assurance in the Health System*. Israel. [accessed 22.03.2023]. Available at: https://www.gov.il/en/departments/guides/patientsafety

is schematically presented in Figure 3.20.

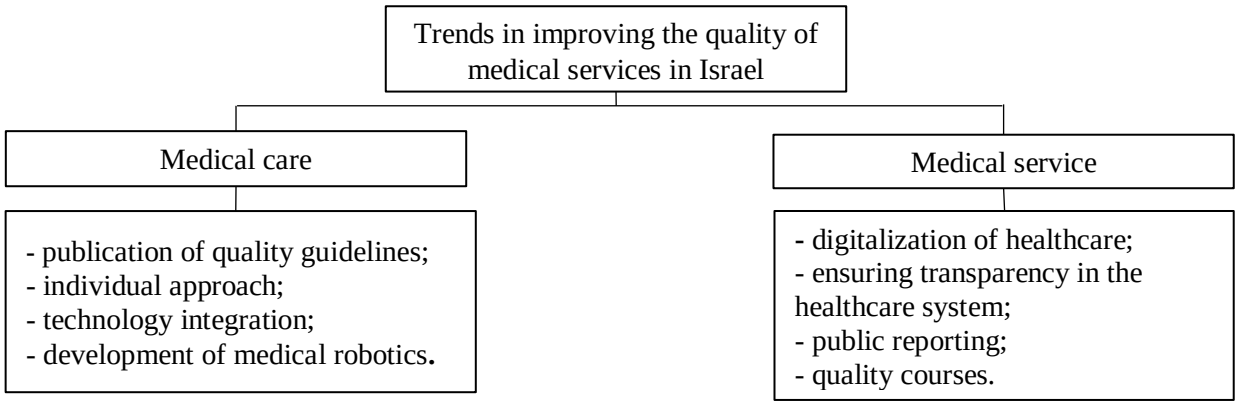

Figure 3.20. Trends in improving the quality of medical care in Israel [developed by the author]

Trends in improving the quality of medical services were conditionally divided by the author into two types: medical care (treatment and diagnosis) and medical service (planning, accessibility and organization). The introduction of modern medical technologies, such as telemedicine, artificial intelligence and big data analysis, makes it possible to more accurately diagnose diseases and more effectively choose treatment methods. The development of genetic research and molecular diagnostics makes it possible to create individual, personalized approaches to treatment, taking into account the genetic characteristics of each patient.

The use of robots in surgery and rehabilitation improves the accuracy and safety of procedures. Introducing electronic health records, online appointments and electronic prescriptions makes access to health information and services easier for patients. Updating equipment and creating modern clinical centers improves the quality of services provided. Simplifying administrative procedures and streamlining bureaucracy in the health care system allows you to focus on medical practice and increase the efficiency of care. Expanding medical coverage to remote and sparsely populated areas through the development of telemedicine and mobile medical units increases the availability of medical services. The bulk of innovation in the Israeli healthcare system is currently happening through digital health[200]. Digital health improves efficiency, equity, patient-centeredness, access to healthcare, efficient use of resources, and patient safety by improving health behaviors, improving clinical assessment, increasing patient adherence and engagement, and improving care coordination.

[200] *Digital Health Laws and Regulations Israel 2023*. [accessed 12.01.2023]. Available at: https://iclg.com/practice-areas/digital-health-laws-and-regulations/israel

The main areas of digital health currently used (2022-2023) in Israel are listed in Figure 3.21.

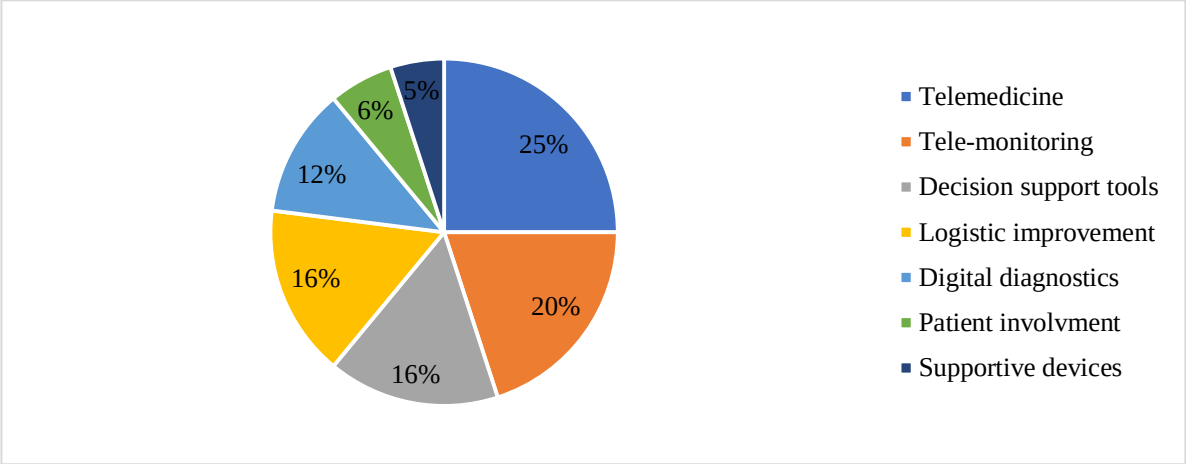

Figure 3.21. Digital Health in Israel [developed by the author based on [201]]

Incorporating digital health into the Israeli health care system could save up to $1.1 billion per year and increase annual economic growth by $9 billion, mainly through the development of home hospitalization, telemedicine, reduction of working hours, number of unnecessary medical tests, and reduction of errors when taking medications, increasing adherence to medications, etc.[202] .

Another trend is the introduction of quality and patient safety courses, which are becoming more popular in programs such as Master of Health Administration and medical schools. Some guidelines on the quality and content of the treatment process have been published by the Israeli Medical Association (85 guidelines between 1997 and 2021), only 20 of them are from the last 5 years (Appendix 39). These guidelines are not considered by the Israeli medical community as mandatory or strong recommendations. Clinical practice guidelines are intended to reduce inappropriate clinical care options, minimize harm to the patient, promote cost-effective practice, and achieve optimal patient outcomes.

Considering the collected data on the Israeli healthcare system and trends, it is necessary to conduct a PEST analysis of the Israeli healthcare system in order to assess the role and degree of influence of environmental factors on the process of organizing and managing the quality of medical services in the country, as shown in Table 3.2.

[201] *IATI's Annual Israeli Life Science Industry* Report 2019. [accessed 12.01.2023]. Available at: https://www.iati.co.il/files/files/IATI%202019%20Israeli%20Life%20Sciences%20Industry%20Report1.pdf

[202] *Deloitte*. 2016 Global healthcare outlook - Battling costs while improving care2016. [accessed 12.01.2023]. Available at: https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Life-Sciences-Health-Care/gx-lshc-2016-health-care-outlook.pdf

Table 3.2. PEST analysis of the Israeli healthcare system [developed by the author]

Political factors	Economic forces
• Availability of government support • Developed legislative infrastructure of the healthcare system • International cooperation on health issues [203] • Government stability • Military conflicts • Policies towards migrants and refugees • Regulation of medicine (standards)	• Financing health care from the tax budget • Private healthcare system • Inflation and the cost of medical services • Private insurance and self-financing
Sociocultural factors	**Technological factors**
• High level of multicultural and diverse population • Maintaining a healthy lifestyle • Developed traditions, religious beliefs, cultural practices • Level of education and awareness • Social inequality	• Medical innovations • IT infrastructure • Electronic health (eHealth) • Infrastructure and transport • Biomedical research base

The information presented in the table indicates the presence of a significant number of factors influencing the Israeli healthcare system. It is necessary to take into account these factors and the conditions they create when developing mechanisms and tools for managing the quality of medical services within the Israeli healthcare system. Not all presented environmental factors (economic, technological, social and political) influence equally. A significant role in the development of healthcare services in Israel is played by political factors. Government support and stability contributes to the development of quality in the healthcare system through financing and regulation, makes it possible to ensure the availability of medical services to the population and invest in the development of healthcare[204]. However, laws governing medical practice and insurance play an important role. The development and maintenance of the country's international relations on health issues also stimulate the qualitative progress of medical services[205]. Cooperation with other countries in the field of medical science and research promotes the exchange of experience and the transfer of best practices, which can improve the level of medical expertise. National security poses challenges to ensuring the quality of medical services in Israel, since military conflicts can limit the availability

[203] Country Cooperation Strategy, Israel (WHO), 2019-2025. World Health Organization. 33 p. ISBN 978-92-4-000802-1. [accessed 10.01.2023]. Available at: https://www.who.int/publications/i/item/9789240008021

[204] AARON, E. M., ANDREWS, C. S. *Integration of advanced practice providers into the Israeli healthcare system*. In: Israel Journal of Health policy research, 2016,.nr. 5(1), p. 1-18. ISSN 2045-4015.

[205] ROTENBERG, D. K. et al. *Similarities and differences between two well-performing healthcare systems: a comparison between the Israeli and the Danish healthcare systems*. In: Israel Journal of Health Policy Research, 2022, nr. 11(1), p. 14. ISSN 2045-4015. [accessed 10.02.2023]. Available at: https://link.springer.com/article/10.1186/s13584-022-00524-x

and quality of medical services in emergency situations. Thus, most of the listed political factors contribute to the development of the quality of medical services in Israel.

Financing healthcare from the tax budget makes it possible to ensure the availability of medical services for the population, regardless of their financial situation. This creates equal conditions for receiving medical care and helps improve the quality of services. The private medicine system simultaneously stimulates and inhibits, since the presence of private medicine can stimulate the development of quality of services through competition and the opportunity to invest in more modern equipment and technologies. However, it can also lead to inequalities in access to care and duplication of resources. Rising inflation and the cost of medical services can make them unaffordable for part of the population, which will worsen the quality of healthcare[206]. High costs may also limit the ability to invest in equipment and personnel. In general, economic factors have a multidirectional impact on the development of the quality of medical services in Israel. Some of these, such as tax funding and the availability of private healthcare, can stimulate competition and investment, which promotes development. While others, such as inflation and the high cost of medical services, can hinder access and quality.

Many of the sociocultural factors can stimulate the development of quality medical services, for example, maintaining a healthy lifestyle and a high level of education. However, some factors, such as population diversity and social inequality, may pose challenges that require consideration and adaptation by the health system to ensure equitable access to quality health care for all population groups.

Most technological factors such as medical innovations[207], IT infrastructure, e-health and biomedical research base are driving the development of quality healthcare services in Israel. However, it is important to ensure equal access to technology and information resources for all segments of the population to prevent deepening social inequalities in health care. By considering PEST factors, Israel's healthcare system can evolve with political support, economic sustainability, cultural diversity and technological advancements. But the system is subject to challenges related to changes in legislation, funding and meeting patient needs.

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206 CHERNICHOVSKY, D. *The Israeli healthcare system: an overview*. In: A chapter from the state of the nation report, 2018. [accessed 17.10.2022]. Available at: https://www.taubcenter.org.il/wp-content/uploads/2020/12/healthcareoverview2018en.pdf

207 ROSHKA, P.I., BLAGORAZUMNAYA, O.N., DREIHER, D., ISRAELI, M. *Innovation as an element of the development of healthcare and education in Israel.* In: Modern engineering and innovative technologies, Nr.24, 2022, p. 39-47. ISSN 2567-5273.

From an analysis of the trends and dynamics of the development of the Israeli healthcare system, we can conclude that the country is in a comparatively leading position as far as the quality of healthcare services is involved, compared to other countries. Some of the characteristics of the Israeli healthcare system are highly qualified medical personnel, a high level of technological equipment and a wide range of medical services. Israel continues to demonstrate high levels of quality health care services and strives to improve the accessibility and cost-effectiveness of its health care system. However, at the same time, new challenges are emerging, such as increasing healthcare costs and the need to ensure accessibility of medical services for all groups of the population and other traditional problems of modern healthcare. Most health care services, especially those that require higher technological capabilities, remain quite expensive and unaffordable for some segments of the population. In addition, there has been an increase in healthcare costs recently, which may lead to additional problems in the near future. It is necessary to follow modern trends in the field of healthcare, maintain a high level of medical care and service, and adapt successful foreign experience. At the same time, it is extremely important to take into account environmental factors that may hinder, stimulate or become obstacles to improving the quality of healthcare services.

3.3. A study of the experience of using quality assurance tools in public general hospitals in Israel

The use of quality assurance and management tools can help public and private hospitals improve their processes and results. The author conducted a study of the experience of using quality assurance tools in public general hospitals in Israel. This study examines the main healthcare quality management tools used in hospitals and their impact on the quality of healthcare and patient satisfaction with healthcare services.

The hospital is the backbone of Israeli healthcare. As you know, medicine in Israel is the second most important item in the state budget. These funds are used to equip public hospitals and clinics, and to improve the qualifications of doctors working in public medical institutions. The Israeli healthcare system includes both private clinics and public hospitals. Public hospitals are better funded than private clinics. The government in Israel invests heavily in purchasing new equipment for public hospitals - especially for large medical centers (for example, Sheba, Soroka, Tel Aviv Sourasky Medical Center). At the same time, public hospitals, unlike private clinics, have equipment for diagnosing and treating any disease, including the rarest. The best Israeli doctors work in public

clinics. Unlike private clinics, in public hospitals doctors have the opportunity to engage in scientific research. In addition, hospitals periodically organize foreign internships and advanced training courses for doctors. In Israeli public hospitals you can get treatment for any disease. However, the following areas are most in demand among patients from abroad: oncology, orthopedics, spinal surgery, urology, gynecology, cardiac surgery of any complexity, etc.

Citizens of the country can be treated in public clinics free of charge. But the trend is that Israelis still prefer to pay extra for medical services in private clinics. According to the State of Israel National Insurance Institute, there are 13 public general hospitals and 7 private hospitals in Israel (Appendix 40). The author selected 7 Israeli public general hospitals to study their experiences with quality assurance tools. The sample included large, medium and small medical centers to ensure representativeness of the sample: Golda[208], Beilinson[209] (both hospitals are part of Rabin Medical Center[210]), Carmel[211], Soroka[212], Emek[213], Meir[214], and Kaplan[215].

The author conducted a study to assess the quality of medical services in public hospitals in Israel based on official statistical data. For this purpose, quality indicators were divided into those that characterize the technical side of the medical service and the interpersonal one. At the same time, these indicators reflected the essence of approaches to assessing the quality of medical services in hospitals, which is presented in Table 3.3.

These indicators were distributed by the author according to two aspects of the medical service. The distribution was based on consistency, that is, the indicators Continuity of care and Attitude and respect for the patient reflect two aspects of the medical service within the framework of the process approach, the indicators Providing information and Physical conditions correspond to the structural approach, the indicators Treatment effectiveness and Overall satisfaction correspond to the effective approach.

[208] *Golda hospital website*. [accessed 18.11.2021]. Available at: https://www.malpractice.co.il
[209]*Beilinson hospital website*. [accessed 18.11.2021]. Available at: https://experts-medical.com/en/clinic/yitzhak-rabin-medical-center-beilinson-hospital/
[210] *Rabin Medical Center*. [accessed 18.11.2021]. Available at: https://hospitals.clalit.co.il/rabin/en/Pages/default.aspx
[211]*Carmel Medical Center website*. [accessed 18.11.2021]. Available at: https://hospitals.clalit.co.il/carmel/he/Pages/default.aspx
[212] *Soroka hospital website*. [accessed 18.11.2021]. Available at: https://hospitals.clalit.co.il/soroka/he/Pages/default.aspx
[213] *Emek hospital website*. [accessed 18.11.2021]. Available at: https://hospitals.clalit.co.il/emek/en/Pages/default.aspx
[214] *Meir Medical Center website*. [accessed 18.11.2021]. Available at: https://mediglobus.com/clinic/meir-medical-center/
[215]*Kaplan medical center website*. [accessed 18.11.2021]. Available at: https://hospitals.clalit.co.il/kaplan/en/Pages/default.aspx

Table 3.3. Evaluation of the quality of medical services in public hospitals in Israel, 2023 [developed by the author based on[216]]

	Technical side (health care)	Interpersonal side (medical service)
Process approach	*Continuity of care* 1. Golda – 89.75 2. Soroka – 88.5 3. Carmel – 88.5 4. Bellinson – 86.5 5. Emek – 85.75 6. Meir – 84.25 7. Kaplan – 82.25	*Attitude and respect for the patient* 1. Carmel – 92.25 2. Golda – 92.25 3. Bellinson – 90.75 4. Emek – 89.25 5. Soroka – 89 6. Meir – 88.25 7. Kaplan – 87.25
Structural approach	*Providing information* 1. Golda – 89.75 2. Carmel – 88.5 3. Soroka – 88.5 4. Bellinson – 86.5 5. Emek – 85.75 6. Meir – 84.25 7. Kaplan – 82.25	*Physical conditions* 1. Bellinson – 84.25 2. Soroka – 84 3. Carmel – 83.75 4. Emek – 82.5 5. Golda – 82.75 6. Meir – 80.25 7. Kaplan - 71.75
Effective approach	*Treatment effectiveness* 1. Golda - 91 2. Bellinson – 88.25 3. Carmel – 88.75 4. Soroka – 88 5. Meir – 86.75 6. Kaplan – 85.75 7. Emek - 85	*Overall satisfaction* 1. Golda – 86.75 2. Carmel – 84.75 3. Soroka – 84.75 4. Bellinson – 84.25 5. Meir – 84.25 6. Emek – 77.75 7. Kaplan – 74.5

As can be seen in the table, each indicator includes its own health care rating for a sample of public general hospitals in Israel. Thus, the author was able to characterize approaches to quality management through these indicators, taking into account two aspects of a medical service (medical care and medical care).

The process approach in this analysis is characterized by two indicators of the quality of medical services: continuity of care and attitude and respect for the patient. The continuity of care indicator (Appendix 41) reflects the sequence and appropriateness of medical procedures, treatment methods or therapeutic interventions, as shown in Figure 3.22.

The presented graph shows the ranking of hospitals by efficiency in the field of therapeutic services. Three leading institutions, namely Golda, Soroka and Carmel, stand out due to the high level of patient care they provide.

[216] *Quality indicators in institutions*. [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality

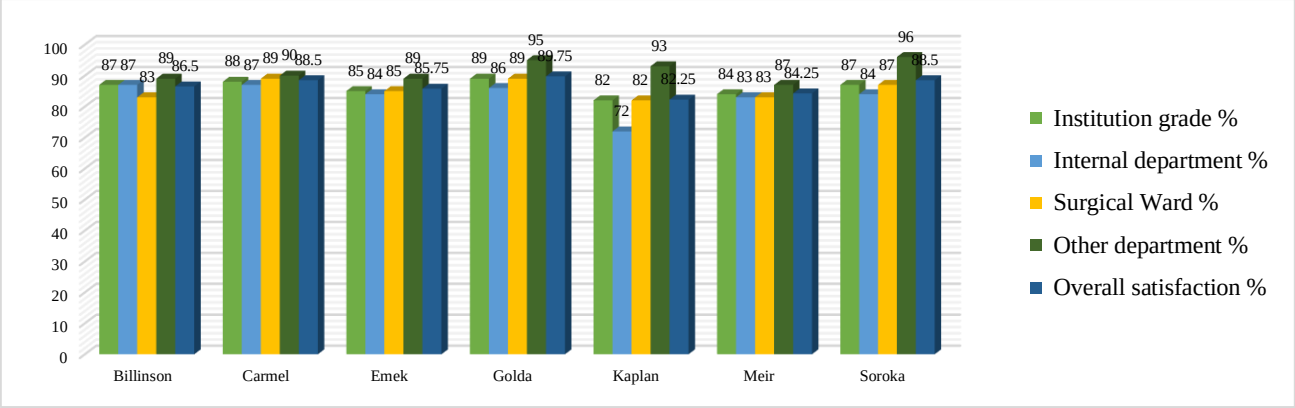

Figure 3.22. Continuity of care in public general hospitals in Israel, 2023[217]

Golda, as one of the leaders, may have advanced treatment methods and knowledge transfer between medical specialists. Soroka and Carmel, also with outstanding results, can provide innovative techniques and a high standard of medical practice. It is likely that the variety of services and treatments provided at these hospitals complements the overall picture of medical care in Israel. Thus, the graph allows us to conclude that Golda, Soroka and Carmel have achieved significant achievements in the field of therapeutic medicine.

The indicator "attitude and respect for the patient" reflects the professionalism and human approach of medical staff to patient care. This indicator assesses how health care staff interact with patients, what kind of relationships are established, and the extent to which ethical and cultural standards for treating patients are respected. The author analyzed attitude and respect for the patient (Appendix 42), which is presented in Figure 3.23.

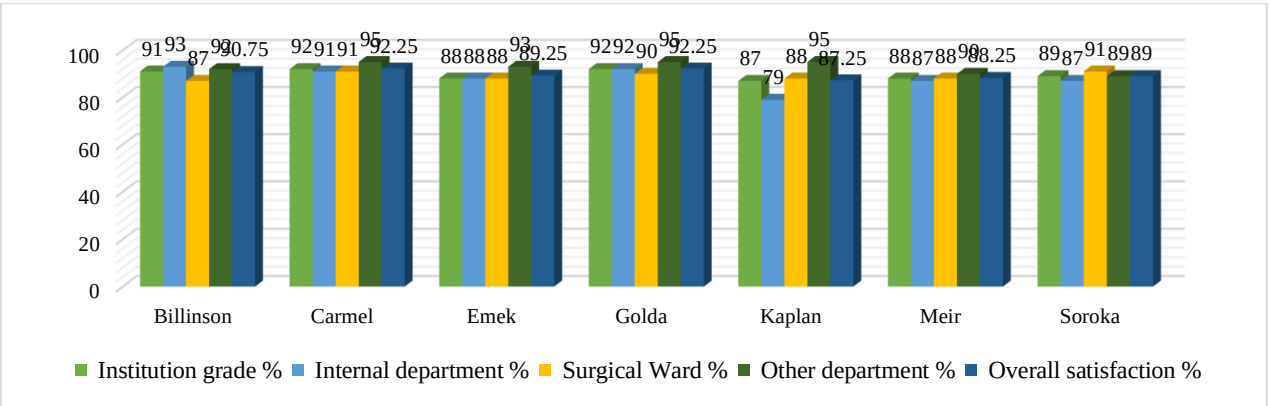

Figure 3.23. Attitude and respect for the patient in Israeli public general hospitals, 2023[218]

[217] *Quality indicators in institutions*. [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality
[218] *Quality indicators in institutions*. [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality

Attitude and respect for the patient is an important criterion for assessing the quality of medical care and patient comfort in hospitals. Hospitals Carmel and Golda show a high level of respect and attitude towards patients. This may indicate the effective communication skills of medical staff, as well as an individual and attentive approach to all patients. Not far behind the leaders, Billinson Hospital also demonstrates a good level of patient care. This may indicate that the hospital is effectively integrating approaches aimed at improving interaction with patients. Kaplan Hospital has the lowest score among those presented. Most hospitals have a high or acceptable level of attitude and respect for patients. However, there are differences between institutions and it is important to identify best practices in leaders and consider possible areas for improvement in those who perform worse.

The structural approach is characterized by the indicators providing information and physical conditions. The indicator "providing information" reflects the ability of medical institutions or staff to provide information to patients about the status and progress of their treatment, diagnosis, procedures, drugs and other aspects related to medical care (Appendix 43), as shown in Figure 3.24.

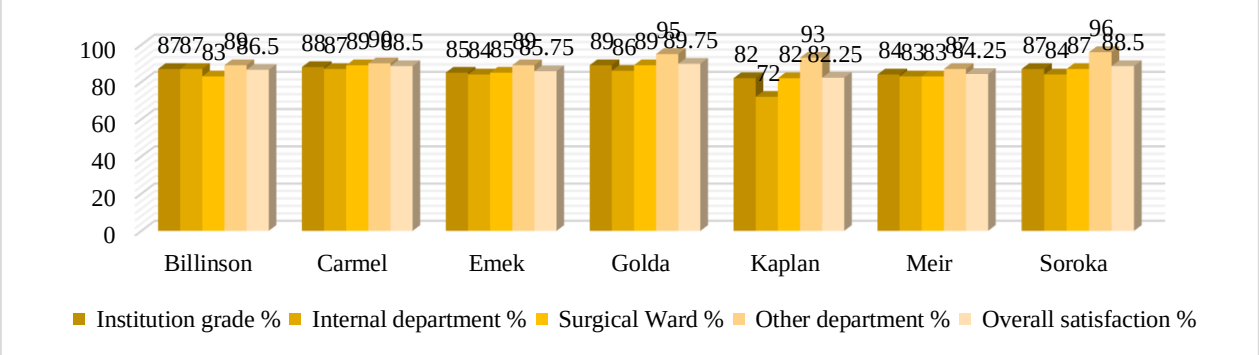

Figure 3.24. Providing information in Israeli public general hospitals, 2023[219]

A high “providing information” score indicates that the hospital successfully communicates with patients and provides them with the necessary information for making informed decisions regarding their health and treatment. It also helps build trust between healthcare providers and patients. Golda Hospital is a leader in providing information. This may indicate a high standard of communication with patients and a focus on ensuring patients understand all aspects of their care. Carmel (88.5) and Soroka (88.5): Data indicate similar levels of information provision at Carmel and Soroka hospitals. They demonstrate that both hospitals provide patients with enough information in order to make informed decisions related to their health. Billinson (86.5), Emek (85.75), Meir (84.25):

[219] *Quality indicators in institutions*. [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality

These hospitals have an average level of "Providing information". It is important to note the potential for improving communication processes with patients to ensure a better understanding of medical aspects. Kaplan (82.25): Kaplan Hospital has a lower level of information provision. This may indicate a need to increase efforts to improve communication with patients and to provide all the information needed for making more informed decisions. In general, data analysis shows that most hospitals have an acceptable level of information provision to patients, however, there are differences in the effectiveness of communication between institutions.

The physical conditions indicator reflects the level of physical conditions in which medical care is provided to patients. This term usually refers to the condition and equipment of premises, medical equipment, infrastructure and other aspects that may affect the comfort, safety and quality of medical care. The author analyzed the physical conditions (Appendix 44), which is shown in Figure 3.25.

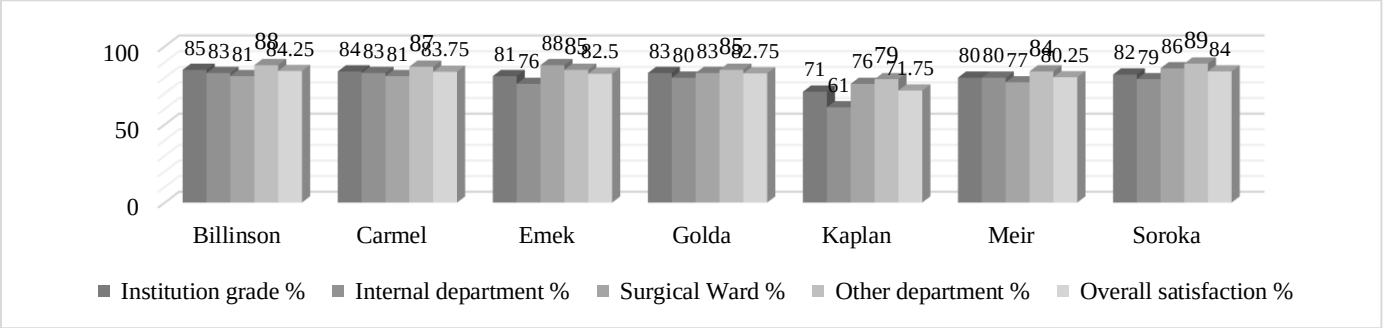

Figure 3.25. Physical conditions in Israeli public general hospitals, 2023[220]

From the analysis of data from the "Physical conditions" graph, it is clear that Billinson, Soroka and Carmel hospitals demonstrate the highest level of physical conditions, providing comfortable and safe spaces for patients. It is noted that Billinson Hospital is in the lead with the highest score in this category. Emek, Golda and Meir hospitals have a "Physical conditions" level of average. This may include opportunities to improve physical infrastructure and equipment to create a better experience for patients and healthcare staff. The comparatively low "Physical conditions" score at Kaplan Hospital indicates significant deficiencies in equipment and infrastructure. This may require urgent improvements to ensure adequate physical conditions for patients and a comfortable medical environment.

The effective approach is expressed by the indicators treatment effectiveness and overall satisfaction. The "Treatment effectiveness" indicator evaluates the results and success of the methods

[220] *Quality indicators in institutions***.** [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality

and procedures used in treating patients. This indicator measures how well a medical intervention or therapy achieves its goals, including reducing symptoms, improving quality of life and other health indicators (Appendix 45), as shown in Figure 3.26.

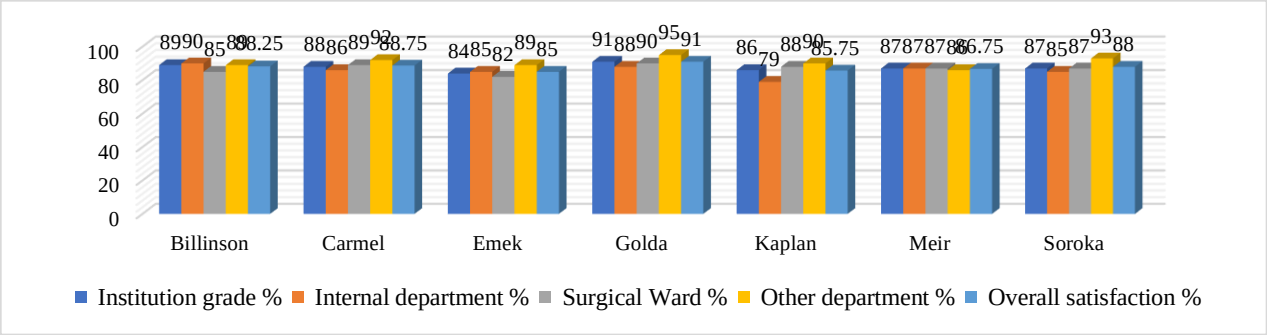

Figure 3.26. Treatment effectiveness in Israeli public general hospitals, 2023[221]

Based on the data from the graph assessing the "Treatment effectiveness" indicator in various medical institutions, we can conclude that Golda Hospital shows the highest treatment effectiveness among the institutions under consideration. This may indicate a high level of professionalism of medical personnel, diagnostic accuracy and successful application of treatment methods. Billinson (88.25), Carmel (88.75) and Soroka (88) - these hospitals demonstrate similar levels of treatment efficiency. They successfully provide quality healthcare that results in positive patient outcomes. Meir (86.75), Kaplan (85.75), Emek (85) - these institutions also have a level of treatment effectiveness that, although lower than the leaders, still demonstrates satisfactory results in the field of medical practice. The overall trend in the graph indicates that most health care facilities are providing an acceptable level of treatment effectiveness, which contributes to positive patient outcomes. These results highlight the importance of competent medical personnel, correct diagnosis and the use of effective treatment methods.

The "Overall satisfaction" indicator reflects the overall impression and level of satisfaction of patients regarding the medical care received and experience in a particular medical organization. This indicator measures the degree to which patients are satisfied with the quality, accessibility, communication and other aspects related to health care (Appendix 46), as shown in Figure 3.27.

[221] *Quality indicators in institutions*. [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality

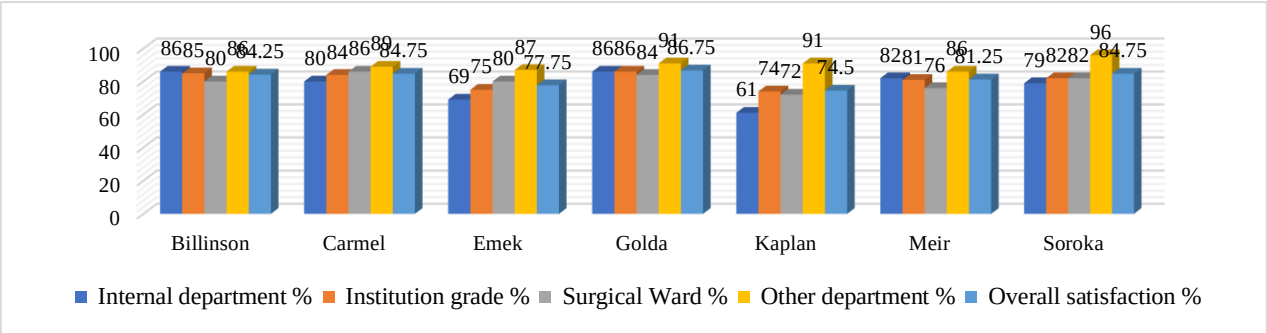

Figure 3.27. Overall satisfaction in Israeli public general hospitals, 2023[222]

Based on the data provided, Golda Hospital demonstrates a high level of overall satisfaction among patients. This may indicate quality medical care, good patient interactions, and a positive treatment experience. Carmel (84.75) and Soroka (84.75): Both institutions show similar levels of overall satisfaction. This may indicate that they are successfully meeting the needs and expectations of patients by providing them with a comfortable and quality healthcare experience. Billinson (84.25) and Meir (84.25) also show acceptable overall satisfaction. However, they may have little room for improvement to achieve better results in this aspect. Emek Hospital has a relatively low overall satisfaction score. This may indicate problems in medical care, communication or physical conditions that require attention and improvement. Kaplan Hospital has the lowest level of overall satisfaction among the institutions represented. This may indicate serious problems that require immediate action in order to improve the quality of care as well as patient satisfaction.

For a more in-depth analysis of public general hospitals in Israel, the author conducted a study of how and through what indicators the quality of medical services in public general hospitals in Israel is assessed. The National Hospital Quality Indicators Program[223], led by the Ministry of Health, is based on regulations, and participating institutions must report data, both administrative and clinical, that is related to quality indicators selected primarily by an academic steering committee. As of 2015, annual public reports are issued. As of 2020, the program included 75 quality indicators[224].

It should be noted that the National Hospital Quality Indicators Program publishes goals for

[222] *Quality indicators in institutions*. [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality

[223] *Ministry of Health*, Medicine Division directive 22/2014, The National Program for Quality Indicators in Hospitals: Monitoring and Follow-up. Jerusalem: Ministry of Health; 2014. [Hebrew]. [accessed 12.03.2020]. Available at: https://www.gov.il/he/departments/policies/mr22-2014.

[224] *The Ministry of Health publishes the quality indicators report for 2022*. [Hebrew]. [accessed 12.03.2020]. Available at: https://www.gov.il/he/departments/news/25072023-01

each indicator, including the extent to which the goal is achieved [225]. Rates above target were reported early on, so that excessive competition between participating hospitals might have led to the target seen as 100%.

Apart from these national quality measures, there are hospitals who develop their own internal quality indicators. For example, Clalit, the largest of the health funds, has developed quality indicators for its network of 14 hospitals. In addition, each hospital develops internal quality indicators for its internal benchmarking and improvement[226].

It is also common to initiate quality metrics for continuity of care between hospitals and the community[227]. The OECD report says a key area that health trusts should focus on to improve the quality of care is coordinating care between primary care services and hospitals, and health trusts should tailor care to patients' needs[228]. These efforts are still sporadic and have not translated into system-wide measures.

Electronic health records are used by all health plans and hospitals. An information highway has also been developed. This system facilitates information transfer between hospitals and outpatient sectors of the health system[229]. Thus, continuity of care is facilitated, but the use of these systems for such a goal is not currently monitored.

Data on the quality of the clinic's work is used as the primary information tool in order to plan quality improvement initiatives at the clinic level[230]. This is done by identifying clinical areas in which the clinic's activities differ markedly from those of other clinics; drawing up an annual work plan; conducting continuous monitoring of effectiveness, including an assessment of the relative effectiveness of doctors in the clinic. The reflection of these data in clinics stimulates the processes of

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225 DREIHER, D. *Geographic location and the quality of medical services in Israeli hospitals*. In: Материалы VIII ежегодной научно-практической конференции «Университетская наука - региону». Пятигорск: Изд-во ПФ СКФУ, 2021, p.6-13. ISSN 978-5-6043630-1-0.

226 *Quality indicators of public medicine in Israel*. Association of Family Physicians. [Hebrew]. [accessed 12.03.2020]. Available at: https://shorturl.at/eqOU4

227 GABISON, R., ELIGULSHVILI, B., MOORE, D. *A joint work on the hospital-community continuum of care*. In: The oncology nursing statement in Israel, 2019, nr. 12(3), p.45-48. [Hebrew]. [accessed 10.06.2022]. Available at: https://shorturl.at/dqrN7

228 *Health policy in Israel. securing adequate resources for Israel's health system*. OECD. 2016. [accessed 12.03.2020]. Available at: https://www.oecd.org/policy-briefs/israel-securing-adequate-resources-for-health-system.pdf.

229 ROSEN, B. et al. *Organizational Aspects of Israel's National Health Information Exchange*. Jerusalem, 2017. 8 p. [accessed 12.03.2020]. Available at: https://brookdale.jdc.org.il/wp-content/uploads/2018/04/Eng_Summary_758-17.pdf.

230 *The reports of the national program for quality indicators of general and geriatric hospitals, mental health hospitals, milk drops and emergency services (MDA and ambulance companies) - summary report for the years 2013 – 2022.* [Hebrew]. [accessed 12.03.2020]. Available at: https://www.gov.il/he/Departments/publications/reports/quality-national-prog-2013-2022

self-improvement and awareness. Such information is often used in group meetings and increases the use of clinical guidelines. As is turns out, staff are often more adherent to their own protocols than to national and international guidelines.

The author analyzed the quality indicators (Appendix 47). It should be noted that out of 37 indicators, only 7 are outcome indicators, while the rest are process indicators. The Israeli National Program for Quality Indicators in the Community[231] relies on several aspects: it is governed by the academy, not the government; its primary purpose is not public reporting, but rather to provide information regarding the quality of healthcare on an aggregate level; it uses only qualitative indicators, while some other countries may use additional tools such as site visits, national accreditation, quality standards and peer reviews; the program performs extensive risk adjustment; relies solely on data from electronic medical records; data are not provided at the regional level; and finally, there are no consequences for performance below expectations [232] [233].

In order to study the tools that are used for managing and improving the quality of healthcare services in Israeli public general hospitals, the author conducted a survey among the heads of public general hospitals (Appendix 48). Based on the results of the survey, conclusions were formulated. The tools used to promote quality are presented in Figure 3.28.

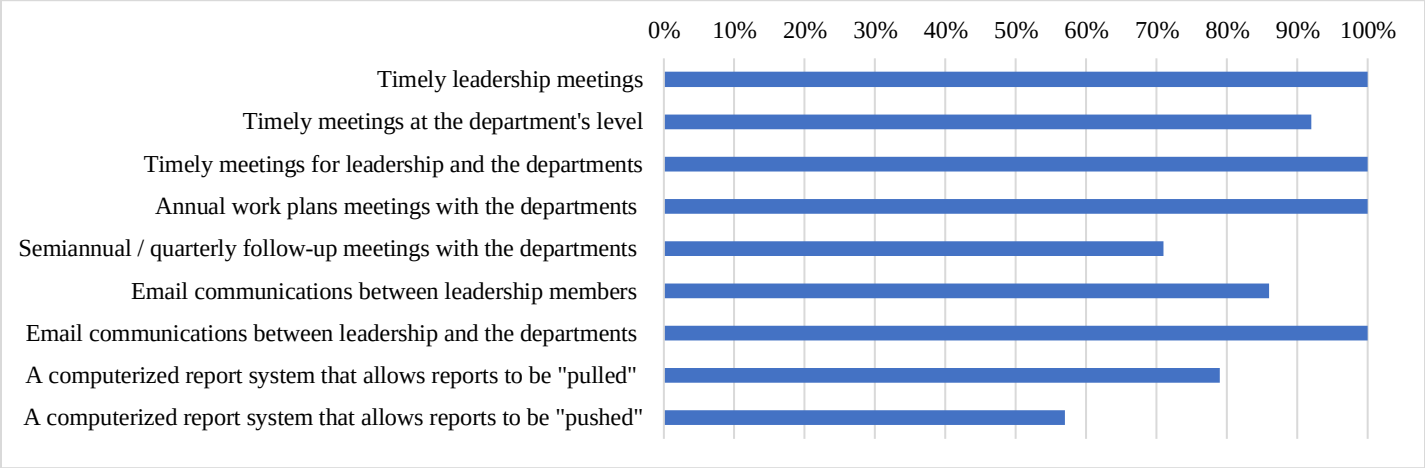

Figure 3.28. Tools used to promote quality [developed by the author based on[234]]

[231] *Israeli Ministry of Health*. The national plan for quality measures. [accessed 02.03.2023]. Available at: https://www.gov.il/he/departments/PublicBodies/quality-standards-hospitals-national-program

[232] BRAMESFELD, A. et al. *Mandatory national quality improvement systems using indicators: an initial assessment in Europe and Israel*. In: Health Policy, 2016, nr. 120(11), p. 1256-1269. ISSN 0168-8510.

[233] *The Ministry of Health publishes the quality indicators report for 2022*. [Hebrew]. [accessed 12.03.2020]. Available at: https://www.gov.il/he/departments/news/25072023-01

[234] DREIHER, D. *Methods used by Israeli hospitals to promote quality*. In: Journal „ECONOMICA", 2022, nr.2 (120), p.101-111. ISSN 1810-9136.

Factors associated with selecting quality improvement tools are listed in Appendix 49. None of the differences was statistically significant, with the exception of more quality improvement tools in JCI accredited hospitals. All hospitals had a senior manager responsible for patient safety, monitoring adverse and near-miss events. Less commonly used tools include computerized adverse and near miss events reporting. Tools used to ensure patient safety are listed in Appendix 50. Public hospitals used significantly fewer tools to monitor near misses, while JCI-accredited hospitals used more tools to monitor adverse events and near misses. Hospitals in the periphery were less likely to have a CEO or deputy CEO responsible for patient **safety**, and were also less likely to have the same person in charge of quality and patient safety programs. Factors associated with the selection of patient safety devices are listed in Appendix 51. These data can be seen in Figure 3.29.

Some commonly used tools include designating a senior leader responsible for the infection control program, as well as hospital-acquired infection monitoring and timely infection prevention department meetings. A computerized reporting system that allowed either "pull" or "push" reports was used in less than half of the hospitals. The tools used to ensure quality control against this criterion, as well as factors associated with the selection of tools to promote infection control, are listed in Appendix 52.

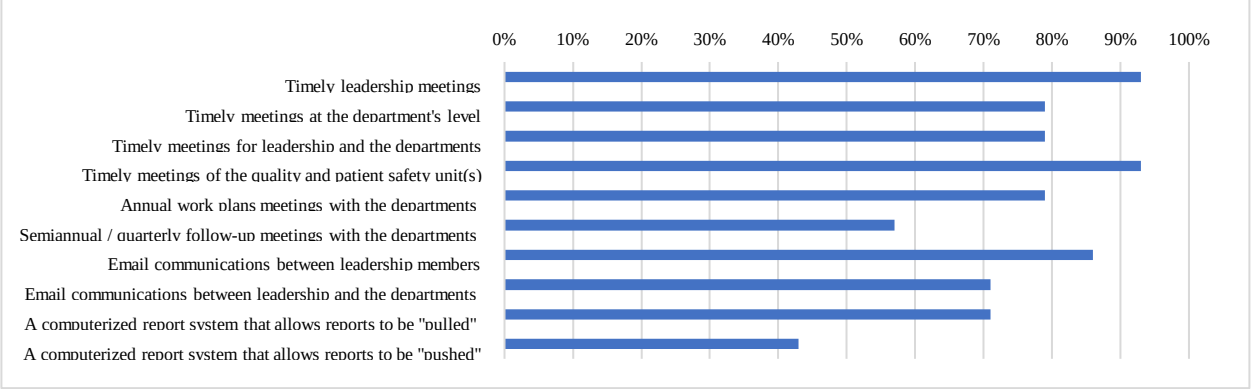

Figure 3.29. Tools used to ensure patient safety [developed by the author based on[235]]

Tools that can be used to ensure quality control of health care services are infection monitoring systems. These systems allow you to track and analyze data about infections occurring in patients in a healthcare facility. Based on this data, measures can be taken to improve infection control and reduce the risk of infection for patients. Tools used to reduce the incidence of hospital-acquired infections are presented in Figure 3.30.

[235] DREIHER, D. *Methods used by Israeli hospitals to promote quality*. In: Journal „ECONOMICA", 2022, nr.2 (120), p.101-111. ISSN 1810-9136

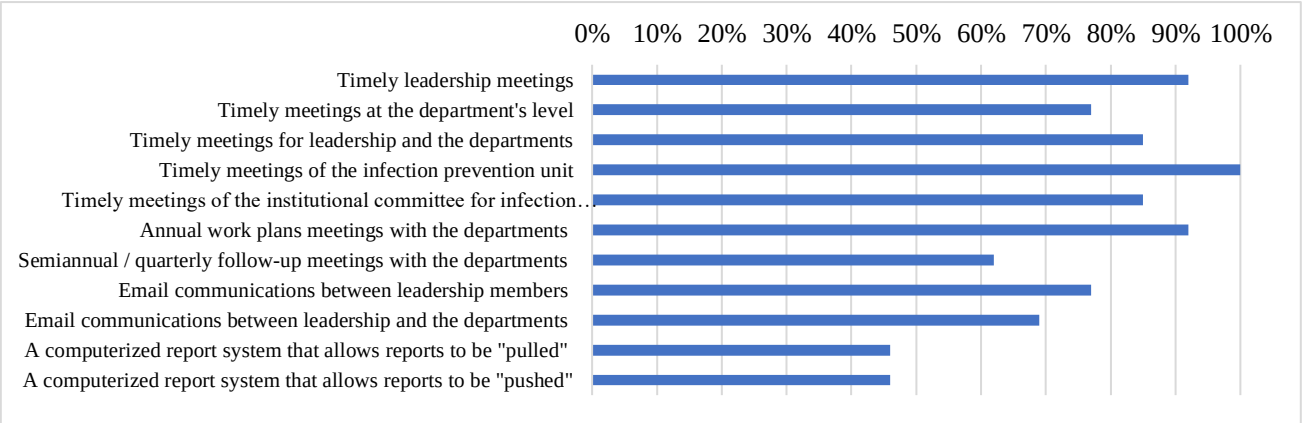

Figure 3.30. Tools used to reduce the incidence of hospital-acquired infections [developed by the author based on[236]]

An important factor in selecting tools to promote infection control is training health care personnel and ensuring they have access to the necessary resources and materials. Only trained and equipped personnel can effectively use tools to ensure patient safety.

Tools used for improving patient experience are listed in Appendix 53. All hospitals had a senior manager responsible for the patient education program and providing training. Less frequently used tools were semiannual or quarterly departmental review meetings and a computerized reporting system that either "push" reports or allow the use of "pull" reports—tools used in less than 50% of hospitals surveyed. Data supporting these conclusions are shown in Figure 3.31.

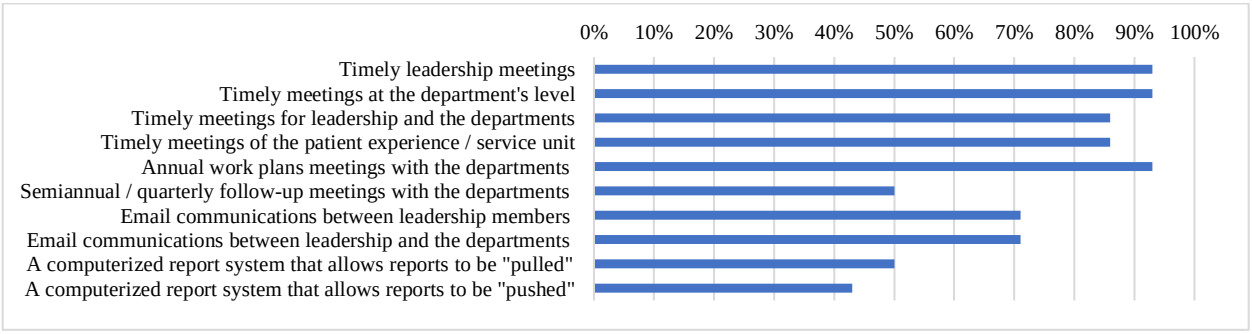

Figure 3.31. Tools used to improve patient experience [developed by the author based on[237]]

Factors associated with the selection of tools to promote patient experience are listed in Appendix 54. Clalit hospitals were unique in that they had a dedicated patient care specialist. There were no other significant differences between hospitals.

[236] DREIHER, D. *Methods used by Israeli hospitals to promote quality*. In: Journal „ECONOMICA", 2022, nr.2 (120), p.101-111. ISSN 1810-9136
[237] DREIHER, D. *Methods used by Israeli hospitals to promote quality*. In: Journal „ECONOMICA", 2022, nr.2 (120), p.101-111. ISSN 1810-9136

Tools used to reduce waiting times are listed in Appendix 55. No universal tools were used, and even waiting time monitoring was not practiced by all hospitals. Again, the use of computerized reporting was practiced in a minority of hospitals. This is shown in Figure 3.32.

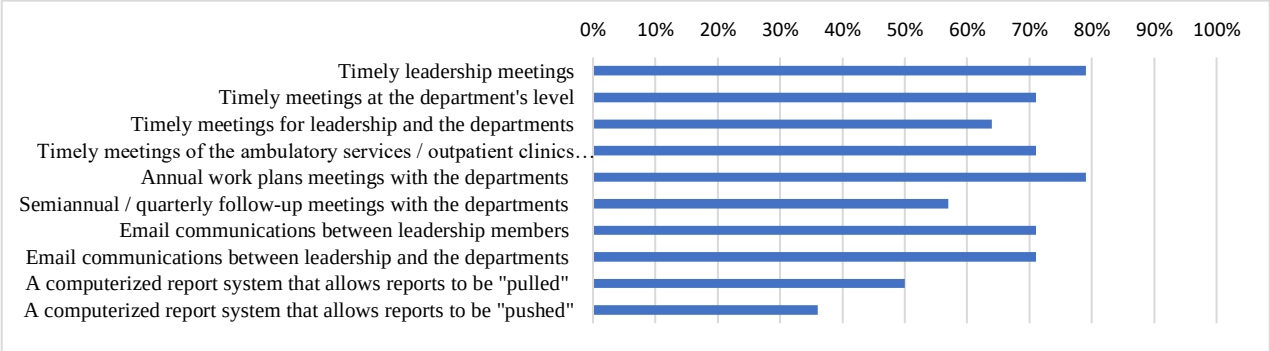

Figure 3.32. Tools used to reduce waiting tmes for outpatients

[developed by the author based on[238]]

No statistically significant differences between hospitals were found regarding these tools (all p values >0.1). Tools used to improve clinician well-being are listed in Appendix 56. Only a fraction of hospitals monitor the well-being of clinicians, and less than half use timely department-level or management-department HR meetings. The topic was also rarely discussed at annual or semi-annual departmental meetings, was not discussed in email correspondence, and did not have a computerized reporting system to monitor it. The results regarding the tools used to improve physician well-being are shown in Figure 3.33.

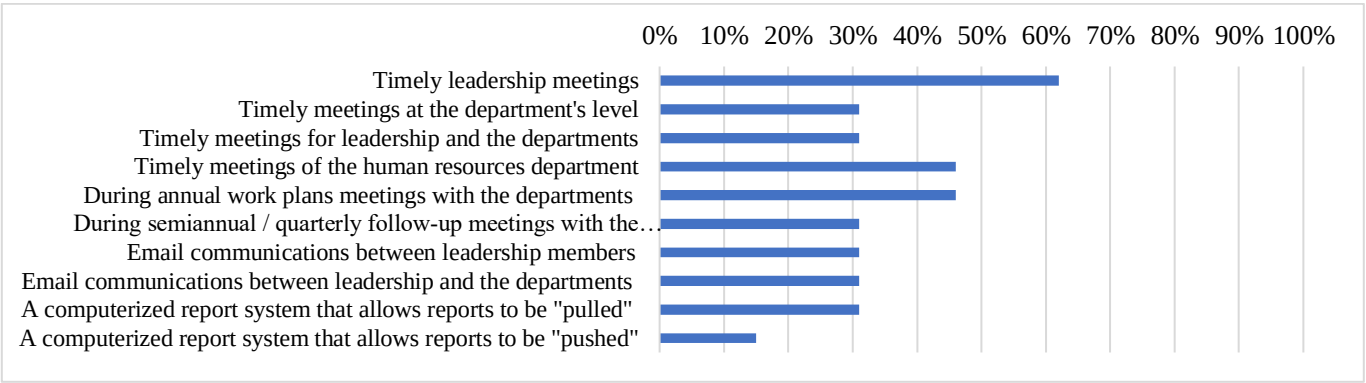

Figure 3.33. Tools used to improve clinicians' well-being

[developed by the author based on[239]]

[238] DREIHER, D. *Methods used by Israeli hospitals to promote quality*. In: Journal „ECONOMICA", 2022, nr.2 (120), p.101-111. ISSN 1810-9136

[239] DREIHER, D. *Methods used by Israeli hospitals to promote quality*. In: Journal „ECONOMICA", 2022, nr.2 (120), p.101-111. ISSN 1810-9136

It should be noted that the number of tools used to improve clinicians' well-being was much smaller than those for quality improvement, patient safety, patient experience, or even wait times. Factors associated with the choice of interventions to enhance clinicians' well-being are listed in Appendix 57. Hospitals owned by Clalit were more likely to

monitor the well-being of clinicians. JCI-accredited hospitals monitored clinician well-being and used more tools to improve it.

Summarizing the survey conducted regarding the quality tools used in hospitals, a positive trend can be noted: the majority of hospitals recognize that correctly selected tools will affect the quality of medical care and service, which in turn will increase the reputation and rating of the hospital. However, hospitals lack a quality management framework that provides a structure of tools that takes into account all quality management activities ranging from planning to quality improvement.

To clarify the results of the survey, the author conducted an in-depth interview with representatives of a sample of public general hospitals in Israel. The interviews were aimed at two key groups of participants - doctors and patients. The point of view of medical workers determines that high-quality medical care is the compliance of the medical care provided with modern technical equipment and technologies, freedom of action in the interests of the patient. According to medical workers, high-quality medical care is the effective use of available medical healthcare resources and the reduction of disability through effective medical technologies.

A significant gap in views on ensuring the quality of health care services between doctors and patients was also identified, reflecting the diversity of interests and expectations of the patient and the doctor. Patients, concentrating on the final results of medical care, adhere to the view that quality is assessed based on the results of treatment and its effectiveness. Doctors are proponents of process and structural approaches to quality management and control. Their view is based on the belief that high quality medical services can be guaranteed through strict adherence to certain procedures and the use of an effective organizational infrastructure. Thus, the issue of ensuring the quality of health care services has many dimensions and depends on the context of perception.

From the point of view of healthcare professionals, key quality management tools should include those related to the optimization of medical processes, effective resource management and the development of quality management systems. Specific examples of tools such as treatment protocol standards, outcome monitoring and evaluation systems, and auditing methods were highlighted as important components of ensuring a high standard of quality in health care services. On the other

hand, patients pay attention to aspects such as quality of relationships, comfort level and safety while waiting and receiving medical care. Also, during the interview, doctors put forward a proposal to create some kind of mechanism that would be the center of quality management in a medical institution, since at the moment in hospitals quality management is dictated by emerging problems or traditional approaches.

The author conducted two thematic examinations. Health experts participated in this study. The topic of the first examination was to determine the points of relationship between the quality management tools used in hospitals (medical care quality and patient experience management tools) with the results demonstrated by the hospital (ranking position, opinions and reviews of patients, hospital image and other measurable and qualitative results). Based on the results of the first examination, it was found that in many hospitals quality management is superficial and formal. The reason for this is the insufficient level of training of specialists involved in quality management and their interest in positive results. Often, quality management tools are used because of a general quality trend or trends rather than because specific results have been achieved. According to the expert, it is important to proceed from the final results that the hospital wants to achieve, being at a certain stage of its development in the context of quality. Then the trajectory, path and specific directions for improving quality are selected, and only after that quality management tools are selected.

In the practice of public general hospitals, according to the expert, two conventional options for quality management have developed: effective and ineffective. An effective option assumes that internal quality control is as effective as possible. Perspectives on the quality of medical care are analyzed in detail, systemic and typical defects are identified. Subsequently, the causes of systemic and typical defects in medical care are identified, which are eliminated in a short time. Relations with insurance medical organizations are built on the principles of mutually beneficial cooperation. An ineffective option involves a formal hospital quality management system. Internal control is ineffective and is not aimed at identifying systemic and typical defects, but rather at concealing them; the requirements for cases of medical service provision are simplified as much as possible and do not comply with regulatory documents; as a result, there are pronounced differences in the results of internal quality control and examination of medical quality services. Systemic and typical defects are eliminated slowly, partially or not eliminated.

The expert recommends developing a certain roadmap for managing the quality of medical services for each specific hospital in order to implement a list of tools depending on the desired results

that the hospital strives for.

The topic of the second examination was to determine the structure of quality management tools in a general hospital: target areas, tasks of tools, areas of influence of tools in the quality management system of medical services, sequence or parallel application, etc. The results of the second thematic examination revealed several main goals that should be achieved quality management tools should be focused on: ensuring patient safety, increasing the efficiency of medical processes, increasing patient satisfaction, improving the professional development of medical personnel and ensuring compliance with standards and protocols. The expert highlighted various areas that quality management tools can have an impact on: diagnostic and treatment processes, the organization of hospitalization and discharge, patient care, communication and information support, as well as monitoring compliance with medical standards. The expert expressed the opinion that each hospital may have its own unique goals, objectives and characteristics.

Analyzing patient feedback is becoming an integral part of ensuring the quality of medical services. This study aims to study and analyze reviews left by patients about general hospitals in Israel in Google reviews. The purpose of this study is to identify aspects of healthcare and service which are important to patients and how these aspects relate to the use of specific tools in the medical field. The results of the analysis of patient reviews (Appendix 58) left in Google reviews are presented in Table 3.4.

Table 3.4. Results of the analysis of reviews of hospital patients left in Google reviews [developed by the author]

Hospital name	Stars reviews 1	Stars reviews 2	Stars reviews 3	Stars reviews 4	Stars reviews 5	Total reviews	Average rating
Soroka	110	37	58	64	150	419	3.3
Beilinson	67	38	84	270	100	559	3.5
Meir	46	70	94	200	171	581	3.7
Kaplan	44	31	46	62	92	275	3.5
Carmel	31	28	30	64	104	257	3.7
Emek	40	40	80	32	74	266	3.2
Golda	29	38	44	89	228	428	4.0

Patient reviews note the high quality of medical care. Even in cases where a hospital received 3 or 4 stars in a review, patients noted that their medical care was provided with high quality (the presence of highly qualified specialists and modern equipment for diagnosis and treatment), and a low rating indicates the quality of medical care. In this context, patients complain about long queues and other aspects related to the organization of the patient admission process. Some patients report

insufficient attention and care from doctors, possibly due to the heavy workload on medical specialists. Infrastructural aspects also play a role in hospital evaluation. Lack of parking and high parking prices can create inconvenience for patients and their loved ones. Outdated buildings, especially in some facilities, can have a negative impact on patient perceptions of service levels. Hospital navigation is also poor, which can make it difficult for patients to find the right departments. Problems with language communication are also highlighted in the reviews. This can affect the quality of interactions between doctors and patients and affect the level of trust. The distribution of hospitals on a 5-point scale is presented in Figure 3.34.

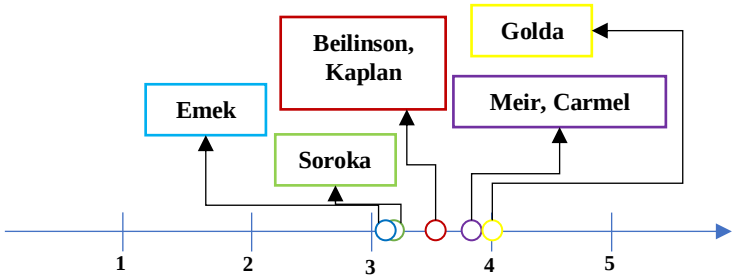

Figure 3.34. Distribution of hospitals on a 5-point scale (in 5-star reviews) [developed by the author]

Golda Hospital received the highest rating in Google reviews, which indicates recognition of its high quality of healthcare services and patient satisfaction. Second place is shared by Meir and Carmel hospitals, which is explained by their similar high standards of medical services. These institutions provide similar sets of services and attention to patients. Beilinson and Kaplan show comparable scores. This may indicate the relatively similar quality of care provided and the level of patient satisfaction. According to reviews, Soroka Hospital ranks second to last, which is explained by identified problems in the quality of medical care, organization of services and infrastructural aspects. In last place is Emek Hospital, which faces certain challenges in the provision of medical services.

The observational and mystery patient approach is a comprehensive approach to test the validity and consistency of feedback-based analysis with patients' actual experiences with the health care setting. A varied distribution and application of healthcare quality management tools was found at different stages of the process:

1) Quality planning and design. Most of the hospitals studied demonstrate a content-oriented approach to medical services with an emphasis on clinical and medical research. There is virtually no use of classical quality planning tools, such as market research and the use of QFD. Patient experience is less taken into account, which may indicate the need for a more systematic approach to planning

that takes into account the interests and expectations of patients.

2) Quality assurance. At the stage of ensuring the quality of medical services, tools are actively used aimed at improving the qualifications of staff, organizing processes and making decisions. Training, education and scheduling and decision charting are identified in all hospitals studied. This indicates a desire to improve staff professionalism and optimize operational processes.

3) Quality control. At the stage of quality control of medical services, accreditation, licensing and verification of compliance with standards are carried out. The rigor of controls indicates the importance of ensuring a high level of quality in the provision of health care. The variation of control tools depends on the specific standards and requirements governing the field of medicine.

4) Quality improvement. The quality improvement phase in many of the hospitals studied is based on the concept of Total Quality Management (TQM), which implies a systematic and comprehensive approach to improvement. It is noted that improvement tools and models are used depending on the ambition of the planned changes, with less common tools being used in some cases.

At the conclusion of the research, in the author's opinion, it is advisable to combine the results obtained (problems, advantages, prospects in the context of the use of quality management tools) in the form of a SWOT analysis. Appendix 59 presents a SWOT analysis incorporating quality criteria for healthcare services, facilitating a more comprehensive evaluation of how strengths, weaknesses, opportunities, and threats can impact the quality of healthcare delivery in public general hospitals in Israel. The results of the study demonstrate that there are several approaches to the application of health care quality management tools in public general hospitals. This highlights the need to develop integrated and adaptive strategies which consider clinical aspects and patient expectations.

3.4. Conclusions to the third chapter

1. Classified based on world country rankings into three categories: "High Health", "Medium Health" and "Low Health". "High level healthcare" is characterized by efficient systems, quality infrastructure, accessibility of medical services, high standards and innovation. "Medium Health" provides basic services, but with some drawbacks. "Low health care" has problems with quality, limited access, insufficient infrastructure and resources.

2. Factors that influence the quality of patient care are identified, including cultural, social and educational differences, access to insurance, medical infrastructure, patient participation and economic factors.

3. It was revealed that a high level of patient safety is associated with a developed infrastructure, compliance with protocols and standards, staff training, prevention of complications and risk management. Low level - with limited resources, insufficient attention to standards, limited staff education and organizational aspects.

4. From the analysis of trends and dynamics of the development of the Israeli healthcare system, it follows that the country occupies a leading position in the world in terms of the quality of medical services. Key features include a high technological level, experienced medical staff and a variety of medical services.

5. Israel is committed to continuously improving the accessibility and cost-effectiveness of the healthcare system. However, new challenges are emerging, such as rising costs and ensuring affordability for all population groups. Rising healthcare costs may create additional challenges in the near future. The high quality of medical services in Israel requires constant efforts to balance affordability and cost-effectiveness. An analysis of the development of the quality of medical services shows that Israel remains a leader in this area, but the availability of medical care for all population groups remains a problem. Difficulties with accessibility greatly affect more complex and costly medical services.

6. Improving the quality of medical services in Israel is possible by following modern trends and adapting successful foreign experience. It is important to maintain a high level of health care and service, and to consider the impact of environmental factors that may hinder or encourage improvements in the health care system.

7. A study of the experience of using quality assurance tools in public hospitals in Israel identified key aspects that influence the quality of medical services and services in these institutions. The analysis found that hospitals use shared governance mechanisms based on management-level discussions and departmental communication.

8. The choice of management tools is directly related to the overall results of the hospital. The unclear structure of quality management tools limits the effectiveness of their application. Hospitals address individual problems, but often do not take a systematic approach that covers all stages of quality management.

9. The results of the study highlight the diversity of approaches to using quality management tools in public hospitals. This highlights the need to develop integrated and adaptive strategies that take into account both clinical aspects and patient expectations.

4. DEVELOPMENT OF A SYSTEM OF TOOLS FOR MANAGING IMPROVING THE QUALITY OF MEDICAL SERVICES IN PUBLIC GENERAL HOSPITALS IN ISRAEL

4.1. Formation of a mechanism for managing the improvement of the quality of medical services in public general hospitals in Israel

As a result of the research, the author found that in Israel, healthcare is one of the most important areas of state activity aimed at providing the population with high-quality medical services. However, as in any industry, in medicine there are problems associated with the process of managing and improving the quality of medical services. As one of the ways to solve this complex problem, the author created a mechanism for managing the improvement of the quality of medical services in public general hospitals and described the process of its application.

As incentives for the creation of the mechanism were, first of all, theoretical gaps regarding the management of the improvement of the quality of medical services, problems in the Israeli healthcare system at the state level and at the level of public general hospitals. These incentives served not only as a starting point for the development of the mechanism, but also made it possible to determine its structural components. The Israeli healthcare system has several problems, some related to the structure of quality management processes, and others regarding the overall approach to quality management, and aspects of the provision of healthcare services.

The absence of a well-structured approach to quality management of medical services was revealed. The system lacks a structured approach to quality management, which often leads to random and unsystematic activities in this area. This can degrade the quality of medical services and make subsequent monitoring and control more difficult. Another problem that has become relevant in Israel is the problem of unbalanced quality management. The Israeli healthcare system does not have a clear balanced approach to managing the quality of medical services. Subsequently, this will lead to insufficient efficiency of the healthcare system as a whole and uneven development of various aspects of the quality of medical services. Related to this problem is another - insufficient planning and coordination of medical services. Lack of sufficient coordination between different levels and components of health care can lead to inefficient use of resources, insufficient predictable distribution of patients and services, and general disorganization in the system. The Israeli healthcare system also faces the problem of uneven quality of medical services in different regions or institutions. This is caused by differences in access to resources, qualifications of medical personnel, technological base and other factors. These problems can have a critically negative impact on the functioning of the

Israeli healthcare system, leading to deterioration in several aspects: the quality of healthcare services, patient satisfaction and efficient resources use. In this regard, as well as based on an analysis of the experience of quality management in countries at the global level, the author formulated general recommendations for the Israeli Ministry of Health. The successful implementation of these recommendations will serve as the foundation for the full implementation of a management mechanism to improve the quality of healthcare services in public general hospitals in Israel.

The author recommends to introduce as part of the national strategy [240] balance of three main functions to achieve high quality control [241]: planning the quality of medical services; improving the quality of these services; and quality control of these services. This will mean effective strategic quality planning at the national level, supporting organizations and professionals to improve health service delivery and control mechanisms in order to facilitate progress and reduce risks in quality management within specific health care settings. If these functions are fixed at the strategy level as certain components, elements of the process of management and including a number of specific areas that are understandable and adaptive at the hospital level, this will mean the mandatory practical implementation of these same functions at the hospital level. hospitals. The management vector should be set at the Ministry level in such a way that it is not simply theorized, but presented in the form of practical recommendations for the implementation of the functions of managing the quality of medical services. Another important recommendation to the Israeli Ministry of Health is to use a basic framework structure for organizing activities related to quality management, as presented in Figure 4.1.

Figure 4.1. Framework for improving the quality of medical services at the national level in Israel [developed by the author]

[240] Strategy for the quality of medical services in Israel

[241] DIXON, J. *Improving the quality of care in health systems: towards better strategies*. In: Israel Journal of Health Policy Research, 2021, nr. 10(1), p. 1-5. ISSN 20454015.

It is necessary to establish at the legislative, state level directions and priorities with their desired results in a clear relationship with the standards and expectations from specific performers. An important step is to build the capacity of health personnel through training in the quality management process at all levels. Only in this way is it possible to measure and publish data on the effects of quality and its improvement at all levels, with recognition and rewarding distinguished individuals, teams and organizations that took part in the management process. Quality measurement data should be provided on a continuous and transparent basis. Using the basic structure of the framework will systematize and standardize the processes related to quality management of medical services.

The author recommends the adoption and implementation of a multi-level capacity building model as part of Israel's National Healthcare Quality Strategy. This model will contribute to effective capacity building of the health system through the integration of various levels and approaches. The planning and implementation of a set of activities, including advanced training of medical specialists, development of advanced technological solutions, optimization of processes and strengthening of coordination between healthcare structures, will form a stable basis for achieving a high level of medical care and quality of medical services for patients in Israel. A tiered capacity building model for a national health quality strategy is presented in Figure 4.2.

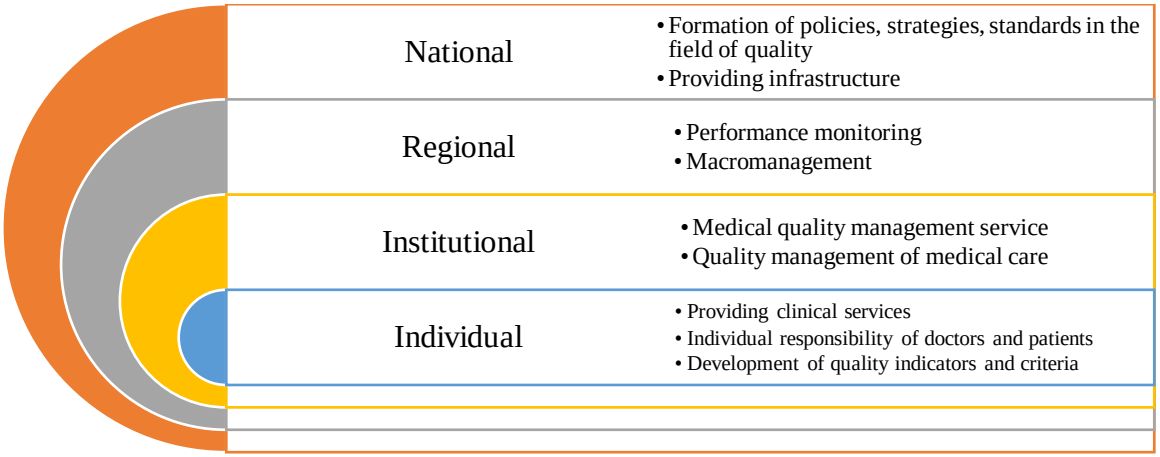

Figure 4.2. Multi-level capacity building model for the national quality strategy in the Israeli medical sector [developed by the author based on [242]]

The multi-level model includes the following levels:

Level 1 "National": national regulations and quality standards in the field of medicine. It is necessary to develop national regulations and quality standards in the field of medicine, which will

[242]MOLLOY, A. et al. *A clear road ahead*. London, Health Foundation, 2016. 107 p. ISBN 978-1-906461-80-5.

determine the requirements for medical care organizations, the qualifications of medical personnel, as well as the quality of medical services.

Level 2 “Regional”: training and certification of medical staff. Providing qualified staff who will provide high quality medical services. To do this, training and certification of medical staff should be provided.

Level 3 "Institutional": quality management system at the level of specific hospitals. Creation of a quality management system for medical services, which will allow assessing the compliance of medical services of hospitals with national quality standards. This includes conducting audits and monitoring the quality of medical services, as well as a feedback system for quality improvement.

Level 4 “Individual”: development of quality indicators. Development of quality indicators that which can be used for assessing the quality of healthcare services. Quality indicators can be developed based on national quality standards, their implementation and performance. It is also important to develop a system of motivation for medical institutions and medical staff, taking into account financial incentives and non-material premiums in the field of quality.

The above levels are interconnected and the corresponding activities must be implemented consistently in order to create a solid foundation for the Israeli national quality strategy in the field of medicine. An important aspect is the continuous improvement and updating of Israel's national quality standards so that they meet modern requirements and changing needs in the field of medicine. This sets the implementation of all subsequent levels (regional, institutional and individual) in the right direction. In addition, it is necessary to improve the accessibility and uniformity of the provision of medical services in different regions of the country in order to improve the high of healthcare medical services for all residents. Overall, a multi-level capacity building model for the national quality strategy in medicine will improve the level of public health and provide more effective and high-quality medical care. This proposal will also solve the problem of uneven quality of medical services by ensuring standardization and uniform approaches to the quality of medical services in all institutions and regions of Israel.

After preparing and creating all the necessary conditions in the healthcare system for the effective organization of quality management of medical services, an important stage begins - ensuring the quality of care provided at the hospital level. This scientific study pays special attention to Israeli public general hospitals (hereinafter referred to as hospitals), which are key elements of the country's medical infrastructure. The author developed a mechanism for managing the improvement

of the quality of medical services (hereinafter referred to as the mechanism) in these hospitals. By addressing the complex issues of activities within quality management, the study outlines important steps to ensure the delivery of optimal and reliable health care services to patients.

A framework is a structured and systematic set of interrelated activities, processes, methods and management tools designed to purposefully plan, deliver, control and improve the quality of care. The developed framework integrates management actions, methodologies and principles aimed at maintaining optimal standards of medical practice, meeting the needs of patients and increasing the efficiency of the Israeli healthcare system as a whole.

The prerequisites for the creation of a mechanism for managing quality improvement in healthcare have to do with the recognition in the framework of studies conducted in public general hospitals of the need to provide a high standard of medical services, as well as with an awareness of the complexity and diversity of the modern Israeli health care system and the need to structure it at the hospital level. The key prerequisites for the development of the mechanism that can be identified were the following factors: the desire for quality medical care; complexity of medical services; the dynamic nature of the health service; national and international standards; it is necessary to meet the needs and expectations of patients.

The presented premises define the principles that become fundamental when applying the mechanism in hospitals: the principle of efficiency (providing health services to those in need); the principle of safety (no harm or damage to health during the provision of medical services); the principle of focusing on the needs of patients (taking into account individual characteristics, preferences, needs, values in the provision of medical services); the principle of equity (ensuring equal quality of care independent of factors such as age, gender, race and/or ethnicity, the patient's socioeconomic status, level of education, geographic location, religious belief, language or political affiliation); principle of integration (coordination of medical care among providers at all levels of management); principle of operation (extracting maximum benefits from available resources, avoiding wastage of time and money).

The mechanism is shown schematically in Figure 4.3.

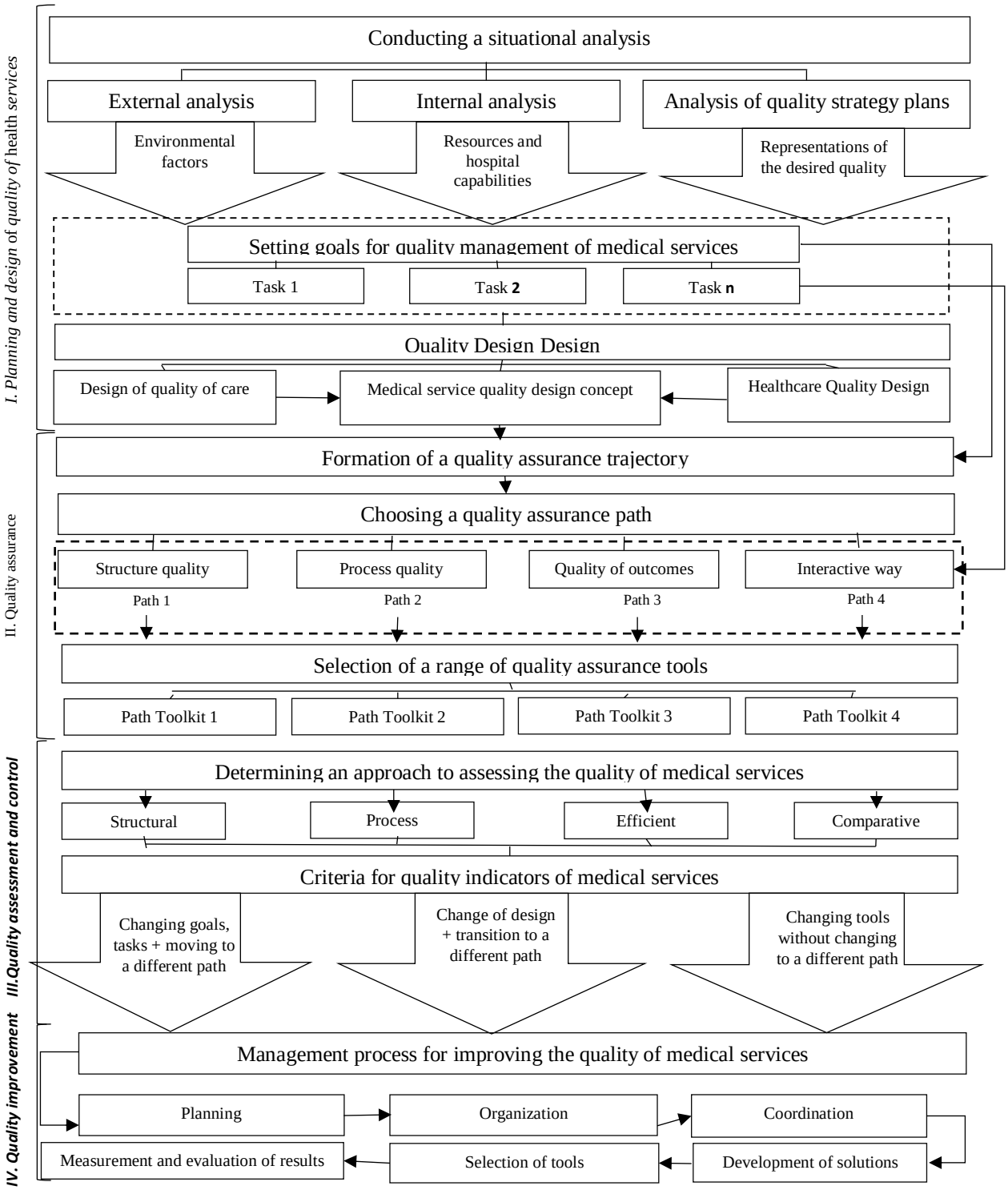

Figure 4.3. Structure of a management mechanism for improving the quality of medical services in public hospitals in Israel [developed by the author]

The presented structure of the mechanism includes four sequential types of activities for managing the quality of medical services: quality planning and design; quality assurance, quality

control and finally – quality improvement. Each of them includes a number of specific required actions aimed at establishing, maintaining and continuously improving the process of managing the quality of health care services at the hospital level.

I. Planning and design of quality of health services

This stage covers conducting a situational analysis in the hospital, formulating the goal and objectives of quality management of medical services, as well as designing the design of the desired quality of hospital medical services. The first stage is the starting point for managing the improvement of the quality of medical services in the hospital, which is why it is important to analyze the current, initial situation of the hospital. This includes studying the structure of the provision of medical services, assessing the quality of services provided, identifying weaknesses and strengths, analyzing the resource base, as well as analyzing feedback from patients and medical staff. For this, traditional methods of qualitative and quantitative analysis are used, which will identify the factors of the external and internal environment that affect the activities of the hospital, the provision of services, etc. The initial quality of hospital services can be measured using criteria and the corresponding indicators of the quality of medical services. These indicators will remain unchanged and will be applied at the stage of quality control and evaluation of implementation results. In this way, objective assessments will be achieved. It is also important at the stage of analyzing the current situation to understand the expected, desired level of quality of medical services based on the results of the implementation of the mechanism. Often, when conducting an analysis, respondents generate ideas for improving, improving the quality of medical services, with which they would be completely satisfied. This can serve as a good and reliable source of information about the desired outcome of the implementation of the mechanism. In addition, the management of the hospital must accurately understand, based on the analysis, what prospects are possible for the hospital in terms of quality assurance, what specific features the institution has that we would like to emphasize, what resources and capabilities the hospital has in order to achieve the desired level of quality of medical services.

The results of the analysis and decisions of the hospital management are the totality that determines the goal of quality management. The goal can be formulated as achieving a certain level of quality in patient care and optimizing medical practice. Objectives define what specific steps will need to be taken to achieve this goal. It is important to note that the goal depends on three points: factors of the external and internal environment; hospital resources; management decisions regarding the desired level of quality of medical services. The goal of quality management of medical services

can be formed within certain areas: safety; patient focus; efficiency; timeliness; justice; well-being of the clinician (doctor), etc.

Based on the formulated goals and objectives, the design of the design of the quality of medical services is carried out. This process will allow visualizing, presenting, describing, demonstrating, presenting the quality of medical services in the final form in which it is possible for a particular hospital. The process of creating a quality design includes setting quality standards and criteria, defining the processes for delivering a medical service, and developing plans to ensure a high standard of quality. The design includes a detailed description of how certain quality objectives will be achieved and what changes may be required in the hospital's organizational structure, processes and resources.

The design of quality necessarily takes into account two components that must be designed in the context of the overall vision of the quality of a medical service (medical care and medical care), which is presented in Figure 4.4.

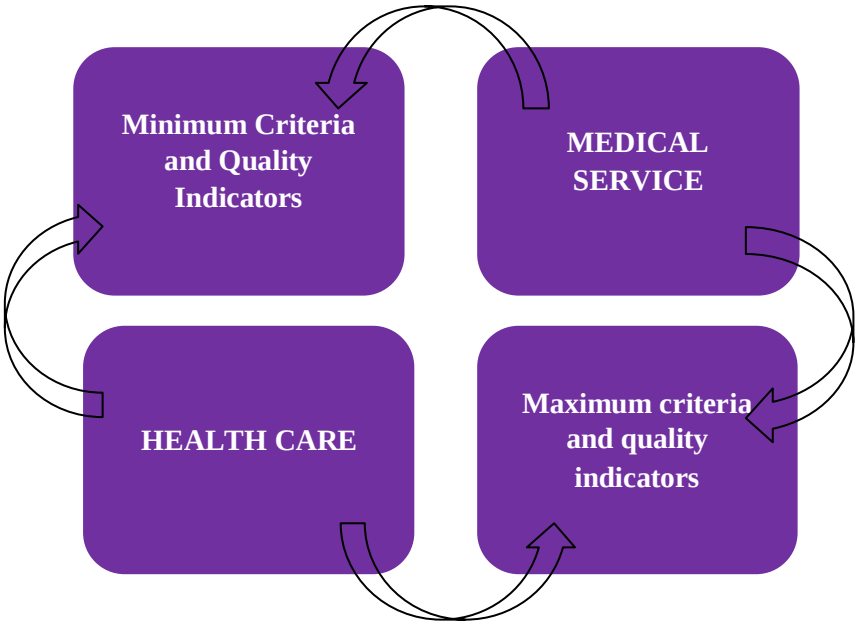

Figure 4.4. Scheme for the formation of the design of the quality of medical services in public general hospitals [developed by the author]

The diagram shows two areas that will help formulate a general concept of the quality of medical services: medical service and health care. Depending on resources, capabilities, factors of influence of the external and internal environment, a decision is made to adopt maximum or minimum criteria and quality indicators. For example, you can choose the maximum criteria for medical care, and the minimum criteria for service due to a lack of resource base or due to the lack of need to introduce

large-scale changes in the service process. Thus, a certain concept will be formed, which in the form of precise criteria and indicators will allow us to characterize the desired quality design, and then measure its effectiveness using the same indicators. Quality planning and design provide a clear and focused framework for subsequent stages of the framework, ensuring a systematic and effective approach to ensuring preparation for quality assurance of health services.

II. Ensuring the quality of medical services

The quality assurance phase is the main phase in which quality is established, the quality management trajectory is set, and the specific path that the hospital should take using certain tools for managing and improving the quality of medical services is determined, as shown in Figure 4.5.

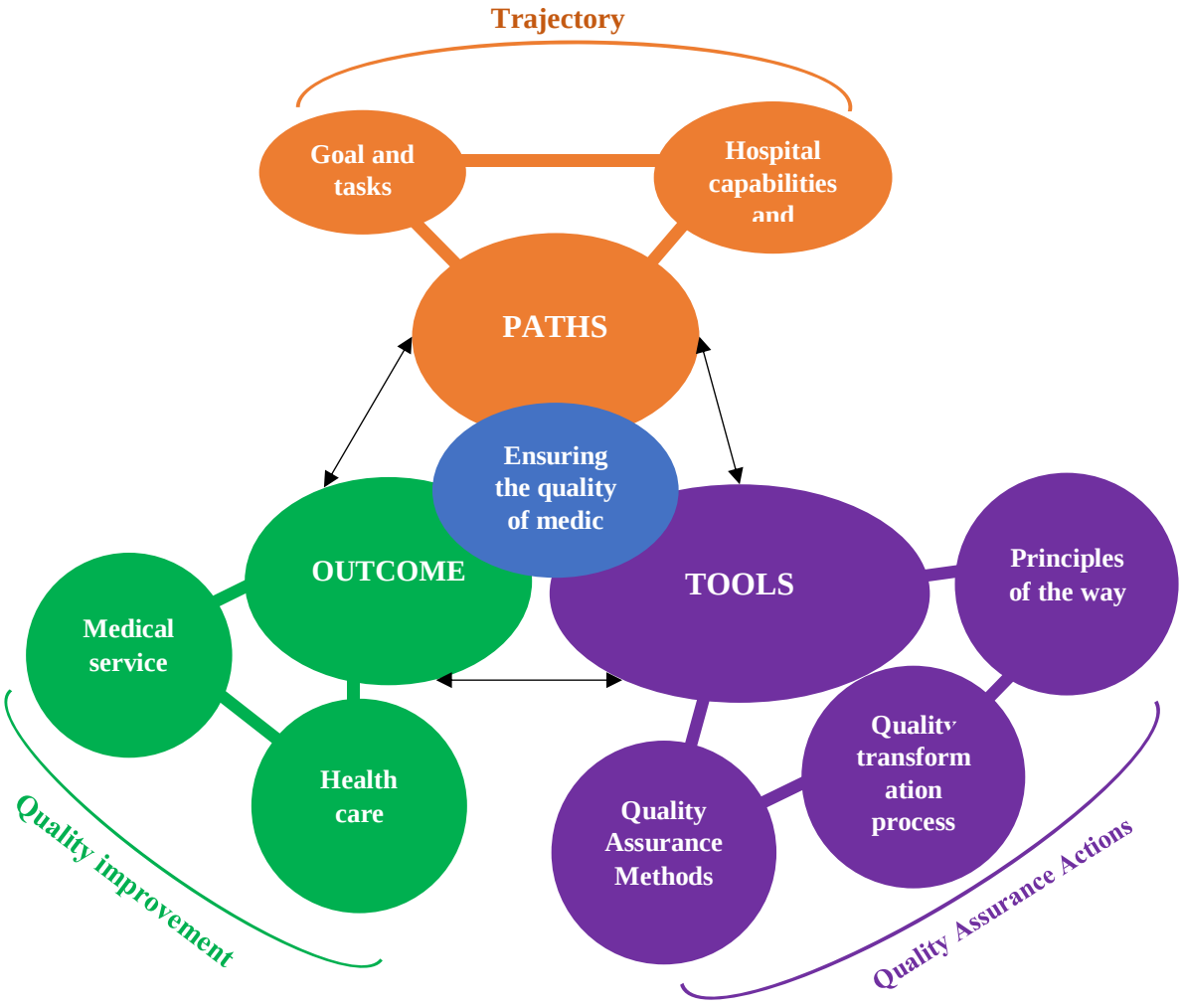

Figure 4.5. Scheme for ensuring the quality of medical services in public general hospitals [developed by the author]

This stage is decisive in the mechanism, as it forms the basis for all subsequent practical work, providing reliable fundamental principles and tools for the effective implementation of the mechanism. A quality assurance trajectory is a planned and systematized vector that a hospital follows to achieve and improve the quality of medical services. A quality trajectory is a disciplined approach to managing and improving the quality of health care services, which is aimed at achieving specific goals dictated by aspects of the quality of health care services. The trajectory is determined by the goal formulated at the first stage. A goal sets the basis and focus of attention for the formation of a vector, while a vector is a detailed and comprehensive vision of step-by-step movement towards a given end point (goal). As an example, the vector could be a desire to improve the patient experience, and the trajectory could be a number of specific measures, such as training staff in the field of patient care, implementing a feedback system and other actions aimed at improving the patient experience.

The trajectory in the mechanism covers the following four paths:

- path 1: quality of structure - focusing on creating and optimizing the organizational structure, infrastructure, as well as providing the necessary resources and conditions for effective medical practice of the hospital;

- path 2: process quality - focusing on optimization and standardization of processes for providing medical services;

- path 3: quality of outcomes - concentration on achieving clinical and patient outcomes, measured by treatment success, patient satisfaction and other indicators.

- Path 4: Integrative path - combining aspects of all three paths and creating a balanced path that considers structure, processes and outcomes, while striving for integrated quality improvement.

A path represents specific steps that are taken to achieve a goal associated with a specific aspect of the quality of a health care service. Each path focuses on a specific aspect of quality management and includes related tools, activities and actions. Quality assurance pathways determine how tools and methods for managing the quality of a medical service will be used.

The trajectory and ways to ensure the quality of medical services are presented schematically in Figure 4.6.

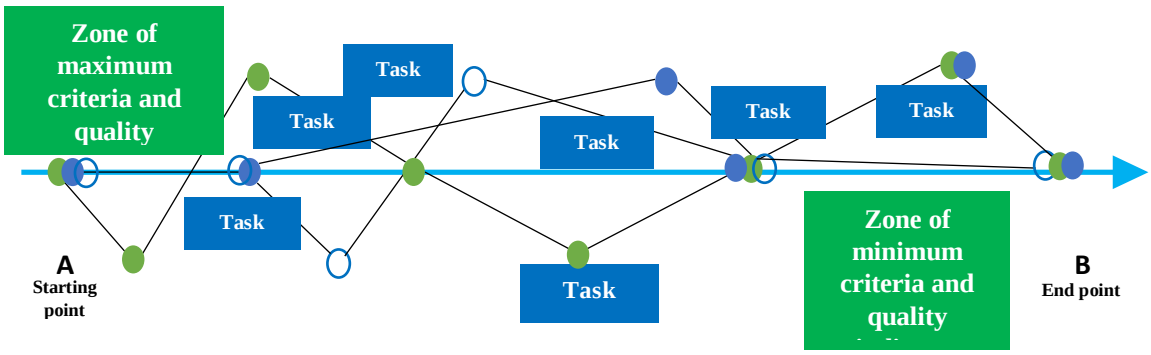

Figure 4.6. Trajectory of health care quality in public general hospitals [developed by the author]

The paths presented in the diagram consist of control points (each color is a separate path), which correspond to tasks compiled in accordance with the goal of managing the quality of medical services at the first stage. Thus, completing the path means consistently completing the assigned tasks.

It is important to note that when choosing, priority is given to the path (or paths) that the hospital can travel without damage and loss of a significant part of the resources, in conditions of sufficient capacity to implement all the activities of the path. This means that the resource capabilities of the hospital, determined during the situational analysis, should become a path determinant. When choosing a path, the perspectives of the influence of external environmental factors, which, as we know, the hospital cannot influence in any way, are taken into account, as well as the influence of internal environmental factors that are controlled by the hospital's management decisions. And only after this, the designed design of the quality of medical services is taken into account, which the hospital should achieve based on the results of applying the mechanism. Considering that the quality design developed at the first stage should take into account the results of the case study (the design is developed based on the results of the analysis), there should be no discrepancies between the resource capabilities of the hospital and the planned quality of the medical service. In other words, the practical achievement of the designed design of the desired quality should be within the power of the hospital with its resource capabilities and management ambitions to improve the quality of medical services.

The choice of a specific path is accompanied by a choice of a range of quality management tools. Tools serve as means for the practical implementation of the chosen path, that is, to implement a certain task included in the path, a specific tool or a set of them is needed. Each path involves the use of different methods, approaches and, accordingly, tools. This aspect will be considered in more detail in paragraph 4.2.

III. Quality control of medical services

The stage of monitoring the quality of medical services is an integral part of the quality improvement management mechanism, since it provides systematic assessment and feedback at all stages of continuous follow-up along the chosen path within the trajectory. Quality control allows you to determine the degree of implementation of tasks and see discrepancies both in the process and at the end of the entire management cycle for improving the quality of medical services. Therefore, this stage includes two types of quality control: assessment and quality control.

Quality control differs from the assessment of the quality of medical services in that it is based not on planning, but on the final type of medical service. Evaluation, in turn, is a more generalized and systematic view of the whole situation. The main purpose of the assessment is to get an objective picture of the current state of quality (before and during its formation) and to identify areas for improvement. Quality assessment can be carried out at various points in time and is not always associated with direct control. Quality control focuses on checking and maintaining the compliance of a medical service with an established idea of design, purpose. It is a systematic, but "final" process that includes monitoring and reviewing medical service processes for deviations from predetermined standards. The purpose of control is to identify errors, deviations from a given vector or shortcomings after the final result is obtained. Thus, such dual monitoring and analysis of the results makes it possible to evaluate the work on ensuring and improving the quality of medical services in two planes - in the process and after completion of work on creating the quality of health care and medical service desired for the hospital.

Quality control and assessment implies the application of quality criteria for medical services and their corresponding quality indicators, which were selected to assess the current situation at the first stage of the mechanism. Additional quality indicators can detail the visualization of the intermediate and final result of the implementation of the mechanism. But the main comparison and conclusions about the degree of achievement of results within the chosen path are carried out on the basis of established criteria and indicators when conducting a situational analysis of the hospital. On the basis of this, an assessment of the effectiveness of the entire mechanism is formed and conclusions are drawn regarding how correctly the goal and objectives were drawn up, the path in the quality assurance trajectory was chosen, the quality assurance tools were selected and the necessary measures were taken. This aspect will be described in more detail in paragraph 4.3.

IV. Improving the quality of medical services

Continuous improvement is a key aspect of the mechanism. At this stage, measures are developed and implemented to eliminate problems identified at the previous stage of quality control, as well as measures to improve processes. This may include analyzing the causes of deviations, introducing innovations, changing the direction of improving the quality of medical services in the hospital, etc. Specific actions depend on the results of control. Also at the quality improvement stage, the priority of actions to improve quality is determined.

Managing the improvement of the quality of medical services means planning, organizing, coordinating and controlling efforts and resources when developing decisions aimed at improving the quality of medical services. The process of managing quality improvement in the medical field includes a number of key stages and cyclical activities from planning to continuous improvement.

Quality improvement planning is the stage in which it is determined which objectives have been achieved and to what extent. Accordingly, a selection of methods and approaches is made that will be used to improve the quality of medical services in those aspects that need improvement.

Organizing a quality improvement process is a stage that determines the structure, resources and processes necessary to implement a plan to improve a medical service. Responsibilities are distributed, teams and groups of performers are created that will improve the quality of hospital services, each in their own area. Often this stage also includes the motivation of performers.

Coordination in improving the quality of medical services. Managing the quality of medical services requires coordination between various departments and specialists in the hospital. Coordination ensures that efforts are integrated to achieve the common goal of improving quality.

Development of solutions to improve the quality of medical services. In the process of implementing quality improvement solutions, problems, challenges and decisions may arise that require analysis and decision making. This includes identifying the causes of problems, choosing the best courses of action, and implementing plans to solve them. This stage is the monitoring of the implementation of plans to improve the quality of medical services and the achievement of quality goals. A flow chart of the hospital's quality improvement process is shown in Figure 4.7.

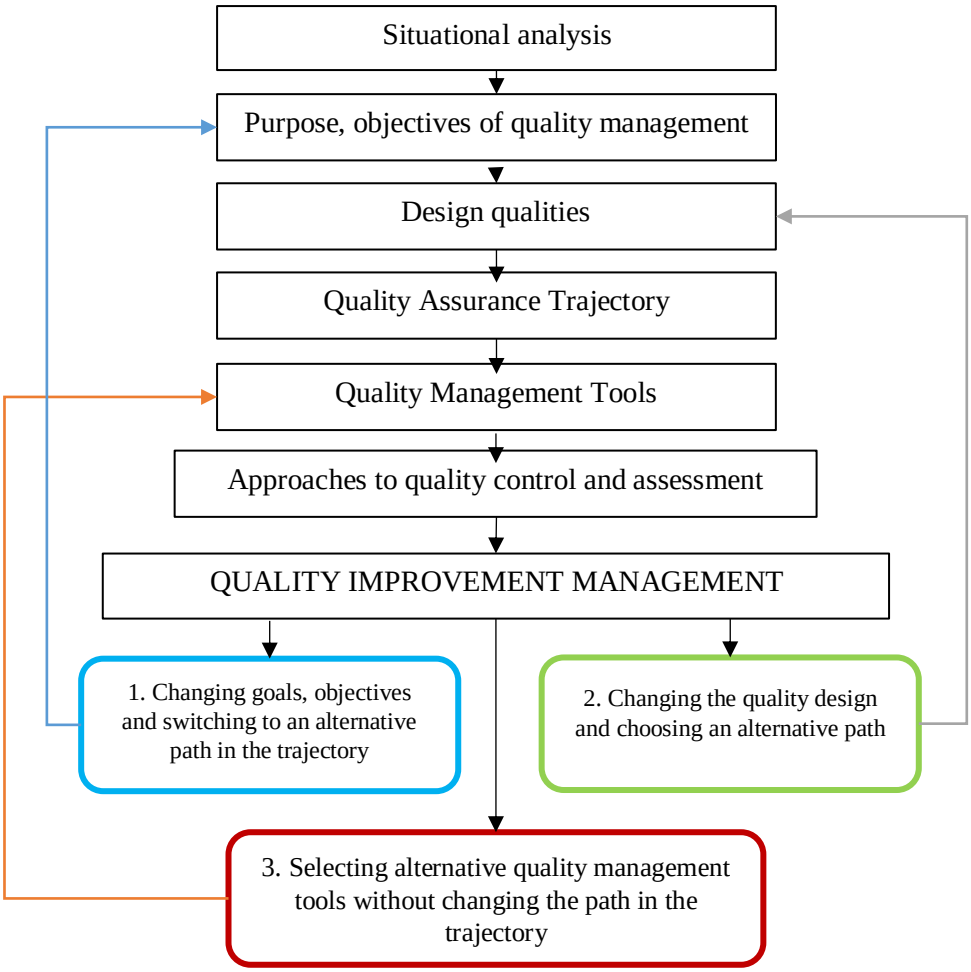

Figure 4.7. Diagram of alternative ways to improve the quality of medical services [developed by the author]

Managing the quality of health care services involves a constant pursuit of improvement. Therefore, after assessing the results of implementing a quality management mechanism, the organization can make one of the following decisions depending on the identified data:

1) Changing the goal, tasks and switching to an alternative path in the trajectory

If an evaluation of the quality improvement process indicates that the current path and established goals are not achieving expected results or quality standards, hospital management may decide to review and modify the goals, objectives, and strategy. This may involve choosing an alternative path in the quality management trajectory that will better suit needs and requirements.

2) Changing the quality design and choosing an alternative path.

If the assessment reveals problems with the quality design, that is, with the way the hospital plans and defines quality standards, the nature of care and service, it may be decided to make changes to the quality design. This may include reviewing the processes and outcomes of health care services.

In some cases, this may also lead to the selection of an alternative path in the quality management trajectory.

3) Selection of alternative quality management tools without changing the path in the trajectory.

If the assessment shows that the chosen path in the trajectory is appropriate for the quality design, but the tools used to manage quality are ineffective or inappropriate, hospital management may decide to make changes to the tools. This may include the selection of alternative methods, techniques or approaches in the context of the application of quality management tools.

Selecting one of these alternatives depends on data analysis, the hospital's goals, and the overall strategic direction. The solution may be complex, and in some cases a combination of changes in objectives, quality design and tools may be chosen to achieve the best results in managing the quality of health care services. Everything will depend on the resources that the hospital has, the unresolved problems of ensuring the quality of medical services in the hospital, as well as growth points in terms of quality.

In general, managing the quality of health care services is a cyclical and systemic process that includes many activities aimed at ensuring the best practice and level of delivery of health care services.

The formation of a mechanism for managing quality improvement of healthcare services in Israeli public general hospitals is an important step towards improving healthcare in the country. The author has developed a framework that is a systematic approach to planning, organizing, coordinating and controlling a hospital's efforts and resources to ensure a high level of quality health care services. Through the use of this mechanism, one can expect a significant increase in patient satisfaction, improved treatment outcomes, and a reduction in the risk of errors in medical practice.

However, it is important to emphasize that the mechanism for managing the quality of medical services cannot function effectively without appropriate management tools. The mechanism involves the use of effective tools for quality management, ensuring continuous improvement and compliance with specified quality standards and indicators.

Thus, the developed mechanism for managing the quality of medical services in public hospitals in Israel is an important resource for achieving a high standard of healthcare. With the right tools and careful implementation, it has the potential to significantly improve the quality of healthcare services and enhance the overall well-being of patients.

4.2. System of tools for managing the improvement of quality of services in public Israeli hospitals

A system of quality management tools becomes a key factor in turning a hospital's strategic intentions into concrete and achievable results. Each chosen path, be it an emphasis on structure, process or result, requires its own set of methods and approaches, which, in turn, are implemented through specific tools. The essence of quality management tools lies in their ability to adapt to the specific requirements of each path. In turn, these tools not only ensure the execution of established tasks, but are also the key to continuous improvement. After all, it is through systematic assessment, monitoring and analysis of results based on the use of various tools that it is possible to identify areas requiring additional optimization and correction.

According to the author, the healthcare quality management tool system is a comprehensive set of methods, techniques, procedures and approaches designed to ensure consistency, control and continuous improvement of the healthcare quality management process. This system focuses on systematically achieving defined quality standards, monitoring compliance and discrepancies, and making adjustments to processes to improve efficiency and satisfaction for all involved, including patients and medical staff. Quality management tools include data analysis methods, monitoring systems, audits and standards aimed at achieving a level of quality that meets current requirements and expectations.

The system of quality improvement management tools is an indispensable component in achieving high quality medical services. It ensures compliance with the chosen path, and also increases efficiency, quality and satisfaction of all participants in the healthcare process. This system is aimed at continuous development and innovation[243] to ensure the highest level of quality. The system of management tools for improving the quality of medical services is driven by the need to adapt and respond to changing requirements and challenges in the healthcare sector. It includes a wide range of tools, ranging from data analysis and statistics to patient feedback systems and continuous training of medical staff. These tools aim to improve efficiency, safety and satisfaction for all parties, and thus contribute to the provision of higher quality healthcare services.

The author will describe in detail the block of the mechanism dedicated to ensuring the quality of medical services in order to present the structure of quality management tools. This block is the

[243] DREIHER, D., ISRAELI, M. *Innovation as the key to improvement in healthcare and education.* In: Economic Series. 2022, Vol. 13(22), Issue 4, 2022, p.309-318. ISSN 2393-1795.

core of the mechanism, since it sets the vector (trajectory) for the development of the quality of medical services, determines the path of movement along this vector and determines the tools corresponding to a certain path, as shown in Figure 4.8.

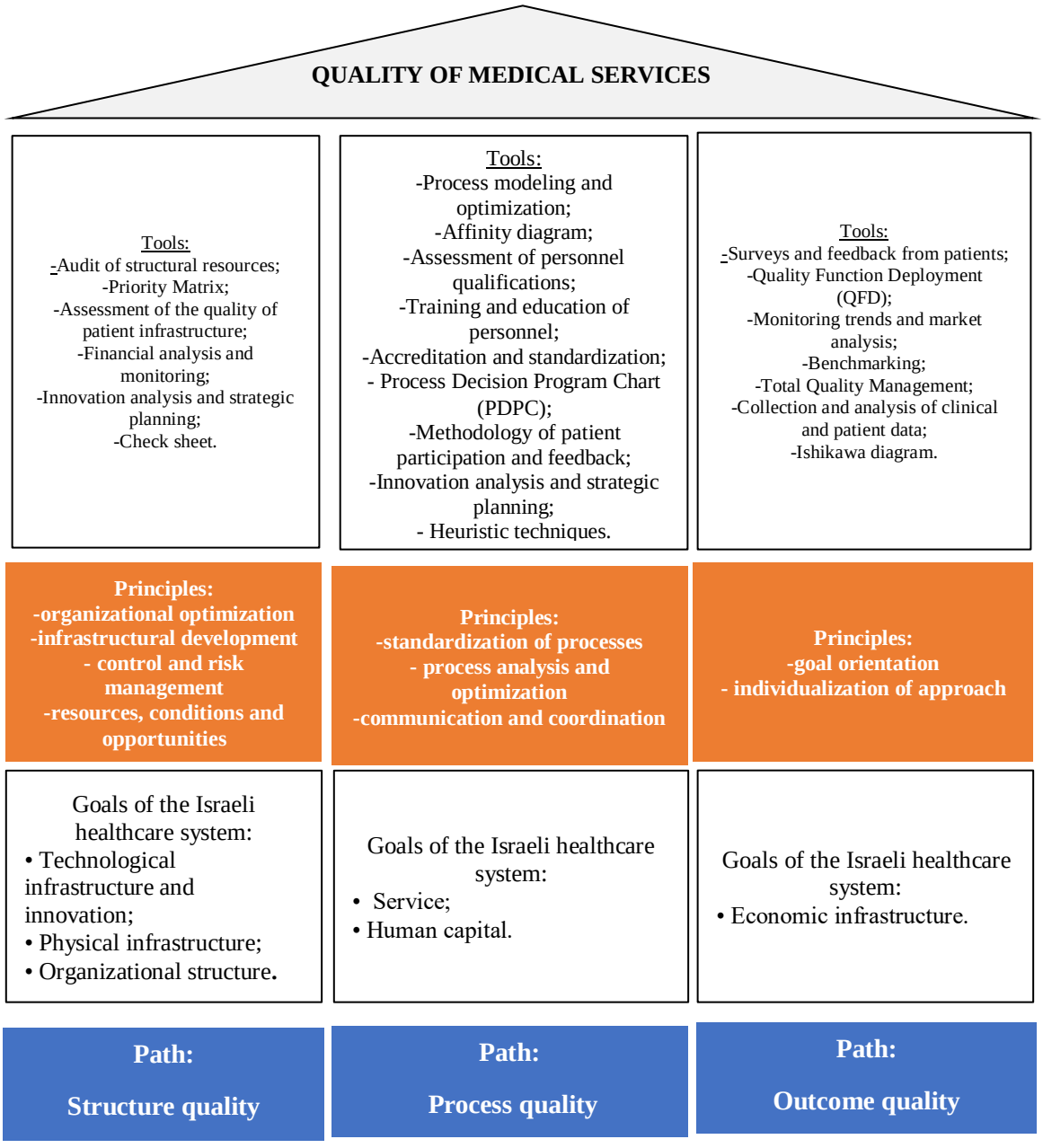

Figure 4.8. Diagram of management tools for improving the quality of medical services in public general hospitals in Israel [developed by the author]

The framework is based on three main paths that hospitals can follow when building their own mechanism for managing the quality of medical services. Hospitals do not have to choose one specific path; they can choose two or three paths at once. Everything will depend on the available

opportunities, resources and the degree of influence of factors influencing the external and internal environment.

The quality of medical services is based on three pillars: structure, process and outcome. If a situation arises where the hospital cannot cover three paths at once, then it is necessary to proceed from the most important and large-scale quality problem that exists in the hospital. This will keep the system of quality assurance of medical services stable until it becomes possible to cover three aspects at the same time. In this case, the hospital will first go through one path, closing the most pressing problems, then the second and third, restoring the entire quality structure.

Each path is based on principles that were formulated by the author on the basis of the plan of the six goals of the Israeli health system[244]: technological infrastructure and innovation; human capital; physical infrastructure; service; organizational infrastructure; economic infrastructure. The principles should resonate with the hospital's overall development strategy, quality strategy or policy, and should also respond to the critical problem that the hospital is trying to solve by building a quality management mechanism for medical services.

The practical part of the scheme is made up of tools for managing the quality of medical services, corresponding to one or another path. Each of the presented ways of managing the quality of medical services has its own specifics and unique tasks, and it is the choice of certain tools that plays a decisive role in the successful implementation of each path. These tools serve as a kind of guide that ensures the practical implementation of managerial tasks, as well as key assistants in overcoming difficulties on the way to improving the quality of medical services. These include data analysis methods, standards development, patient and staff feedback systems, education and training programs, and economic tools for assessing cost-benefit ratios. The effective use of suitable tools not only contributes to the achievement of goals within a specific path, but also ensures a sustainable improvement in the quality of medical services, which is the main goal of the management system. It is important to note that the tools shown in the diagram are not an exhaustive list. There are many quality management tools. The author only made an attempt to present how, it is necessary to choose tools for a certain path chosen by the hospital when managing the quality of medical services, examples are given and the correlation of the path, principle and tool of quality management is described.

Further, the author considers each path separately, including a description of the path, a

[244] HIRSHBERG, R.S. *Health system policy planning. Changing the rules in the health world: The six goals plan of the health system*. Emunah Carmel Studio, 2022. 80 p. [accessed 18.01.2023]. Available at: https://shorturl.at/cmyZ9

description of the possible tasks of the hospital, as well as tools that will make the passage of the path not so difficult. The author also pays special attention to the unique aspects of each path. A detailed consideration of the paths allows you to deeply understand their essence and the basic principles of work on managing the quality of medical services.

Path: Quality Structure focuses the hospital on creating and optimizing the organizational structure, hospital infrastructure, and providing the necessary resources and conditions for the hospital to effectively practice medicine. Choosing this path assumes that in order to achieve high quality medical services, it is important to provide adequate and modern resources, create comfortable and safe conditions for patients and staff, and optimize organizational processes. The main idea of this path is that the successful conduct of medical practice requires an emphasis on providing a high level of organizational and technical resources that serve as the basis for effective medical practice. This includes creating modern and functional medical facilities, providing high-tech equipment and supplies, and developing an optimal staffing structure. Optimizing organizational processes related to patient intake, resource allocation and staff coordination is also a key aspect of this path. As a result of the successful application of this approach, the hospital will be able to provide a high standard of organizational conditions that contribute to more efficient and quality medical practice, patient satisfaction and successful treatment outcomes.

The choice of this path is likely due to the fact that the hospital was faced with certain problems that are associated with any manifestation of structures in the hospital and in medical activities. Such problems usually include the following: suboptimal use of resources, unsatisfactory conditions in the hospital for patients, ineffective budget execution, lack of coordination in processes, the organizational structure of the hospital does not allow achieving goals for the quality of medical services, difficulties in introducing changes and innovations in the process of providing medical services.

However, there are often cases when a hospital does not face problems of a negative nature, but simply wants to improve the organizational structure, improve the quality of coordination between departments, service structure, use infrastructure capabilities more efficiently, etc. In this case, this path will also be relevant and timely.

The selection of specific instruments depends on the unique characteristics of the hospital. This includes the size of the organization, the specifics of medical services, availability of financial resources and other factors. How and for what purpose the quality management tool will be applied

depends on the goals set by the hospital management in the field of providing quality services. In the case of the “quality structure” path, the choice of quality management tools depends on the goals and strategic directions of the hospital, focused on creating and optimizing the organizational structure and resources. Specific tools are selected based on an analysis of the current conditions and needs of the hospital.

If a hospital chooses the Quality of Structure path, then the selection of tools depends on a number of factors: resources and budget; technologies and equipment; strategic goals; patient experience. Examples of specific health care quality management tools that can be used in the Quality Framework path should be used when assessing and updating physical infrastructure, creating and optimizing medical procedures and protocols, analyzing and managing human resources, and, for example, when implementing modern information systems to improve operational efficiency. The selection of tools must suit each hospital's unique needs and strategy to achieve high levels of quality care.

The author has identified some tools for managing the quality of the structure of a medical institution, which include the following: an audit of structural resources is an analysis of the efficiency of using buildings, equipment and materials in a hospital in order to identify optimization opportunities; the priority matrix is a technique for assessing and ranking tasks and projects according to their degree of importance to improve the organizational structure and resource planning; assessment of the quality of patient infrastructure is an analysis of the conditions of stay of patients, assessment of their level of satisfaction, planning measures to improve the quality of conditions; financial analysis and monitoring is the study of the financial side of the hospital, identifying costs and finding ways to optimize budget indicators; innovation analysis and strategic planning - this is the analysis of obstacles and opportunities for introducing innovation into the organizational structure, developing a strategy for innovative development; a checklist is a list of key points and criteria that help monitor the implementation of tasks to optimize the organizational structure and resource planning.

In the context of the Quality Structure path, the use of a variety of quality management tools necessary for the effective optimization of the hospital's organizational structure, infrastructure and resource planning. An audit of structural resources identifies potential improvements, a priority matrix helps identify the most significant tasks, and an assessment of patient infrastructure is aimed at increasing patient satisfaction. Financial analysis and monitoring contribute to more efficient use of

resources, while innovative analysis and strategic planning contribute to the implementation of modern practices. The use of a checklist ensures constant monitoring of optimization processes. Together, these tools enable the hospital to achieve higher levels of organizational efficiency and ensure quality healthcare delivery. Examples of situations where these tools can be applied to improve the quality of the structure in the context of hospital quality management are presented in Table 4.1.

Table 4.1. Examples of situations of applying quality management tools within the framework of the "Quality Structure" path [developed by the author]

Problem	Tool	Event
Inefficient allocation of hospital resources	-Audit of structural resources; -Priority Matrix.	- analysis of the use of buildings, equipment and materials; - development of a plan for optimizing the use and distribution of resources.
Unsatisfactory conditions in the hospital for patients	-Assessment of the quality of patient infrastructure.	- analysis of the condition of patient rooms; - assessment of the level of patient satisfaction with hospital conditions; - development of a plan for improving patient infrastructure; -creation of a mechanism for continuous monitoring of conditions.
Inefficient budget execution	-Financial analysis and monitoring.	- analysis of hospital income and expenses; - development of measures to optimize costs; - creation of a system for monitoring the financial condition of the hospital.
Difficulties in introducing innovations in the process of providing medical services	-Innovative analysis and strategic planning; -Check sheet.	- analysis of existing barriers to innovation; - assessment of personnel readiness for changes; -development of an innovative development strategy.

The table shows only some of the possible problems and tools that can help solve them. The application of these tools will allow hospitals to more effectively manage the quality of their structure, ensure a high standard of organizational and technical resources, and improve the skills of their staff.

The activities listed in the table are points on the path, that is, these are the tasks that are set in the first block of the mechanism for managing the quality of medical services. It is important to note that, as a rule, there is more than one problem in the hospital that requires solutions and the selection of appropriate tools, so there is a combination of tools and, accordingly, tasks within the framework of planned activities (points on the path, Appendix 60).

Pathway: "Process quality" consists of focusing on the optimization and standardization of all stages and processes of health care delivery, from prevention and diagnosis to treatment and patient

monitoring. This path implies that by focusing on improving the medical processes themselves, one can achieve higher efficiency, diagnostic accuracy, optimal treatment and patient care, and as a result, patient satisfaction. On the path of process quality, medical institutions strive to standardize methods, procedures and protocols in all areas of medical activity in order to guarantee a consistently high level of medical care provided.

Consideration of this path as a possible way to achieve an improvement in the quality of medical services is possible if the hospital has encountered certain problems that relate to the content of the medical service, that is, to the process of providing medical care. This is a very wide range of problems that can relate to all those aspects that the patient imagines about the medical service and how the medical service should be provided according to the procedures specified in the standards, as well as based on specific clinical situations. It is difficult to provide an exhaustive list of problems in this case due to their diversity, but in a general sense, such problems include: lack of regular training and advanced training of doctors, slow introduction of innovations in the process of providing medical services, limited participation of patients in the process, lack of accreditation of the hospital and other.

Cases should also be mentioned, for example, when patients are satisfied with the quality of the medical care process in the hospital, the medical institution demonstrates good performance, but the management sets tasks that can be conditionally called “problems”, and they relate to improving the quality of the medical care process. In this case, examples of such tasks can be the desire to speed up processes, reduce time and at the same time improve the quality of operations, interaction and exchange of experience with other hospitals, and others. In this case, the way to improve the quality of the process of providing medical services will also show efficiency and results.

The choice of a set of specific tools for managing the quality of medical services depends on the specifics of the hospital. This includes the size of the organization, the focus of health care services, the availability of financial resources and other factors that may influence the reorganization and improvement of the health care delivery process. In the context of the “process quality” path, the choice of quality management tools depends on the hospital's focus on optimizing and standardizing processes for providing health care services. The selection of specific tools is determined by a number of key factors: medical practice processes; standards and regulations; technological resources; personnel and training; integration and coordination.

Specific tools that can be used in the Process Quality path include those aimed at standardizing medical protocols and procedures, implementing quality management systems, automating processes

using information systems and technologies, and actively using data for continuous monitoring and process improvement. When selecting specific tools, it is important to remember that the selection should reflect the strategic priorities and needs of each individual hospital, striving for a balance between standardization and individual patient needs in the delivery of health care services.

The author provides some tools for managing the quality of the process of providing medical services, which include the following:

• Process modeling and optimization is the analysis and improvement of the sequence of activities and steps associated with the provision of health care services to improve the efficiency and quality of processes.

• An affinity diagram is a visualization of the relationships between system elements to determine the most important factors and improve the quality of processes in the hospital.

• Staff qualification assessment is an analysis and assessment of personnel competencies aimed at ensuring high-quality medical performance x procedures.

• Training and education of staff is the improvement of the knowledge and skills of employees for better and more efficient provision of medical services.

• Accreditation and standardization is the application of standards and regulations to ensure high quality medical processes and services.

• Process decision program chart (PDPC) is about predicting risks and developing plans to minimize negative consequences during health care delivery processes.

• Patient participation and feedback techniques involve involving patients in the service delivery process and using their feedback to improve quality and satisfaction.

• Innovation analysis and strategic planning is the application of new ideas and methods to improve health care processes and strategic planning.

• Heuristic techniques are the use of experience and intuition to solve complex problems and find new approaches in the processes of providing medical services.

The use of appropriate tools becomes an integral part of strategic planning and quality management of medical services as part of improving the quality of the hospital's service delivery process. This allows hospitals to effectively solve current problems, improve the level of medical care and meet modern standards. Examples of cases where the presented tools can be used to improve the quality of a hospital's health care delivery process are presented in Table 4.2.

Table 4.2. Examples of situations of using quality management tools within the framework of the "Process Quality" path [developed by the author]

Problem	Tool	Event
Lack of coordination in processes	-Process modeling and optimization; -Affinity chart.	- analysis of current processes; -development of a model of optimized processes; - implementation of a control and feedback system.
Insufficient qualification of personnel	-Assessment of staff qualifications; -Training and education of staff.	-Assessing the competencies of medical and administrative personnel; - Organization of advanced training and training programs for staff.
Lack of hospital accreditation	-Accreditation and standardization; - Decision Chart (PDPC)	- Study of requirements for accreditation; -Development and implementation of a plan to prepare for accreditation; - Establishment of a committee to ensure that the quality standards and processes required for successful accreditation are met.
Limited patient participation in the process	-Methodology of patient participation and feedback	-Development of a patient feedback system; -Introducing the practice of shared decision-making with patients; -Conducting consultations on quality improvement.
Slow innovation in healthcare delivery	-Innovative analysis and strategic planning; - Heuristic techniques	-Analysis of current processes; -Introduction of the direction of innovative development into the quality strategy of the hospital; -Identify the key stages of introducing innovations in the hospital.

It is important to understand that effective management of the quality of medical services requires the use of appropriate tools in various areas, most often this area of the process of providing medical services. Each of the problems listed in the table requires an individual approach and the selection of appropriate quality management tools. The analysis and selection of tools should be carefully thought out and focused on solving specific problems and achieving set goals (Appendix 61).

Pathway: Quality Outcomes focuses on achieving real-world clinical and patient outcomes. This approach focuses on measurable indicators of treatment success, patient satisfaction and other factors that indicate the quality of medical practice. The main idea of this path is that the quality of medical services can be assessed through the final results obtained by patients. This includes clinical indicators such as cure, improvement, and prevention of complications, as well as patient ratings, satisfaction levels, and positive service experiences. The path implies that running a successful medical practice requires an emphasis on maintaining and improving clinical performance and ensuring positive, long-term patient outcomes.

The need to go through this path when managing the quality of medical services arises if the

hospital encounters problems when the final result of medical care does not meet the expectations of patients and doctors, as well as the requirements of standards, norms, and strategies approved at the state and hospital level. This is a fairly wide range of problems, which is associated with completely different results. In this case, it will also be difficult to provide an exhaustive list of problems due to their wide variety. For this reason, the author cites the most typical problems, which include the following: lack of attention to patient experience, inconsistency with changing conditions and needs, inconsistency with patient expectations, dependence on numerical quality indicators, and others. These are only some of the problems related to the hospital's performance.

Similar to other ways of managing the quality of medical services, in this case there are also situations where there are no obvious problems regarding the effectiveness of the hospital's practice, but management follows this path. This is possible if the hospital seeks, for example, to improve its status, gain a competitive advantage, better meet the needs of patients, take a higher position in the ranking, meet a new standard in the field of medicine, obtain accreditation and other reasons that require improving quality indicators, that relate to the result.

Thus, even in the absence of obvious problems with the effectiveness of health care delivery, a hospital may choose the “Quality of Outcome” path in order to achieve various strategic, competitive or standard goals, thereby emphasizing its focus on continuous improvement and excellence in medical practice.

The selection of outcome quality management tools depends on how ambitious and clearly defined the plans and goals that the hospital intends to achieve in improving the quality of medical services. This involves assessing not only current treatment outcomes and patient satisfaction levels, but also striving for meaningful improvements in performance, introducing innovative approaches and achieving high standards in the hospital's medical practice. In the context of the Quality Outcomes pathway, the choice of quality management tools depends on a number of critical factors: the goals and ambitions of the hospital; quality measurement and analysis systems; monitoring and feedback; innovation and best practices; social and patient factors.

In this regard, examples of specific tools that can be used in the Quality Outcomes pathway include the development and implementation of clinical indicators, patient questionnaires and feedback, the analysis of statistical data to identify trends and patterns, the application of advanced treatment methods and technologies to improve clinical results.

Thus, the choice of quality management tools in the Quality of Outcomes path is determined by

both the desire for high standards and the willingness to adapt to changing needs and new challenges in the field of medical practice.

The author presented some tools for managing the quality of the results of medical services, which include the following:

• Patient surveys and feedback are the collection of patient opinions and ratings to measure and improve patient experience and satisfaction.

• Quality Function Deployment (QFD) is the translation of patient needs into specific quality indicators that help inform improvement strategies.

• Trend monitoring and market analysis is tracking changes in healthcare and analyzing market trends to adapt practices to changing conditions.

• Benchmarking is the comparison of performance and practices with best standards and competitors to identify areas for improvement.

• Total Quality Management is a comprehensive approach to quality management that includes the involvement of all levels of the organization in continuous improvement.

• Collection and analysis of clinical and patient data - this is the analysis of data on the results of treatment and patient satisfaction to adjust practices and services.

• Ishikawa diagram (Ishikawa) is a visualization of the main factors influencing the quality of the result to identify and manage the causes of problems.

Examples of cases where the presented tools can be used to improve the quality of hospital health care outcomes are presented in Table 4.3.

Table 4.3. Examples of situations of application of quality management tools within the framework of the "Quality of outcome" path [developed by the author]

Problem	Tool	Event
Lack of attention to patient experience	-Surveys and feedback from patients; -Quality Function Deployment (QFD)	-Conducting regular patient surveys; -Analysis of the received data; -Developing measures to improve patient experience.
Inconsistency with changing conditions and patient needs	-Monitoring trends and market analysis; -Benchmarking; - Total Quality Management	- Monitoring changes in the healthcare sector; - Analysis of patient needs and preferences; - Making adjustments to medical practice and honey. services.
Inconsistency with patient expectations, dependence on numerical quality indicators	-Collection and analysis of clinical and patient data; -Ishikawa Diagram	-Analysis of treatment results; -Implementation of changes and improvements in the medical practice of the hospital; -Focus on the specific needs of patients, and not just on numerical indicators.

The three considered ways of managing the quality of medical services - “structure quality”, “process quality” and “outcome quality” - represent important directions for achieving a high level of medical care and meeting the needs of patients (Appendix 62). Each of these ways has its own characteristics and is focused on different aspects of quality and requires a specific approach. However, in today's dynamic healthcare environment, it is sometimes necessary to integrate and align all three aspects to effectively manage change and strive for best practice. In this regard, the integrative path of quality management stands out as complex and requiring the harmonization of various aspects of quality. The basic principles, guiding goals and tools themselves for managing the quality of medical services within the integrative path are presented schematically in Figure 4.9.

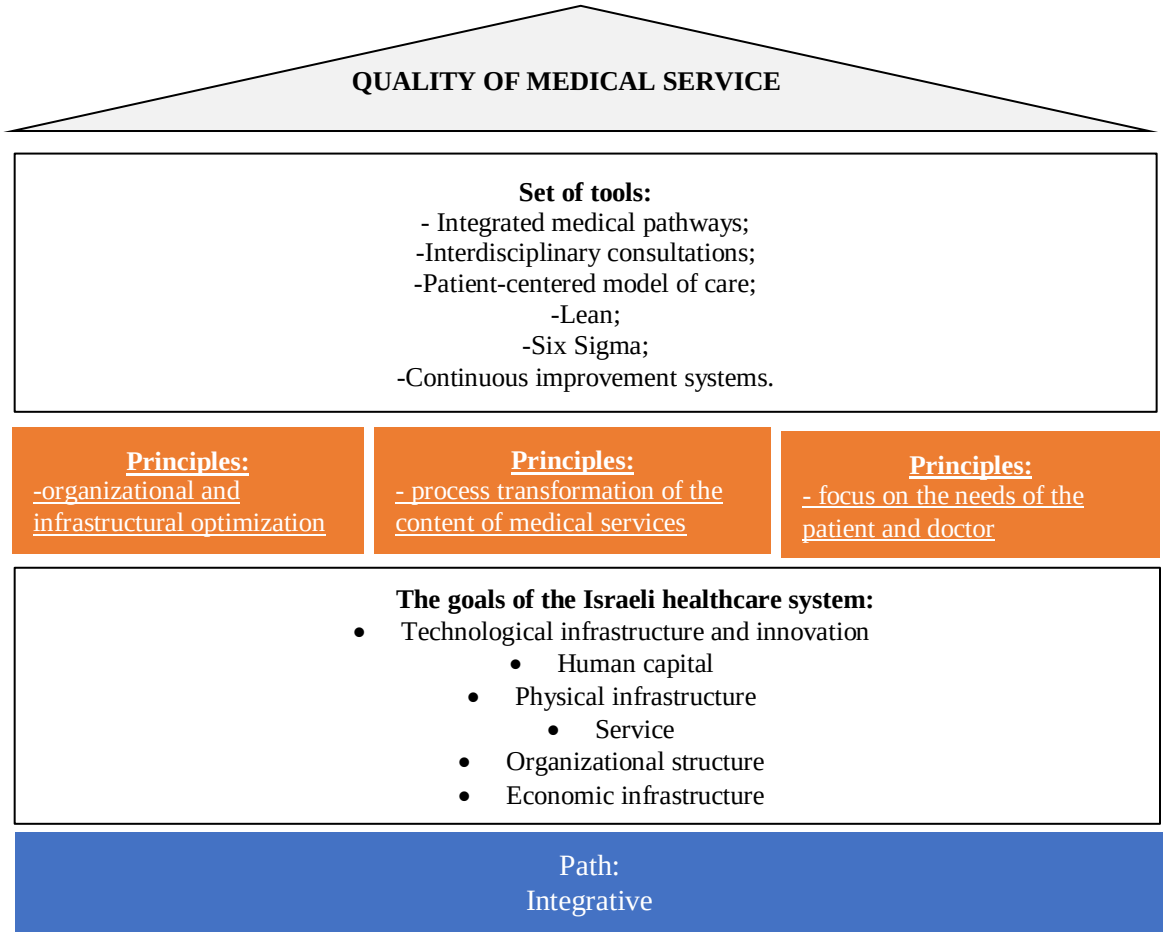

Figure 4.9. Outline of tools for an integrated management path for quality improvement of medical services in Israeli public general hospitals [developed by the author]

Path: "Integrative" implies a comprehensive and balanced approach to quality management of medical services, combining the advantages of all three paths: the quality of the structure, the quality of the process and the quality of the outcome. This path seeks to create a harmonious

interaction between organizational structure, streamlined processes and the achievement of end results. The choice of an integrative approach implies that the quality of medical services depends on the relationship between various aspects: the availability of modern resources, well-organized processes and the achievement of successful outcomes for patients. This path requires taking into account the whole range of factors, from ensuring a high level of structural resources, going through the standardization and optimization of processes, and culminating in the achievement of measurable clinical and patient outcomes. This approach takes into account that the successful functioning of a medical organization is the interaction of many elements, each of which affects the quality.

The path involves the development and implementation of a system that combines best practices and tools from different areas: organizational structure, streamlined processes and end results analysis. This allows us to provide not only a high standard of medical services, but also to maintain continuous improvement and improvement at all levels of medical activity.

The integrative quality management path is the most difficult because of its complexity. The need for a hospital to go through this path is due not only to the correction of individual aspects, but also to deeper transformations in the organization and interaction of all components of the healthcare system. Rather, the challenges a hospital faces in choosing this path are driven by positive and strategic changes in quality management. Among them are:

• Fragmentation of management. Lack of coherence and a unified strategy (long-term plan) in various aspects of quality management in a hospital can lead to insufficient efficiency and even contradictions between different elements of medical practice.

• The complexity of ensuring patient safety. In modern medical practice, patients are increasingly faced with a variety of diseases and conditions. Providing quality health care requires an integrated and coordinated approach to all aspects of treatment and care.

• Increasing patient expectations. Today's patients place higher demands on the quality of health care, expecting a comprehensive approach to their needs and concern for comprehensive well-being.

• Need for data and analysis. Effective quality management requires access to a wide range of data and analysis to understand how different aspects are interconnected and how they affect the final results.

• Weak interaction between specialists, doctors, hospital staff. Divisions of specialties and disciplines can create barriers to information sharing and collaboration, which can ultimately impact the quality of health care services.

• Diversity of standards and approaches to regulating the quality of medical services, which can lead to inconsistency and duplication of effort.

Thus, the challenges associated with choosing an integrative path reflect the complexity and magnitude of the changes it involves. This can lead to a more balanced and holistic approach to managing the quality of healthcare services in a hospital.

The selection of healthcare quality management tools within an integrative pathway depends on a number of key factors, which, of course, are unique to each individual hospital. It is important to consider the context of the application of this path for the hospital. The selection of appropriate instruments must be consistent with the specifics, resources, and strategic goals of the hospital. The author lists and characterizes some of these factors:

1. The size and structure of the hospital. The size of the hospital may influence the choice of instruments. Hospitals of different sizes may have different needs and capabilities for implementing comprehensive tools.

2. The specifics of medical services in a medical institution. The types of health care services that a hospital provides may require different approaches and tools. Oncology, surgery, pediatrics and other specialties may have their own unique needs.

3. Availability of financial resources for the hospital. The integrative path may require additional financial investments. The selection of tools should take into account the budget and financial capabilities of the organization.

4. Technological readiness of the hospital. Depending on the level of technology readiness, a hospital can choose tools that match its technical capabilities.

5. Hospital goals and strategic priorities. The goals that hospital management sets for themselves determine which aspects of quality require the most attention. For example, if the priority is to improve clinical outcomes, the selection of tools will be focused on this area.

6. Cooperation and interaction of the hospital with partners. The integrative path involves cooperation between various departments and specialists. The selection of tools should facilitate effective interaction.

All of these factors combine to shape the unique context and needs of a particular hospital, determining which tools will be most effective in implementing an integrative path to healthcare quality management.

In this regard, the range of tools that can be used in an integrative way includes tools aimed at

providing coordinated and effective patient care, taking into account the various aspects of health care delivery from three perspectives: structure, process and outcome.

The choice of quality management tools in the path under consideration is determined by the desire for intra-organizational transformations, process modification and the effectiveness of the result of the provision of medical services. The author presented some tools for managing the quality of the results of medical services, which include the following:

• Integrated healthcare pathways. These structured treatment plans define the sequence of medical actions for specific conditions or diseases. They provide a coherent and consistent approach to the delivery of health care services.

• Interdisciplinary consultations. Organizing regular discussions of medical cases between different specialists promotes an integrated approach to diagnosis and treatment.

• Patient-centered model of care. Focusing on patient needs and preferences encourages a harmonized approach between different healthcare services and provides more holistic and personalized care.

• Continuous improvement systems. The use of continuous improvement methodologies, such as Lean and Six Sigma, allows us to optimize the processes of providing medical services and minimize losses.

This is just a small list of tools that fit this path. All of these tools are aimed at creating a consistent, efficient and effective practice in the provision of health care services, which is characteristic of the integrative path of quality management. Examples of cases where these integrated tools are useful for improving quality within the integrative pathway (Appendix 63) are presented in Table 4.4. Ultimately, the integrative healthcare quality management pathway is a powerful and comprehensive method that combines the best aspects of the structure quality, process quality, and outcome quality pathways. It is designed to meet the challenges of the modern medical field, where patient requirements and expectations, as well as changes in technology and standards, are constantly evolving. The integrative approach allows hospitals to harmoniously combine tools and methods to achieve optimal quality of services, creating new instrumental hybrids (Appendix 64). This approach provides a holistic view of a healthcare facility, from structure and organization to processes and outcomes.

Table 4.4. Examples of situations of using quality management tools within the framework of the "Integrative Path" [developed by the author]

Problem	Tools	Event
Fragmentation of management	- Integrated medical pathways.	-Implementation of a unified quality management system at all levels; -Organization of regular meetings and exchange of information between management and departments.
Comprehensiveness of patient safety	-Interdisciplinary consultations.	-Development and implementation of safety standards; -Training staff with a focus on patient safety.
Rising patient expectations	-Patient-centric model of care.	-Carrying out patient surveys; -Development of plans to improve the quality of service and communication with patients.
The need for data and analysis	-Lean; -Six Sigma.	-Introduction of innovative software for medical records; -Training of personnel in data analysis and use of analytical tools.
Poor interaction between specialists, doctors, hospital staff	-Continuous improvement systems.	-Organization of interdisciplinary consultations and joint projects; -Introduction of teamwork and communication programs.

Improving the quality of services in Israeli public hospitals is of particular importance. To ensure a high level of quality of services in Israeli hospitals, a number of measures are proposed that can be combined into a system of quality improvement management tools. It includes a set of methods and procedures that allow you to monitor and optimize various aspects of hospital performance, such as patient safety, quality of care, treatment efficiency, etc. The author developed this system of tools and demonstrated its impact on improving the quality of services in public Israeli hospitals.

In light of the above, the implementation of a set of tools in the context of managing the quality of medical services acquires the highest axiomatic status in the architecture of creating a mechanism that ensures the progressive dynamics of improving the quality of medical practice. The author emphasizes that quality management itself is essentially a path that is identified with the strategic orientation of the hospital to improve the quality of services provided. Thus, when hospital management decides to engage in active quality management, this step places the hospital on a trajectory aimed at systematically and consistently improving the quality characteristics of medical services, and, accordingly, aims to manage the improvement of the quality of medical services.

4.3. Evaluation of the effectiveness of the management mechanism for improving the quality of medical services in public medical institutions in Israel

Currently, medical services play a key role in ensuring public health and quality of life. With the constant development of medical technologies and rising patient expectations, effective management of the quality of medical services is becoming an integral part of the modern healthcare system. This is especially true for public medical institutions in Israel, which are responsible for providing the population with affordable and high-quality medical services. Ensuring the quality of medical services and managing this process is the most important aspect of the hospital's activities. However, the state and results of the functioning of a healthcare institution are determined by the action of many factors, the most important of which is the effectiveness of the mechanism for managing the improvement of the quality of medical services. Thus, there is a need to systematically analyze the progress in quality management and improve the quality management mechanism in public general medical institutions in Israel.

The author has developed a system for assessing the effectiveness of the management mechanism for improving the quality of medical services (hereinafter referred to as effectiveness assessment) for use in public general medical institutions in Israel. By analyzing current practices and experiences of other countries, as well as taking into account the characteristics of the Israeli national health care system, the author identified problem areas that are incentives for developing the structure of a performance measurement system. The results of this work may have important practical significance for further improving medical services and increasing the level of health of the Israeli population.

Quality oversight in the health care system, process optimization, and policy-making based on the information received are critical processes required for the effective functioning of a country's health care system. Measuring quality at the national level allows us to assess the strengths and weaknesses of the health care system and improve its performance. For these purposes, a National Program (hereinafter referred to as the Program) for quality indicators in Israeli hospitals was created[245], aimed at developing and promoting the quality of medical care in the Israeli healthcare system. The measurement of quality indicators at the level of the entire health care system, as well as the comparison of quality indicators at the level of various hospitals, is a source of positive and

[245] *Ministry of Health*, Medicine Division directive 22/2014, The National Program for Quality Indicators in Hospitals: Monitoring and Follow-up. Jerusalem: Ministry of Health; 2014. [Hebrew]. [accessed 12.03.2020]. Available at: https://www.gov.il/he/departments/policies/mr22-2014.

constructive competition in healthcare, an incentive for excellence and achievements in medicine. With this program, it became possible to calculate and extract data from patient files to promote standardization in the field of information optimization, encryption and data verification. On this basis, cooperation between hospitals and joint work with professional associations within the framework of the Israel Medical Association was developed [246] and with the Quality Division [247], who deals with quality issues.

The prerequisite for the creation of a performance assessment is the goal of the Israeli Ministry of Health "To conduct a national program for measuring quality indicators in Israeli hospitals", which implies the establishment and definition of quality indicators for Israeli general hospitals, setting quality standards for them to be aspired to according to the selected quality indicators[248]. In other words, the implementation of the National Quality Indicators Program in Israeli general hospitals means the implementation of measurement practices in hospitals and the provision of an infrastructure to track data over time. This was the impetus for the development of a quality tracker framework, a universal system for evaluating the effectiveness of the quality improvement management mechanism in public general hospitals. The author's development will allow not only to implement the goals of the National Program laid down at the national level, but also to assess the level of quality at the level of a particular hospital for local work to improve quality and increase competition between healthcare institutions.

According to the author, there are twofold results of the implementation of the Program. Problems associated with the order in which quality indicators are measured. On the one hand, the results lead to an improvement in the quality of medical services in general in Israel, as well as to an improvement in documentation. On the other hand, there are concerns that the Program focuses on what can be measured, but does not pay attention to more important aspects of the medical service delivery process that cannot be measured (patient composition, patient adherence to recommendations and other qualitative characteristics).

Israeli hospital doctors during in-depth interviews reported several problems they associated with the quality measurement program: increased workload, competition, managerial pressure,

[246] *Israeli Medical Association*. [accessed 18.11.2022]. Available at: https://www.ima.org.il/eng/
[247] *Ministry of Health*, Quality Division. [accessed 12.11.2022]. Available at: https://www.gov.il/en/Departments/Guides/patientsafety
[248] *Ministry of Health.* Goals and Objectives. [accessed 17.02.2023]. Available at: https://www.gov.il/en/departments/about/about_ministry_of_health

distraction from other clinical issues, unreasonableness of some quality standards, so they had limited ability to deviate from the protocols embedded in quality scores where it made clinical sense. Some critics point to the difficulties and dangers of measuring quality, especially when it involves financial incentives or comparative publication of health worker results[249]. The use of tools for supervision, evaluation, monitoring and measurement ultimately reduces the professional autonomy of doctors. Measurement-based information provides both policy makers and the public with an opportunity to judge the effectiveness of health care. However, this could lead to undermining the authority of medicine. The National Hospital Quality Score Program met with no opposition from the Israel Medical Association. Similarly, family physician support for the Program has remained high over the years, despite specific and unsubstantiated criticism of several indicators, their interpretation, and sometimes managerial demands made in response to poor results[250].

Another issue is the cross-sectional, rather than longitudinal, nature of the snapshots used to generate National Program reports. Another problem is tunnel vision, where management emphasis is on measurable areas rather than on the most important aspects. The problem of "ceiling effects" has also been described, where setting a less than optimal target for an indicator forces suppliers to align their improvement efforts when they achieve the target. Using quality indicators to assess socioeconomic disparities, as well as changes in disparities over time, requires appropriate data on socioeconomic status, but direct individual-level data on socioeconomic status poses a challenge in electronic health record systems such as health plans. insurance and for hospitals.

Thus, the need and idea arose to develop a performance measurement system at the hospital level. Initiatives to ensure and improve quality at the hospital level must have clear reporting, so that specific performers in the hospital are responsible for each national initiative, and their own quality decisions do not run counter to, but complement, national vectors for the quality development of the healthcare system. Initiatives must be measured by the time it takes to implement them, and there must be some balance across the various areas of safety, effectiveness, efficiency, timeliness, patient-centered care, and equity so that initiatives cover all of these areas. The system for assessing the effectiveness of the management mechanism for improving the quality of medical services in a

[249]LEVI, B., ZEHAVI, A., CHINITZ, D. *Taking the measure of the profession: physician associations in the measurement age*. In: Health Policy, 2018, nr. 122(7), p. 746-754. ISSN 0168-8510.
[250] Idem. LEVI, B., ZEHAVI, A., CHINITZ, D. *Taking the measure of the profession: physician associations in the measurement age*. In: Health Policy, 2018, nr. 122(7), p. 746-754. ISSN 0168-8510.

hospital is a comprehensive and structured approach aimed at analyzing and assessing the effectiveness of all types of activities for managing quality control and improvement mechanisms carried out in public general medical institutions. This system includes methods, tools, criteria and indicators for assessing the quality of medical services, which make it possible to objectively measure and evaluate the achievement of established goals in the field of quality of medical care and service. Performance assessment will help identify problem areas in the health care delivery system and quality management process. This will lead to optimization of processes and reduction of hospital costs. Performance evaluation provides impetus for the development and implementation of measures to improve the quality of health care services and patient safety. Based on the results of the assessment, informed decisions will be made to make changes to the quality management system of medical services.

The purpose of the system for assessing the effectiveness of the management mechanism for improving the quality of medical services is to provide objective and critical data on the basis of which analysis can be carried out and measures can be taken to improve medical processes and ensure a high level of quality of medical care. This improves the safety and effectiveness of treatment, patient satisfaction and public trust in medical institutions.

The effectiveness assessment developed by the author is based on the following principles: the principle of assessing the context of application of the assessment (effectiveness assessment includes an analysis of the influence of external and internal environmental factors); the principle of clinical harmony (taking into account the impact of medical services on the patient's health); the principle of process differentiation (awareness of the patient's individuality and adaptation of medical service processes); the principle of long-term visibility of outcomes (taking into account the long-term impact on the patient's health).

These principles make it possible to build an assessment of the effectiveness of the quality management mechanism for medical services, taking into account their complex impact on the patient and providing a more flexible and long-term approach to assessing the effectiveness of medical processes. Based on this, the following characteristic features of performance assessment can be identified:

1. Adaptability to hospital conditions and problem. Performance assessments are tailored to the specific characteristics and needs of each hospital. It is able to adapt to current problems and challenges that an organization faces in the field of quality of medical services.

2. Versatility for any hospital. The assessment is a flexible approach applicable to public general hospitals of varying levels, sizes and resources. This allows any hospital to benefit from this tool, regardless of its capabilities.

3. Relative independence from external and internal factors. Performance assessment is focused on internal processes and the quality of services provided, and is primarily focused on this. In this case, external influencing factors are taken into account, but do not influence the measurement of indicators.

4. Flexibility in choosing quality criteria. The number of health care quality measures that are expected to be assessed depends on the specific quality improvement trajectory chosen by the hospital. This puts focus on specific aspects of quality that are most important to a given health care facility.

5. Possibility of expanding the coverage of the assessment. Assessment can be either a universal tool, including quality indicators related to all four paths within the trajectory of improving the quality of health services, or a narrowly focused one, focused on a specific path chosen for quality management.

6. Wide range of quality indicators. Evaluation can include a wide variety of health service quality indicators suitable for assessing different aspects of health service design, processes and outcomes.

The characteristics of the performance assessment developed by the author emphasize its flexibility, versatility and adaptability within the framework of quality management of medical services. Despite the high flexibility and adaptability of performance assessment, it has certain boundaries that give it a certain focus. They are expressed in three aspects related to the activities of the hospital: internal processes; quality of services; set goals.

Performance measurement is a powerful tool that is highly flexible and adaptable to the characteristics of each hospital, and also has its own limitations. The structure for assessing the effectiveness of the quality management mechanism for medical services in Israeli hospitals is schematically shown in Figure 4.10.

The performance measurement methodology outlined in the framework is a systematic and structured approach to measuring, analyzing and evaluating the results and achievements of an area, process or activity to improve the quality of health care services in a hospital. It includes a set of principles, tools and procedures that determine how data can be collected, analyzed and interpreted, and how conclusions and recommendations can be drawn from it.

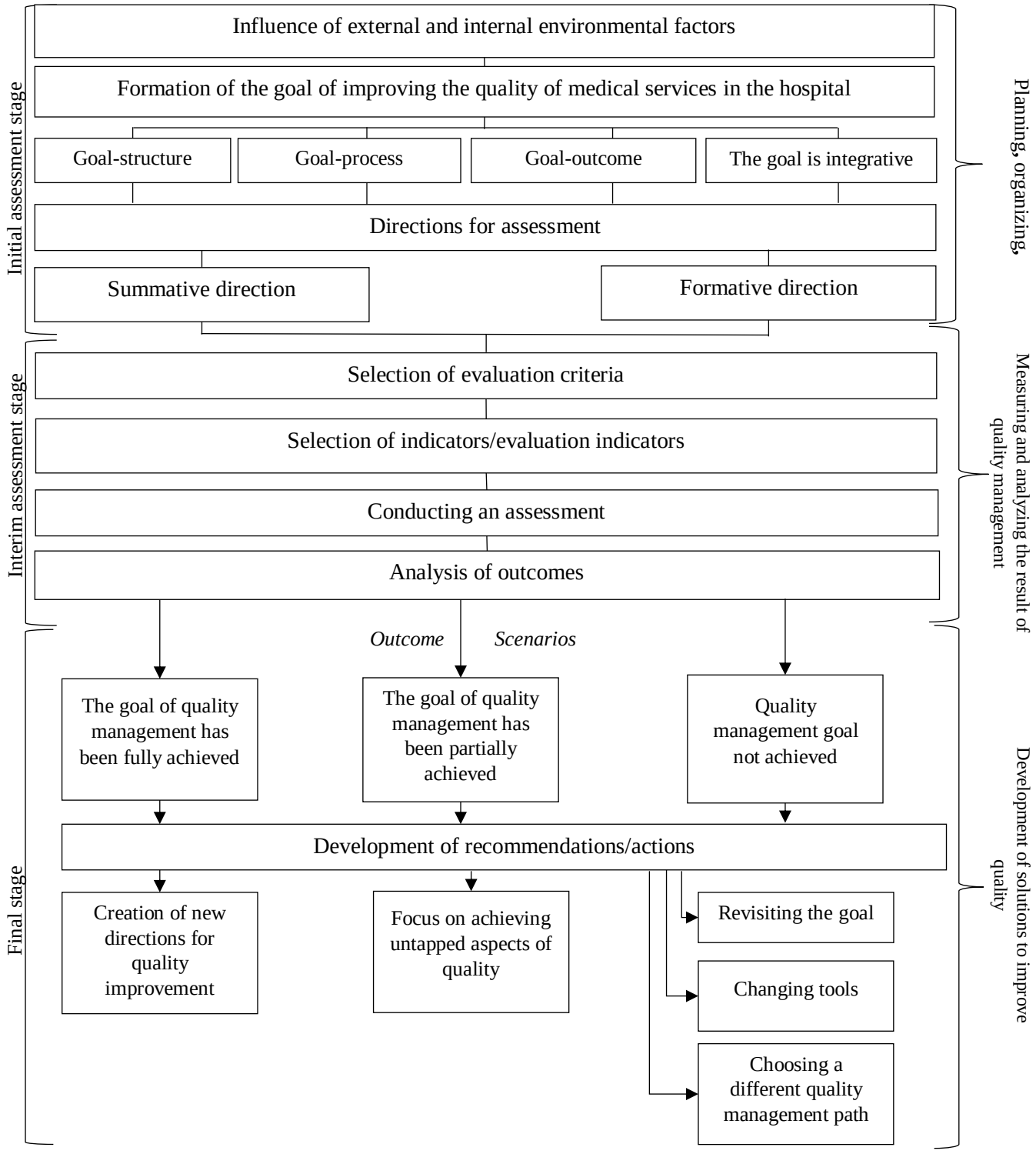

Figure 4.10. Scheme for evaluating the effectiveness of the mechanism for managing the quality of medical services in hospitals in Israel [developed by the author]

It is important to note that the effectiveness assessment is carried out based on the results of the implementation of a mechanism for managing the quality of medical services in the hospital. After its implementation, a certain time must pass for the results of the indicators before and after implementation to be indicative.

The structure of the performance assessment developed by the author includes the following main stages: initial stage; intermediate stage; final stage.

At the initial stage, planning, organization, and coordination of all processes necessary for conducting performance assessment take place. This includes taking into account the influence of factors of the external and internal environment (assessment framework, principles, characteristics) and the formation of goals depending on the chosen path (structural, process, effective qualitative changes) or when choosing an integrative path - complex goals.

After selecting a list of indicators for measuring the quality of medical services, it is necessary to determine the direction of measurement depending on the goal set in the field of ensuring the quality of medical services in the hospital. The author proposes two directions for measuring the quality of medical services in Israeli hospitals:

- the first is to use quality measurement in quality assurance systems as a summative mechanism for external reporting and verification;

- the second is to use quality measurement as a formative (promoting) mechanism for improving quality.

Depending on the goal of the quality measurement system, each hospital will make different decisions regarding indicators, data sources, and the required level of precision in quality measurement. The purpose of this measurement can be either quality improvement or quality assurance, depending on the strategic goals of the overall hospital. The differences in these objectives are presented in Table 4.5.

The division presented in the table is not always clear for a number of reasons. From a societal point-of-view, quality assurance aims to eliminate substandard health care and thus contributes to raising the average level of quality of health care. Second, proponents of some policies actually argue that these policies actually improve the quality of health care and build public trust in health care services. In fact, the rationale for external evaluation and public reporting is that such strategies can lead to changes within organizations which ultimately will improve the quality of healthcare. Clearly, there must also be incentives and motivations for change, so that in contrast to internal quality

improvement initiatives which rely on professionalism, external accountability mechanisms motivate through external incentives and disincentives.

Table 4.5. Comparative characteristics of the goals of assessing the effectiveness of quality management of medical services in a hospital [developed by the author]

	Quality assurance and control	Quality improvement
Target	Preventing quality problems Inspection and assurance Measurement oriented	Learning for continuous improvement Focus on change
Rationale	Ensuring external accountability and reaffirming legitimacy	Promoting change and improvement in the quality of health care
Power and management	External authorities and management	Internal professional governing bodies
Culture	Comparison to obtain general judgments about the quality of medical care. Ranging. Conviction and loss of reputation	Comparison to learn from differences and encourage improvement Informal benchmarking to stimulate discussion and change
Required accuracy	High accuracy. Using statistical analysis to find "real" differences	Lower accuracy
Epistemology (way of knowing)	Empirical statistical validity and reliability are important	Understanding, interpretation Using other data sources and local information to provide context
Examples	External assessment. Pay for performance Public reporting	Internal audit and feedback Continuous quality improvement

Then the direction of assessment is selected. The direction is related to the goal that was initially adopted when managing the quality of medical services. The direction must be chosen so that the performance assessment remains within the framework dictated by the path and trajectory of quality management.

At the preliminary stage, conceptual planning, organization and harmonization of a set of processes that are integral to performance evaluation are carried out. This area includes the formation of a target orientation, closely related to the chosen trajectory direction (structural, procedural or productive), or in the case of an adaptive choice of an integrative path, the formation of synthesized target perspectives that unite thematic areas. Then the definition of the main vector of performance evaluation is carefully considered. This vector directly depends on the previously set goal, which serves as a stronghold in the field of quality management of medical services. The choice of a specific direction provides an opportunity for performance evaluation to remain focused on specific areas that have been affected by the quality management process.

At the intermediate stage, the methodology and assessment tools are being developed. The methodological approach serves as a guideline for systematizing and structuring procedures, as well as for choosing the best tools that are adequate to take into account the characteristics of the chosen goal and direction. The toolkit, in turn, provides quantitative and qualitative measurements, data analysis, interpretation and provides ways to formalize the assessment in accordance with the established parameters. At this stage, criteria and indicators for evaluating performance are selected. It is important to keep the ratio of 80 to 20, which means 80% of the indicators should be the same as those established under the first block of the medical services quality management mechanism (to compare and track the dynamics of changes in the quality of hospital services), and 20% - other indicators that were not used and not laid down at the preliminary stages, they will supplement the analysis and enrich the results with information.

Important aspects to consider regarding the feasibility of using a quality measure are if the needed information is readily available or can be collected in the required timeframe, whether or not there is previous experience with the indicator, are the costs of measurement acceptable, and finally if the data can be meaningfully analyzed for relevant subgroups of the population (e.g., socioeconomic status). In addition, an important criterion is the significance of the indicator, i.e., if it allows useful comparisons, whether the results are convenient for its audience, and if the distinction between low and high quality is meaningful to this audience. In this regard, the author developed criteria for selecting indicators. Each criterion corresponds to a question that will test the indicator of a particular hospital and allow you to make a choice in favor of its choice (Appendix 65).

The initiative to measure the quality of medical services within the quality management system is associated with the development and evaluation of quality indicators. Quality measures can be defined as quantitative indicators which provide information about the effectiveness, safety and person-centeredness of care. Indicators of the quality of medical services should ensure:

1. Quality objective, meaning that there is a clear statement of the goal or objective of the measure;

2. The concept of measurement, i.e., the specific methodology for collecting data and calculating the indicator;

3. The assessment concept, i.e., a description of how the indicator is going to be used to assess quality.

These criteria are met by the indicators proposed by Donabedian, who divide them into indicators of process, structure and outcome. The organizations in which health care is provided influence the processes of care, which influences the outcomes of patient care. To assess the level of influence of certain initiatives in the field of quality management of medical services, the author proposed a self-assessment table presented in Table 4.6.

Table 4.6. Framework for assessing the quality of evidence for different quality improvement management initiatives in health care services [developed by the author]

	Path No. 1	Path No. 2	Path No. 3
Safe			
Effective			
Efficient			
Person-centered			
Timely			
Equitable			

Strong impact | Some impact | Mixed impact | No impact | Posible negative impact | No evidence

The presented table allows you to evaluate which initiatives were effective, which need improvement, and which should be abandoned completely. Self-assessment includes the following stages: determination of initiative; defining goals; evaluation of evidence; economic efficiency assessment; implementation assessment; decision-making; monitoring and evaluation of results. Such a framework would allow us to systematically assess the evidence on the quality of quality improvement management initiatives and make informed decisions about its implementation. Taking into account the recommendations proposed by the author for the formation of a system for assessing the quality of medical services, as well as tools for managing the process of quality formation in medical institutions, a comparative analysis of the tools used in medical institutions in Israel and in other countries was carried out.

The author proposes to use structural quality indicators, such as compliance of medical organizations and equipment with requirements, staff structure, qualifications of medical and administrative staff, to measure the quality of medical services in Israeli general hospitals (Appendix 66). Structure indicators associated with performance include whether staff with appropriate skill sets is available, while the availability of safe medications and volume of operations are usually more related to patient safety. These indicators of patient-centered care include organizational

implementation of a patients' rights charter or patient information accessibility. While institutional structures are definitely important for delivering high-quality healthcare, it is often hard to establish clear links between structures, processes or outcomes, so that the relevance of structural measures is somewhat hampered.

Process indicators are used to evaluate whether activities during service delivery meet the requirements for quality care. Ideally, process indicators should be based on robust scientific evidence that these indicators are associated with better health care outcomes.

Outcome indicators can provide information about whether health services are helping patients stay alive and healthy. They are usually specific and very important to patients. Patient safety outcome indicators may include complications, such as hospital-acquired infections or foreign bodies left behind during surgical procedures. Outcome indicators regarding patient-centeredness will help in assessing patient satisfaction and their willingness to recommend the hospital. Outcome indicators are being increasingly used in quality measurement programs around the world.

Conducting an assessment of the effectiveness of quality management of medical services is the most important part of this stage (intermediate stage). An assessment of the effectiveness of those measures that were implemented thanks to the mechanism for managing the quality of healthcare services is being conducted. As an example, the expert assessment method was considered. The author has developed an algorithm for assessing quality management process effectiveness for medical services, presented in Figure 4.11.

The presented figure shows a diagram of the algorithm for expert assessment of the quality of medical services in general hospitals in Israel, which was proposed by the author. This algorithm was developed for the purposes of:

- ensuring and monitoring the appropriate quality of medical services in a general hospital;

- establishing uniform methodological principles for assessing the quality of medical services using expert assessment;

- assessment of the activities of persons involved in the provision of medical services, their effective interaction;

- using the results of assessing the quality of medical services in healthcare organizations for continuous improvement of its quality; - ensuring the rights of citizens to receive medical services of appropriate quality in accordance with the requirements of Israeli legislation, considering the present level of development of medical science and medical technologies.

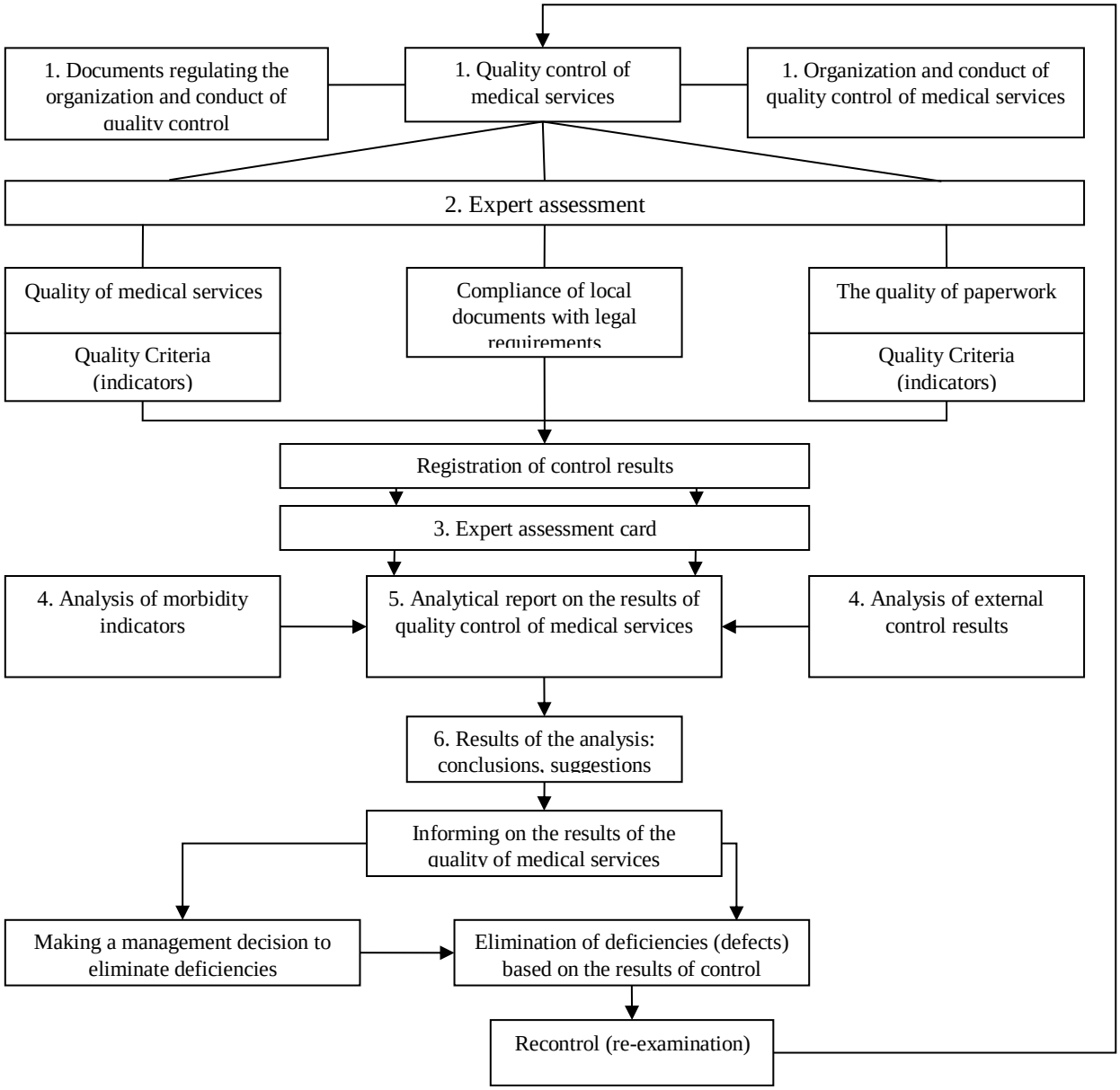

Figure 4.11. Algorithm for expert assessment of the quality of medical services in general hospitals in Israel [developed by the author]

At the first stage of quality control of medical services, a detailed analysis of the current situation in Israeli hospitals is carried out. This includes the study of documentary support and regulation of the process of providing quality medical services. It evaluates how efficiently and accurately each step of the process is implemented, from patient intake and diagnosis to treatment delivery and subsequent quality control.

The process of organizing and conducting quality control of medical services is also assessed. If such control is absent, an analysis of the formal documentation of procedures for ensuring the quality of medical services is carried out. It assesses how effectively these procedures are implemented in practice, and what tools are used to assess the quality of services provided.

As a result of this analysis, weaknesses in the health care delivery system and areas where the quality of services provided can be improved are identified. The key parameters that will be used for assessing the quality of healthcare services at the next stages of the algorithm are also determined.

The second stage is the expert assessment stage. At this stage of the algorithm for assessing the quality of medical services, an expert assessment is conducted. This stage includes an assessment of the state of the regulatory framework, which ensures the proper quality of medical services, as well as checking the compliance of internal documents with the requirements of Israeli healthcare legislation.

For this purpose, a group of experts who evaluate the quality of health services utilizing a number of criteria and indicators is recruited. These indicators include parameters such as the degree of adequacy of medical procedures, the qualifications of medical staff, the use of modern diagnostic and treatment methods, and patient satisfaction. Experts must then select metrics and indicators, and they can follow 3 approaches:

- the first approach is to evaluate through the qualitative characteristics of medical services;
- the second approach is to evaluate through quantitative characteristics of medical services;
- the third approach is to select criteria and indicators of the quality of medical services from ratings that better reflect the goal of improving the quality of medical services.

Next, experts select sources of information for the assessment, presented in Table 4.7.

Table 4.7. Characteristics of data sources for assessing effectiveness when conducting performance assessment [developed by the author]

Data source	Characteristics	Data types
Electronic medical records	Contains information about patients, diagnoses, treatments, etc.	Clinical data, medical history
Patient satisfaction questionnaires	Reflects patients' opinions about the quality of services	Ratings, comments, reviews
Quality management systems	Contains data on the implementation of procedures and standards	Procedure execution statistics
Reports and Analytics	Provide summary statistics	Percentages, averages, trends
Previous expert assessments	Opinion of qualified specialists	Grades, rankings, rating scales

The table identifies the various data sources used for assessing the quality of care its characteristics. This is not an exhaustive list and may be expanded depending on the person conducting the performance evaluation and the characteristics of the hospital. For each source, the types of data that are needed to conduct a performance assessment are identified. This data includes clinical and patient data, satisfaction questionnaires, procedural statistics, statistical reports and analyses, and expert assessments from specialists. Combining data from different sources allows you to get a comprehensive picture of the quality of medical services.

The assessment is carried out on the basis of the chosen approach, sources and analysis of documents and observations of the work of medical institutions. Experts also check the compliance of internal documents of medical institutions with the requirements of Israeli health legislation. They evaluate how closely health care providers follow these requirements and how effectively these requirements help ensure the quality of health care services. Based on the expert opinions received, a conclusion is formed (monitoring results are documented), which gives an overall assessment of the quality of medical services in Israel.

At the third stage, a map of expert assessment of the quality of medical services is developed, which includes the following components:

1. General information about the medical institution. This part of the map indicates the name of the institution, its legal address, contact information, size and structure of the organization.

2. Description of the processes and activities of the medical institution. Describes activities and processes which are conducted in the institution to provide health care services. In addition, the main activities of the medical institution are indicated here.

3. Patient information. Provides information about patients served in the medical facility. It is important to indicate the age, gender and reason for admitting patients.

4. Information about the staff of the medical institution, its number and qualifications is indicated here. It is important to note that staff qualifications are one of the key factors in ensuring the quality of medical services.

5. Information about the system for quality management. The system used in the institution is described. It is important to note that the presence and effectiveness of such a system affects the quality of care which is provided.

6. Assessing the quality of medical services. This part of the map evaluates the quality of medical services based on an expert assessment. The assessment is made using a number of criteria (indicators) that were determined in the second stage.

7. Recommendations for quality improvement are drawn up based on assessing the quality of care provided. Recommendations must be practically applicable and aimed at eliminating identified problems and improving the quality of medical services.

The fourth stage is a quantitative assessment of the quality of services provided using indicators that can be measured in units of measurement. It is important to evaluate which quality improvement tools have shown their effectiveness (legislation, quality indicators, clinical guidelines, accreditation, peer review, financial incentive, registration, etc.). The indicators that the quantitative assessment is based on may include parameters such as waiting time, time to provide medical care, qualifications of medical personnel, frequency of complications, etc.

Based on the results of the quantitative assessment, reports and recommendations are generated to improve the quality of medical services. These reports and recommendations are used both within healthcare organizations and at the government level to develop and implement strategies to improve the quality of care and ensure patient safety.

The fifth stage of the algorithm is the preparation of an analytical report based on the results of quality control of medical services. To compile it, the expert assessment map and the indicator measurement data obtained at the fourth stage are analyzed. As a result of the analysis and preparation of an analytical report, medical institutions can begin to develop measures to improve the quality of services provided, as well as develop development strategies based on the data obtained and recommendations.

The sixth stage consists of drawing up the results of the analysis, that is, formulating conclusions and specific practical proposals. This stage explains the meaning of assessing the effectiveness of quality management tools for medical services. The management of the medical institution is informed about the results of the quality assessment, then management decisions are made on the identified problems. Then the deficiencies are eliminated based on the control results and repeated control (re-control) or re-examination of the quality of medical services is carried out.

The algorithm for expert assessment of the quality of medical services in Israeli general hospitals is a reliable and flexible tool that promotes continuous improvement and innovation in medical practice.

The final stage of assessing the effectiveness of the quality management mechanism for medical services in Israeli hospitals is that, based on the collected and analyzed data, the methodology allows for an assessment of the effectiveness in the selected context. The results are compared with the original goal and indicators oriented towards it. Interpretation of data helps to draw conclusions about the compliance of the achieved results with the expectations and plans for quality management in the hospital.

At this stage, there are three possible scenarios for the development of events: the goal of quality management has been achieved in full; the quality management goal has been partially achieved; The quality management goal has not been achieved. Recommendations are formed based on which scenario corresponds to the results of the assessment carried out at the previous stage. According to the author's assumption, the most acceptable results in this case will be the following: the creation of new areas for improving quality; focus on achieving unrealized aspects of quality; a more complex and comprehensive path: reconsidering the original purpose of quality management; changing tools; choosing an alternative path within the trajectory.

Thus, the presented author's methodology for assessing performance is a cyclical process that aligns set goals with actual achievements, ensuring harmony between management actions and their results in the context of hospital medical practice. In modern medical practice, assessing the quality of healthcare services plays an important role in ensuring effective and safe healthcare delivery. Israeli hospitals strive to improve the quality of their services, focusing on various aspects ranging from structure and processes to final results for patients. According to the author, quality assessment is not a static process, and over time it undergoes changes and is improved taking into account new technologies, standards and requirements. In this context, it is necessary to consider directions for further development of performance measurement to ensure that it remains a relevant tool in the pursuit of continuous quality improvement for health services. Directions for further development of performance assessment, from the author's point of view, will be related to the following aspects:

- Changes in the specifics of the hospital. Efficiency assessment will change with fundamental changes within the hospital (size, specialization, resource capabilities and features of the medical services provided, etc.). Future assessment systems should incorporate modularity so that criteria and indicators can be customized to suit a hospital's unique characteristics.

- The emergence of new quality management tools or their hybrid forms, e.g., new quality improvement methodologies (analogues of Six Sigma or Lean Management approaches), will require

their integration into the assessment system. It is necessary to analyze how these tools can be effectively implemented in quality assessment and ensure their interaction with each other. Perhaps tools will become basic aspects of performance assessment rather than part of it.

- New quality requirements in Israeli healthcare. The evaluation system should be regularly updated to reflect new requirements and standards in medical practice and quality in the country. New standards may require the addition of new quality indicators and evaluation criteria.

- Setting new goals and directions for the development strategy of Israeli healthcare. If Israel's healthcare development strategy or global healthcare trends change, the evaluation system must be adjusted to new goals and directions. This may include changing the weighting of different assessment areas to reflect new priorities.

In summary, the field of health care quality measurement has developed significantly over the past few decades and is attracting increasing interest from researchers, policymakers, and the general public. For Israel, the growing interest in quality measurement was accompanied and supported by an increasing ability to measure and analyze the quality of health care, driven in part to making informed decisions. That is why the author developed an assessment of the effectiveness of the management system for improving the quality of medical services, presented the principles on which it is based and indicated the directions for its further development. The author presents the framework and data sources used in measuring the quality of medical services, as well as methodological issues in conducting the assessment.

4.4. Conclusions to the fourth chapter

1. The author has proposed recommendations for the Israeli Ministry of Health, which will become the foundation and prepare the basis for the introduction of a quality management mechanism in general hospitals. These recommendations include: structuring the state approach to managing the quality of medical services; implementation, within the framework of the national strategy, of a balance of three main functions to achieve high quality management: planning, improvement and quality control of medical services; adopt and implement a multi-level capacity building model as part of Israel's national health care quality strategy.

2. It is recommended to apply, as part of ensuring the quality of care given to patients at the hospital level, the mechanism developed by the author for managing the improvement of the quality of medical services in public hospitals in Israel, which implies the implementation of alternative ways to improve the quality of medical services.

3. Israeli public general hospitals are recommended to implement the application of the mechanism through a system of management tools for improving the quality of medical services in Israeli public general hospitals. Quality management tools imply comprehensive solutions on methods, approaches, methods aimed at achieving a level of quality that meets current requirements and expectations.

4. At the level of public general hospitals in Israel, the use of one of four sets of tools is recommended: tools for improving the quality of structure, process, outcome, or tools that correspond to an integrative quality improvement path that combines the tools of the three previous ones. The use of tools is possible thanks to the careful selection of indicators or quality indicators for them

5. In a healthcare environment which changes rapidly and ever-increasing patient expectations, assessing the effectiveness of the quality management process becomes a challenge which may require ongoing improvement. In this context, the author recommends the use of a methodology for assessing the effectiveness of the management mechanism for improving the quality of medical services in public general hospitals. Its goal is not only to measure the current state, but also to understand how the quality of medical services can be improved. The effectiveness of an assessment depends on the focus of the assessment - structure, process and results - and on the use of a variety of tools to obtain objective data and analyze it, in order to make informed choices.

GENERAL CONCLUSIONS AND RECOMMENDATIONS

Various tools are used around the world to improve the quality of health care services. There is noticeable heterogeneity in their use. Some tools, for example, quality measures and patient experience monitoring, are used extensively, while others, such as clinical guidelines and financial incentives, are not always used. There is insufficient evidence in the scientific literature to guide the correct selection of one tool over another, and there is no absolute comparison of their effectiveness or efficiency.

The purpose of this study was to understand what tools are being used for improving quality, both by healthcare institutes globally, and in Israeli general hospitals, and to draw conclusions and make targeted recommendations for improving quality and patient safety, patient experience, and hospital staff well-being. In addition, theoretical directions and approaches to the development of management to improve the quality of medical services were studied. The combination of analyzed theoretical data and empirical research results made it possible to formulate conclusions and recommendations.

Based on the analyzed material on the research topic, the author made the following **conclusions**:

1. Based on the identification of the two aspects of quality and the dual nature of a medical service, its objective nature (medical care) was identified, including the technical characteristics that the product should have, and its subjective nature (service) - properties that are associated with consumer requirements.

2. It was found that assessment and management of the quality of medical services are closely interrelated and are aimed at ensuring a high standard of medical care. Quality assessment serves as a tool for implementing and maintaining the effectiveness of quality management.

3. From a methodological point of view, it would be more appropriate not just to combine a variety of methods (both qualitative and quantitative), but to develop a conceptually sound approach to assessing the quality of medical services. This approach should systematize theoretical concepts and integrate various methods and tools into a single mechanism that is consistent with the goals and objectives of the health system or hospital.

4. It has been determined that there is a gradual transition from quality control of cares to quality management through three processes: planning, control, and improvement.

5. The variety of quality management models and their successful adaptation to the medical field confirm that quality management of medical services is critical both for individual medical institutions and for the entire healthcare system.

6. Summarizing theoretical research, we can highlight certain types of activities within the framework of quality management of medical services: quality planning and design; quality assurance; quality control; quality improvement.

7. A connection was found between the types of activities and the tools used in managing the quality of medical services. Different methods for assessing the quality of health care services are used in different approaches and may vary depending on specific objectives and contexts.

8. The understanding of healthcare quality in some countries was shown to be the extent to which patient care increase the likelihood of reaching health outcomes. It uses evidence-based professional knowledge and is critical for achieving universal health coverage.

9. Based on rating data, the author compiled a summary table, which made it possible to group the countries of the world analyzed above into three categories (high, middle and low health care).

10. The relationship between the healthcare system (budgetary (state), social insurance and private (market)) and the approach to ensuring the quality of medical services, respectively, and the selection of the necessary tools for these purposes is reflected. This relationship is conditional in nature due to the large variety of individual country characteristics characteristic of managing the quality of medical services in various healthcare organizations.

11. Israel leads the world in the quality of medical services, thanks to its high technological level, experienced medical staff and variety of services. Israel continually strives to improve the accessibility and cost-effectiveness of its healthcare system. However, new challenges are emerging, such as rising costs and ensuring accessibility for all population groups.

12. The results of the study highlight the variety of ways in which healthcare quality management tools are used in public hospitals in Israel. This highlights the need to develop comprehensive and flexible strategies that take into account both clinical aspects and patient expectations.

As practical measures that improve the quality and efficiency of the process of quality management of medical services, the author formulated the following **recommendations**:

1. For future studies of the process of improving and managing the quality of medical services, researchers should use the definition of the quality of medical services developed by the author, which

combines an understanding of the dual nature of the quality of medical services: the quality of medical services is a complex concept that includes not only technical aspects of the provision of medical care, such as accuracy of diagnosis, effectiveness of treatment and safety of procedures, but also subjective aspects such as patient satisfaction with the result of treatment, communication between medical staff and patients, accessibility of medical services, as well as compliance with the requirements of professional practice and the expectations of patients and their environment.

2. The Israeli Ministry of Health is recommended to structure the state approach to managing the quality of medical services; implementation, within the framework of the national strategy, of a balance of three main functions to achieve high quality management: planning, improvement and quality control of medical services; Adopt and implement a multi-level capacity building model as part of Israel's national health care quality strategy.

3. It is recommended to apply, as part of ensuring the quality of medical services provided at the hospital level, the mechanism developed by the author for managing the improvement of the quality of medical services in public hospitals in Israel, which implies the implementation of alternative routes for improving quality of care.

4. Israeli public general hospitals are recommended to implement the application of the mechanism through a system of management tools for improving the quality of medical services in Israeli public general hospitals. Quality management tools imply comprehensive solutions on methods, approaches, methods aimed at achieving a level of quality that meets current requirements and expectations.

5. At the level of public general hospitals in Israel, the use of one of four sets of tools is recommended: tools for improving the quality of structure, process, outcome, or tools that correspond to an integrative quality improvement path that combines the tools of the three previous ones. The use of tools is possible thanks to the careful selection of indicators or quality indicators for them

6. In a healthcare environment which is constantly changing, and with rising patient expectations, assessing the effectiveness of quality management requires continuous improvement. It is recommended to use a methodology for assessing the effectiveness of the mechanism for managing the quality of medical services in public hospitals. It helps measure current status and understand how to improve the quality of health care services, using a variety of tools to obtain objective data and analysis to make informed patient choices.

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APPENDICES

Appendix 1

Characteristics of qualitative methods for assessing the quality of medical services

Evaluation method	Characteristic
Expert assessment method (expert opinion, expert analysis)[251]	This is a study of an object conducted by a knowledgeable person (expert), based on special (professional) knowledge, using special tools aimed at obtaining new knowledge about the object, which is drawn up in the form of a reasoned conclusion. Through expert analysis, a subjective, unsystematized assessment of the state of individual components of the quality of medical services is given.
In-depth interview method [252]	Involves interviewing patients, health care sraff, and other stakeholders to obtain detailed research data on health care quality perceptions, expectations, experiences, and satisfaction. In-depth interviews help reveal the emotional and psychological aspects of patients' and staff's perceptions of health services, which can have a significant impact on the quality of the medical service provided.
Focus group method[253]	The organization of group discussions with the participation of representatives of patients or medical staff. To identify common opinions, trends and issues related to the quality of medical services and their management.
Medical records analysis method [254]	Research and analysis of medical records can reveal compliance with standards, quality of documentation, accuracy of diagnoses and prescriptions.
Medical case audit method [255]	Includes a detailed analysis of specific cases of treatment to determine the compliance of medical practices with standards and regulations.
Medical Practice Observation Method[256]	Allows you to evaluate adherence to procedures, communication, use of resources and other aspects of quality.
Secret patients method	Will help assess the quality of service, communication and accessibility of medical services.
Method for qualitative analysis of data from social media and feedback[257]	his is a study of patient comments and feedback on social networks, forums and other online platforms to obtain insights about the quality of medical services.
Method of studying the legal framework [258]	consists of a critical assessment of documents in the field of ensuring the quality of medical services and their provision in general.

Source: developed by the author based on [251-258]

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Appendix 2

Characteristics of quantitative methods for assessing the quality of medical services

Method	Characteristic
A method for assessing the quality of the process of providing medical services based on a list of criteria for a specific disease	Means preliminary agreement and development by a group of clinicians of a detailed list of criteria for the quality of the medical process for a particular disease. The assessment mechanism boils down to comparing the doctor's actions described in the medical document with a list of criteria, which may include 100 or more signs. The results of a study on an individual case are expressed by a score characteristic of the quality of a medical service, corresponding to the total number of "scored" criteria.
Method for assessing the quality of the process of providing medical services based on quality indicators	Developed in connection with the process of standardization of medical care, the emergence in foreign healthcare of officially approved clinical practice guidelines, and the introduction of the principles of evidence-based medicine. The evaluation criteria are indicators of the quality of the medical process, which, as a rule, include the most significant treatment standards from the point of view of immediate and long-term results of medical care. The evaluation mechanism boils down to checking the compliance of the medical process with quality indicators.
Method for assessing the quality of the process of providing medical services in accordance with the list of its elements	Used to determine the amount of payment for a patient's visit to a doctor. The essence of this approach is to compare the doctor's actions described in a medical document (or pre-coded) with a detailed list of elements of questioning, physical examination of individual systems and organs of the body, and maintaining medical records that are not focused on a specific disease. The result of the first stage of verification is the arithmetic sum of the completed elements of the medical process. The further assessment procedure is carried out on the basis of a set of tables that take into account the level of complexity of the medical decision, the number of diagnostic and tactical actions, and the risk of complications. The final result of the case assessment, which determines the amount of its payment.
Method for direct quantitative assessment of the quality of the process of providing medical services	Recognizes one of the qualimetric methods, the essence of which is the direct quantitative assessment of quality by experts. The evaluation mechanism consists of scoring the expert's subjective opinion on the quality of each sub-block of medical actions in accordance with the accepted rating scale, calculating the arithmetic mean for each block and the integrated indicator for the entire case of care. Methods developed within the framework of this approach: the methodology of integrated quality assessment (MIQ), assessment of the level of quality of treatment (QL), assessment of the level of quality of diagnosis and treatment (QAL) and other modifications.
Method for assessing the quality of the diagnostic and treatment process based on its connection with negative results of medical care	The identification of errors in the medical process that are directly related to negative treatment results. The assessment mechanism boils down to preliminary agreement by a group of clinicians on the criteria for dividing unsatisfactory treatment results into unpreventable and preventable and identifying, during expert analysis of medical documentation, errors in the medical process that were the cause of preventable adverse outcomes.
Method for assessing the quality of the medical care process based on research algorithms	Includes the structural construction of expert cards, which ensures compliance with a certain analysis algorithm that requires special knowledge in the clinical specialty. When filling out a card, the expert can take into account the features of a particular case of assistance and make judgments.
Statistical analysis method	Includes studying the dynamics of statistical indicators and making judgments

	on monitored processes
Standards Compliance Method	Involves comparison of actual practices or procedures with established norms, standards and guidelines
Method for analyzing ratings in the field of medicine	Consists of studying the dynamics, place of certain countries, criteria, hospitals in ratings in order to draw conclusions

Source: developed by the author based on[259] [260] [261]

[259] KÖTTER, T., BLOZIK, E., SCHERER, M. *Methods for the guideline-based development of quality indicators-a systematic review*. In: Implementation Science, 2012, nr. 7, p. 1-22. ISSN 1748-5908.

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Appendix 3

Characteristics of mixed methods for assessing the quality of medical services

Method	Characteristic
Medical records analysis method	A method that can include both a quantitative measurement (for example, quantitative analysis of diagnoses, procedures) and a qualitative aspect (analysis of the content of medical records, identifying subjective comments from doctors).
Survey and questionnaire	Are generally considered quantitative, but can also incorporate elements of qualitative assessment, such as open-ended questions that allow respondents to freely express their opinions and experiences
Ratings analysis	May include both a quantitative analysis of ratings and ratings, as well as a qualitative analysis of comments and reviews, which may contain additional information about the quality of medical services.

Source: developed by the author based on[262] [263]

[262] O'CATHAIN, A., MURPHY, E., NICHOLL, J. *The quality of mixed methods studies in health services research*. In: Journal of health services research & policy, 2008, nr. 13(2), p. 92-98. ISSN 17581060.

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Appendix 4

Assessing the quality of medical services at the macro and micro levels

Table 4.1. Assessment of the quality of medical services at the macro level

	Assessment type Direction, area, aspect that can be assessed	**Type of assessment** Subcategories or aspects of each assessment type	**Evaluation method** System, procedures for assessment, framework within which assessment is carried out	**Evaluation method** Specific tools, techniques or techniques, steps that correspond to the method
GRADE	**WHAT?**		**HOW?**	**USING WHAT?**
Process approach - assessing the process of providing medical services in regions/countries	-processes and procedures for providing medical services; - interaction between patients and staff.	-compliance with standards and protocols; -process efficiency; -use of innovations and technologies; - time frame of treatment; -quality of communication.	-analysis of the effectiveness of the process of providing medical services in the region/country; -level of use of innovations in the field of medicine. Quantitative: -method of compliance with standards. Qualitative: -analysis of patient feedback, reviews, complaints; -analysis of documents. Mixed: -surveys and questionnaires.	-questionnaires, questionnaires; -documents (strategies, policies, etc.); -standards; -patient reviews, complaints, etc.
Structural approach - assessment of resources in the health care system of the region/country	resource support; -checking in medical institutions; -structure and organization of the health care system.	-availability, condition, distribution and availability of resources (staff, equipment, materials, etc.) -compliance with standards and norms; - human resources potential -resource efficiency	-assessment of the provision of the healthcare system with the necessary equipment; -analysis of the structure of the health care system. Quantitative: -statistical analysis; -method of compliance with standards. Qualitative: -expert review; -analysis of documents. Mixed: -analysis of medical records.	-medical records; -standards; -statistical data; -questions for interviewing an expert.
An effective approach - assessing the	-patient health in terms of indicators; -patient satisfaction.	-indicators: mortality,	-studying the long-term effects of medical care on patient health and public welfare. Quantitative:	-rating; -questionnaire, questionnaire;

achieved results and outcomes of medical services in the region/country		morbidity, recovery rate, etc.; -patient satisfaction with the content of medical services, the service process, etc.	-statistical analysis; -method of compliance with standards. Qualitative: -analysis of documents; -interviews with experts and stakeholders. Mixed: -analysis of ratings; -survey, questionnaire;	- standards, norms; - results registration forms; -statistical data.
Comparative approach - comparison of health systems of regions/countries or practices to identify best practices and exchange experiences	-models of health care systems of regions/countries; -organization of health care systems; - technologies and innovations in the healthcare system.	-features of healthcare systems; - innovations in healthcare systems; -advantages and disadvantages of health care systems; -organizational features, etc.	- comparison of results and practices within health systems in regions/countries; -identification of best practices and exchange of experience between different medical systems; -evaluation of the effectiveness of new methods and approaches through comparison with traditional ones. Quantitative (-international comparative studies; -studying the results and practices of medical institutions or systems in different countries). Qualitative (expert assessment). Mixed (ratings analysis).	-statistical data; -data from international organizations; - materials for expert assessment; - international and country ratings.

Source: developed by the author based on [264]

[264] WATSON, L. et al. *Utilizing Patient Reported Outcome Measures (PROMs) in ambulatory oncology in Alberta: Digital reporting at the micro, meso and macro level*. In: Journal of Patient-Reported Outcomes, 2021, nr. 5(2), p. 1-8. ISSN 25098020.

Appendix 5

Assessing the quality of medical services at the micro level

	Assessment type Direction, area, aspect that can be assessed	**Type of assessment** Subcategories or aspects of each assessment type	**Evaluation method** System, procedures for assessment, framework within which assessment is carried out	**Evaluation method** Specific tools, techniques or techniques, steps that correspond to the method
GRADE	**WHAT?**		**HOW?**	**USING WHAT?**
Process approach - assessment of the process of providing medical services, starting with the patient's admission and ending with the end of treatment	-sequence of medical stages; -interaction between staff and patients.	-bottlenecks, delays and optimization of procedures; -quality of communication, respect and confidentiality, response to complaints, feedback, emotional support, meeting patient expectations, etc.	-measurement of time spent on various medical activities -research of opinions, expectations, preferences of patients; -monitoring the implementation of standards. Quantitative: -Time & motion method; -analysis of patient flow and other processes; - quality assessment for a specific disease; - quality assessment based on quality indicators; - quality assessment based on the list of elements; -assessment of the quality of the diagnostic and treatment process; -assessment of the quality of the medical care process using an algorithm. Qualitative: - in-depth interview; -focus group; -secret patients. Mixed: -questioning; -survey.	- handouts for the focus group; -list of questions for in-depth interview - forms for time estimation, etc. -quality standards in the field of medicine
Structural approach - assessment of resources and organizational infrastructure of medical institutions	-infrastructure resources (buildings, landscaping) -physical resources (equipment, medicines)	-availability and condition of medical equipment, premises and other resources;-level of knowledge and	- assessment of medical infrastructure; - audit of staff qualifications; - analysis of compliance with norms and standards. Quantitative: -physical review and inspection, inventory; -analysis of documents. Quality: -expert review.	-inspection checklist; -questionnaire, test for staff; -databases, email tables for registration and accounting of medical

	-human resources (staff); -material resources (financing); -organizational structure, quality management system.	qualifications of medical staff. - compliance of the organizational structure and functioning of the hospital with established standards and norms.	Mixed: -survey.	services. resources of all types. - form for expert assessment.
Effective approach – assessment of achieved results and outcomes of medical services	long-term and short-term consequences of treatment and the impact of medical procedures on the health of hospital patients.	-patient satisfaction; -patient health indicators over time.	assessment of patient satisfaction; -research of treatment outcomes; Quantitative: -statistical analysis; -method of compliance with standards; -analysis of ratings; -audit of medical cases. Quality: -comparative analysis; -analysis of patient feedback, reviews, complaints; Mixed: - questionnaires, surveys; -clinical audit (analysis of medical cases); - focus groups of patients; -in-depth interviews with patients.	-questionnaire, questionnaires; -simulation training of personnel; -list of interview questions; -reviews.
Comparative approach - comparison of medical institutions or practices to identify best practices and exchange experiences	- comparison of results and processes of various medical institutions; -identification of successful approaches and innovations used in hospitals.	efficiency and results of medical institutions.	- comparison of standard and practice; -economic analysis; Quantitative: -statistical analysis; -analysis of ratings. Quality: -expert review; -observation of medical practice; -secret patients. Mixed: -analysis of medical records; -surveys, questionnaires.	

Source: developed by the author based on[265] [266]

[265] DUDIN, M. N. et al. *Development of methodological approaches to assessing the quality of healthcare services*. In: Calitatea, 2017, nr. 18(158), p. 71-79. ISSN 1844-5292.

[266] LEE, H. et al. *Subjective well-being and the measurement of quality in healthcare*. In: Social Science & Medicine, 2013, nr. 99, p. 27-34. ISSN 0277-9536.

Appendix 6

Advantages and disadvantages of medical service quality management models

Model of quality management of medical services	Characteristic	Advantages	Limitations
ISO (9001, 14001, 45001, 27001, 13485, 50001)[267]	International standard with application to the medical field	Recognition, ensuring quality standards, improving the organization of medical processes	Process orientation may limit adaptation to clinical needs, formal nature
Six Sigma[268]	Methodology for improving clinical processes, optimizing results	A systematic approach to reducing errors, improving the quality of diagnosis and treatment, improving the patient experience	Requires staff training in statistical methods, not always suitable for complex clinical scenarios
TQM[269]	An integrated approach to quality management, covering clinical and administrative aspects	Improving the quality of medical services, better staff interaction, optimization of business processes	Requires time and effort to implement, does not always pay enough attention to clinical aspects
EFQM[270]	Assess and improve the entire health care facility in the context of clinical needs	Comprehensive quality management, taking into account clinical and administrative aspects, focus on achieving results	Complexity and duration of implementation, requires active management support, high requirements for data analysis
PDCA[271]	A cyclical approach to continuous improvement of clinical processes	Ease of use, regular improvement, improved clinical results	Requires a systematic approach to implementing changes, may require time to achieve visible results
Industrial model[272]	Introducing principles and methods from the industrial sector into medical practice	Process efficiency, adaptation of "bewährter" methods, emphasis on resource	Limitations when applied to unique clinical cases, does not always take into account the human factor

[267] ISO Certifications in the Medical Field – The Must-have Standards. In: ISO UPDATE, 2023. [accessed 05.01.2023]. Available at: https://isoupdate.com/general/iso-certifications-in-the-medical-field-the-must-have-standards/

[268] AHMED, S. *Integrating DMAIC approach of Lean Six Sigma and theory of constraints toward quality improvement in healthcare*. In: Reviews on environmental health, 2019, nr. 34(4), p. 427-434. ISSN 00487554.

[269] HIDAYAH, N. et al. *The impact of integrated quality management-based health services on general hospital quality*. In: Frontiers in Public Health, 2022, nr. 10, p. 1011396. ISSN 22962565.

[270] WAGNER, C. et al. *The implementation of quality management systems in hospitals: a comparison between three countries*. In: BMC health services research, 2006, nr. 6, p. 1-11. ISSN 1472-6963.

[271] ZHOU G. Q. et al. *Construction of community health management model based on PDCA cycle quality management theory*. In: Chinese General Practice, 2016, nr. 19(29), p. 3598-3600. ISSN 10079572.

[272] MAYER, T. A. *Industrial models of continuous quality improvement: implications for emergency medicine*. In: Emergency medicine clinics of North America, 1992, nr. 10(3), p. 523-547. ISSN 0733-8627.

		optimization	
Juran Triad [273]	Three main components of quality management: planning, management, improvement	Simplicity of structure, pays attention to continuous improvement, identifying the causes of defects	May require additional details to adapt to the specifics of medical practice
Ishikawa model[274]	Graphical method of process analysis to identify and eliminate the causes of problems	Ease of use, visualization of problem areas, encourages teamwork on improvements	May require additional time for analysis and planning, not always suitable for complex processes
Professional model [275]	Quality management is based on the knowledge and experience of medical professionals	High level of expertise, adaptation to medical needs, taking into account clinical practice	Limitations in coverage of system and administrative aspects, may be less structured
Administrative model [276]	Based on the effective organization of administrative processes in medical institutions	Optimize resources, improve coordination, ensure effective management	May miss clinical features, limited to administrative aspects
TQC (total quality control)[277]	Based on the involvement of all employees in quality management	Promotes the formation of a quality culture, active participation of personnel in continuous process improvement	May take time to establish an effective system of participation and communication between staff
CQI[278]	An approach that focuses on continuous improvement and analysis of clinical processes	Ease of integration into medical practice, emphasis on identifying the root causes of problems, active participation of staff	May require time for training and implementation, does not always take into account administrative and management aspects
Lean management[279]	a focus on efficient use of resources and elimination of redundant activities	Improve productivity and quality, reduce wait times, reduce costs	May require time to change organizational culture, limits focus on clinical aspects

Source: developed by the author based on [267-279]

[273] JURAN, J. M. *The quality trilogy*. In: Joseph M. Juran: critical evaluations in business and management, 2005, nr. 19, p. 54. ISBN 978-0415325714.
[274] HARSOYO, R. *Model Pengembangan Mutu Pendidikan (Tinjauan Konsep Mutu Kaoru Ishikawa).* In: Southeast Asian Journal of Islamic Education Management, 2021, nr. 2(1), p. 95-112. ISSN 2716-0599.
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[276] ANDREASSON, J. et al. *Professional bureaucracy and health care managers' planned change strategies: Governance in Swedish Health Care*. In: Nordic Journal of Working Life Studies, 2018, nr. 8(1), p. 23-41. ISSN 22450157.
[277] HAMAGUCHI, N., MIYAZAKI, S. Y. M. Dissemination of Japanese Quality Control in Brazil. In: Brazil—Japan Cooperation: From Complementarity to Shared Value. – Singapore: Springer Nature Singapore, 2022, p. 177-201. [accessed 11.12.2022]. Available at: https://link.springer.com/chapter/10.1007/978-981-19-4029-3_7
[278] DODWAD, S. S. *Quality management in healthcare*. In: Indian journal of public health, 2013, nr. 57(3), p. 138-143. ISSN 0019-557X.
[279] CATALYST. N. *What is lean healthcare*? In: NEJM Catalyst, 2018, nr. 4(2). [accessed 28.12.2021]. Available at: https://catalyst.nejm.org/doi/full/10.1056/CAT.18.0193

Appendix 7

Interrelation of activities and tools in managing the quality of medical services

Management function	Type of quality management activity	Quality management tool	Quality criterion	Quality indicator
Planning	Quality planning and design	-marketing research tools; -quality function deployment (QFD); -theory of solving inventive problems; -benchmarking; - heuristic techniques.	-patient safety; -effectiveness of treatment; -availability; -communication and information.	-percentage of undesirable events; - waiting time for an appointment; -level of understanding by patients.
Organization Motivation Coordination	Quality assurance	-training and education of personnel; -affinity diagram; -connection diagram; -tree diagram; -matrix diagram; -network diagram (Gantt chart); -decision making diagram (PDPC); -priority matrix.	-reliability of the diagnosis; -compliance with medical standards; -use of modern technologies; -professionalism of the staff; -patient satisfaction.	- percentage of successful results; -percentage of agreement between diagnoses; -compliance of diagnoses with medical standards; -education and certification of medical personnel. -percentage of patients who expressed satisfaction with the services.
Control	Quality control	-bar chart; -Pareto diagram; -control card; -scatter diagram; -stratification; -check sheet; -Ishikawa (Ishikawa) diagram.	-compliance with medical standards; - effectiveness of treatment; -level of errors and omissions; -accuracy and timeliness of documentation; - compliance with drug therapy.	- percentage of successful treatment cases; -level of relapses and complications after treatment; -percentage of errors in documents; - selection and control of medications.

	Quality improvement	- Six Sigma; - Lean Management; -Theory of Constraints; - Total Quality Management; - Continuous improvement; - DMAIC; - PDCA; - Hoshin Kanri; - Value Stream Mapping.	-use of modern technologies; -training	-implemented process improvements; -number of new treatment methods; -reaction time to complaints and suggestions; -introduction of new medical technologies; - comparison of the effectiveness of new and old methods; -percentage of personnel who have completed training; -assessment of staff knowledge and skills after training.

** Quality criteria and indicators are presented in the form of examples and in real practice they may vary depending on the specific medical organization and its goals*

Source: developed by the author based on[280] [281]

[280] JACKSON. S. *Successfully implementing total quality management tools within healthcare: what are the key actions*? In: International Journal of Health Care Quality Assurance, 2001, nr. 14(4), p. 157-163. ISSN 9526862.

[281] MCCARTHY, S. et al. *An integrated patient journey mapping tool for embedding quality in healthcare service reform*. In: Journal of Decision Systems, 2016, nr. 25(1), p. 354-368. ISSN 21167052.

Appendix 8

Characteristics of tools for designing the quality of medical services

Tool	Characteristic
Quality Function Deployment, (QFD)	A methodology used to translate customer requirements and preferences into specific characteristics and parameters of a product, service or process [282]. In the medical field, QFD can be used to improve the quality of medical services, optimize processes and ensure patient satisfaction: improving the process of receiving and servicing patients (optimizing waiting time, ease of making an appointment, clear communication with patients, etc.); development of new medical services or treatment programs (selection of optimal treatment methods, development of individualized treatment plans, etc.); improving patient safety (development of infection safety protocols, improvement of drug therapy processes, etc.); optimization of medical technology and equipment; pain management and patient comfort. The QFD tool helps identify and structure priorities aimed at meeting patient needs and improving the quality of health care services. This tool allows you to lay the foundation for effective adaptation to changing patient needs and ensure higher levels of patient satisfaction.
Theory of solving inventive problems	A methodology designed to stimulate creative and innovative thinking in solving complex problems [283]. This tool can be applied in medicine to find new and effective solutions in various aspects of healthcare (developing new treatments; improving diagnostic methods; developing medical devices and technologies; improving patient experience; solving complex clinical problems; optimizing healthcare processes. Application of this theory in medicine can contribute to the development of new innovative solutions, improving the quality of medical services and equipment, as well as increasing the efficiency of healthcare processes.
Benchmarking	A methodology that allows organizations to compare their processes, products or services with the best practices of other organizations in order to identify improvements and make the best decisions [284]. When designing the quality of healthcare services, benchmarking can be an effective tool for studying how other healthcare organizations achieve high levels of quality and patient satisfaction (studying best practices, comparing processes and procedures, adapting best practices, identifying key performance and quality indicators, promoting continuous improvement, experience exchange).
Heuristic techniques	Special strategies or methods of thinking that help generate new ideas, solve complex problems and find creative approaches to designing the quality of medical services [285]. Examples of heuristic techniques that can be used when designing the quality of medical services: inversion (reverse thinking); analogies and metaphors (searching for analogies between health care services and other areas of life to find new ways to solve problems or improve processes); principle of patient feedback; separation of functions (dividing a health care service into its component parts and examining them separately to determine how each aspect can be improved); principle of opposition; principle of maximization and minimization; integration; use of prototypes; considering options from the client's point of view; principle of negation and agreement.

Source: developed by the author based on [282-285]

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Appendix 9

Characteristics of tools for ensuring the quality of medical services

Tool	Characteristic
Staff training and education.	Education and training of medical staff through trainings, seminars and educational programs allow them to improve their professional skills, update their knowledge and become familiar with new treatment methods and technologies, which helps improve the quality of medical services.
Affinity Diagram.	This tool can be used to systematically group and structure staff's ideas, opinions and suggestions for improving the quality of health services. This can help identify common themes and priorities for further analysis and implementation.
Relations Diagram	Using this diagram, you can visualize the relationships between various factors that influence the quality of healthcare services. It can help identify key elements that influence processes and results.
Tree Diagram	A tree diagram allows you to break down a large task into smaller components, which can be useful in planning and organizing medical processes. For example, to ensure the quality of the diagnostic process, you can break it down into steps, starting with receiving the patient and ending with issuing the result.
Matrix Diagram	A matrix diagram can be used to analyze the relationships between different elements, such as cause and effect, risks and risk management, which helps organize information and plan improvements.
Network diagram (Gantt chart).	A network diagram can be used to plan and track the progress of medical projects and processes, as well as to distribute tasks among members of the medical team.
Process Decision Program Chart (PDPC)	This diagram allows you to analyze and manage risks in medical processes, anticipate possible negative consequences and develop plans to prevent or respond to them.
Priority Matrix	A priority matrix can be used to identify the most important tasks and activities to improve the quality of health services based on their impact and degree of importance. This helps you focus on the key aspects.

Source: developed by the author based on [286] [287]

[286] GROSSU-LEIBOVICA, D., KALKIS, H. *Total quality management tools and techniques for improving service quality and client satisfaction in the healthcare environment: A qualitative systematic review*. In: Management Science Letters, 2023, nr. 13(2), p. 118-123. ISSN 19239335.

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Appendix 10

Features of approaches to quality control of medical services

Approach	Characteristic	Criteria for evaluation
Medical approach	Evaluates the quality of medical services based on compliance of procedures and techniques with medical standards, protocols and scientific research.	Experience and qualifications of doctors, use of modern technologies and procedures, compliance of medical services with scientific standards.
Patient-centered approach	Evaluates the quality of medical services based on patient satisfaction, needs, preferences and expectations.	Patient satisfaction, accessibility of medical services, timeliness and completeness of information provided to patients.
Systems approach	Evaluates the quality of medical services based on the process of providing medical care, as well as on the basis of the effectiveness and results of treatment.	The degree of coordination between all participants in the system, the efficiency of resource use and risk management.
Economic approach	Evaluates the quality of medical services based on the costs and results of treatment, as well as on the basis of the ratio of costs and benefits of treatment.	Cost of health care services, optimal use of resources and cost-effectiveness of health care delivery.
Standardized approach	Evaluates the quality of medical services based on the compliance of procedures and techniques with standards, protocols and recommendations defined in national or international guidelines.	Compliance of medical services with established standards and criteria, as well as fulfillment of specified efficiency and quality indicators.
A complex approach	Combines various aspects of assessing the quality of medical services, including medical, patient-oriented, systemic, economic and standardized approaches.	Efficiency, accessibility, safety and patient satisfaction, as well as optimal use of resources and compliance of health care services with standards and regulatory requirements.

Source: developed by the author based on [288] [289]

[288] МАНДЖИЕВА, Д.А., ЛИДЖИ-ГОРЯЕВА, С.Э., МАНДЖИКОВА, И.П., МУКАЕВА, С.Г. *Качество медицинских услуг в оценке населения*. В: Вестник ИКИАТ, 2010, №2 (21), с. 97-109. ISSN 2071-7830.

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Appendix 11

Characteristics of medical service quality control tools

Tool	Characteristic
Bar chart	Displays the distribution of frequency or number of values within a specific range. In the medical field, a histogram can be used, for example, to analyze the distribution of patient waiting times for an appointment or the incidence of certain medical conditions[290].
Pareto chart	Allows you to identify the root causes or factors that make the greatest contribution to a problem or deficiency. In the medical field, it can be used to determine the root causes of medical errors or frequent complications [291].
Control chart	A graph that shows how a process changes over time [292]. It can be used to monitor and control various medical indicators such as heart rate, blood sugar levels, etc.
Scatter diagram (scatter diagram)	Allows you to analyze the relationship between two variables. In the medical field, it can be used to study the relationship between two medical parameters, for example, the relationship between a patient's age and cholesterol levels[293].
Stratification	Involves dividing data into subgroups for additional analysis. In the medical field, stratification can be useful when analyzing the results of different groups of patients, for example, by age, gender or diagnosis[294].
Checklist (checklist)	Used to systematically check that certain steps or criteria have been met. In the medical field, it can be used to ensure that certain procedural standards are followed during medical processes[295].
Ishikawa diagram	Also known as a "fishbone diagram" or "cause-effect diagram", allows you to identify the various factors influencing a problem and analyze their impact[296]. In the medical field, it can be used to identify the causes of certain diseases or adverse events.

Source: developed by the author based on [290-296]

290 BAMFORD, D. R., GREATBANKS, R. W. *The use of quality management tools and techniques: a study of application in everyday situations*. In: International Journal of Quality & Reliability Management, 2005, nr. 22(4), p. 376-392. ISSN 0265671X.

291 AL-SUBEHAT, M. H. *The scope of the total quality management applications of the personnel according to Pareto chart in private hospitals in Abu Dhabi*. In: International Journal of Productivity and Quality Management, 2022, nr. 37(4), p. 454-467. ISSN 0265671X.

292 TENNANT, R. et al. *Monitoring patients using control charts: a systematic review*. In: International Journal for Quality in Health Care, 2007, nr. 19(4), p. 187-194. ISSN 13534505.

293 MOORE, IV H. E. et al. *Exploring medical diagnostic performance using interactive, multi-parameter sourced receiver operating characteristic scatter plots*. In: Computers in Biology and Medicine, 2014, nr. 47, p. 120-129. ISSN 0010-4825.

294 LINCOLN, M. *Medical stratification in Vietnam.* In: Medicine Anthropology Theory, 2014, nr. 1(1), p. ISSN 2405-691X. https://doi.org/10.17157/mat.1.1.206

295 SANDIKÇI, B. et al. *Alleviating the patient's price of privacy through a partially observable waiting list*. In: Management Science, 2013, nr. 59(8), p. 1836-1854. ISSN 0025-1909.

296 LUCA, L. *Study to determine a new model of the Ishikawa diagram for quality improvement.* In: Rliability Durab, 2017, nr. 1, p. 249-254. ISSN 0149-144X.

Appendix 12

Characteristics of tools for improving the quality of medical services

Tool	Characteristic
Six Sigma	A methodology that focuses on eliminating defects and improving processes in order to achieve a high degree of quality and reduce variability[297].
Lean Management	An approach focused on eliminating redundant operations and resources in processes in order to increase efficiency and improve the quality of medical services [298].
Theory of Constraints	Focuses on identifying and eliminating limitations and bottlenecks in healthcare service processes to improve efficiency and productivity [299].
Total Quality Management	an organization-wide method of continuously improving the quality of all organizational processes. The main idea of TQM is that the company should work not only on product quality, but also on the quality of work in general, including the work of staff [300].
Continuous Improvement	Implies a constant desire to improve the processes and results of health services through constant analysis and optimization[301].
DMAIC (Define, Measure, Analyze, Improve, Control).	a methodology used within Six Sigma that helps organizations define a problem, measure the current condition, analyze the causes, make improvements and monitor results [302].
Kaizen.	A concept of continuous quality improvement in which employees at all levels of the organization are actively involved in the process of proposing and implementing improvements [303].
PDCA (Plan-Do-Check-Act).	The improvement cycle proposed by W.E. Deming, includes the stages of planning, execution, testing and action that allow continuous improvement of processes and results[304].
Hoshin Kanri (Policy Deployment)	This method helps connect the strategic goals of a healthcare organization with daily activities and process improvement at all levels [305].

[297] AIZED, T. (ed.). *Total quality management and six sigma*. Norderstedt: BoD–Books on Demand, 2012. 308 p. ISBN 978-953-51-0688-3.

[298] CATALYST, N. *What is lean healthcare*? In: NEJM Catalyst, 2018, nr. 4(2). [accessed 28.12.2021]. Available at: https://catalyst.nejm.org/doi/full/10.1056/CAT.18.0193

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[300] PATEL, G. *Total quality management in healthcare*. In: The Midas Journal, 2009, nr. 23(3), p. 1-4. ISSN 2182-9543.

[301] MOLDOVAN, F., BLAGA, P. *The continuous improvement cycle core activities for the sustainable development of healthcare facilities.* In: International Conference Interdisciplinarity in Engineering. – Cham: Springer International Publishing, 2021, p. 316-325. ISSN 2367-3389.

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Value Stream Mapping.	This tool allows you to visualize the patient value stream, identify waste and improve processes to achieve maximum efficiency [306].

Source: developed by the author based on [297-306]

[306] MARIN-GARCIA, J. A., VIDAL-CARRERAS, P. I., GARCIA-SABATER, J. J. *The role of value stream mapping in healthcare services: A scoping review.* In: International journal of environmental research and public health, 2021, nr. 18(3), p. 951. ISSN 1660-4601. DOI:10.3390/ijerph18030951

Appendix 13

The sequence of application of fundamental methods of scientific research

Classic sequence	Optimal Sequence	Description	Advantages	Flaws
Analysis	Historical	Study and evaluation of parts of an object/phenomenon	Allows you to identify the weaknesses and strengths of the object / phenomenon	Does not take into account the context and historical features
Historical	Analysis	Study of the past and context of an object/phenomenon	Helps to understand the evolution of an object/phenomenon and its significance in the present	May not be applicable to new objects/phenomena
Logical	abstraction	Determination of links and patterns between parts of an object/phenomenon	Allows you to establish objective laws and principles	Does not take into account the individual features of the object/phenomenon
Synthesis	Induction	Combining parts of an object/phenomenon into a whole	Allows you to see a complete picture of an object/phenomenon	May lead to simplistic or misrepresentation
Induction	Hypothetical	Generalization of observations and development of a hypothesis	Allows you to formulate hypotheses that can be tested in practice	Does not guarantee the correctness of the hypothesis
Deduction	Logical	Choosing the most probable hypothesis and testing it in practice	Allows you to get accurate conclusions based on preliminary hypotheses	Does not take into account the possibility of errors when checking in practice
Hypothetical	Deduction	Testing the hypothesis in practice	Allows you to determine the correctness of the hypothesis	Does not guarantee a complete understanding of the object/phenomenon
Study and generalizatio n	Synthesis	Summarizing the results of the study	Allows you to establish general patterns and trends	Does not take into account the individual features of the object/phenomenon

Source: developed by the author

Appendix14

The sequence of application of applied methods of scientific research

Classic sequence	Optimal Sequence	Description	Advantages	Flaws
Observation	Observation	Observation is the initial and main method of data collection. The researcher observes the phenomena and writes them down.	Simplicity and ease of use.	The limited ability to establish causal relationships and the influence of factors that cannot be directly observed.
Interview	Measurement	A dimension is used to obtain quantitative data. The researcher measures various parameters of phenomena and processes.	Getting accurate data that can be analyzed statistically.	The limitation is that the measured parameters may not always fully reflect the phenomena and processes.
Questionnaire	Comparison	Comparison is used to determine the differences between objects and phenomena. The researcher compares their characteristics and determines the degree of similarity or difference.	Allows you to identify common and distinctive features of objects.	The limitation is that the comparison can be subjective and depends on the choice of parameters for comparison.
Survey	Interview	The interview is used to obtain qualitative data such as opinions, views, and ratings. The researcher conducts a conversation with research participants to find out their point of view.	Allows you to get a deep understanding of the thoughts and opinions of research participants.	The limitation is that the interview can be time consuming and require significant effort on the part of the researcher and participants.
Testing	Questionnaire	Testing is a method in which the researcher gives research participants tests to perform in order to measure their knowledge, skills, or abilities.	Objective results, can be quantified	May be limited to areas of expertise measured by tests

Photographing	Survey	Collecting information by photographing objects or phenomena	Allows you to get additional information that is difficult to convey in words	May be limited by accuracy of information transfer, may require special equipment
Measurement	Testing	Collecting information by measuring the characteristics of objects or phenomena	Provides accurate and objective data	May be limited by the availability of tools and require special
Comparison	Photographing	Comparison of groups or objects in different conditions or on different grounds	A simple and affordable method that allows you to quickly get information about the differences between objects	It does not allow to determine the cause-and-effect relationships between phenomena
Experiment	Experiment	Systematic impact on objects or phenomena in order to study their properties or the influence of factors on them	Allows you to determine cause-and-effect relationships between phenomena, allows you to control conditions and obtain accurate data	May be difficult to use in real-life situations or in cases where ethical considerations preclude experimentation
Modeling	Modeling	Creation of models of objects or phenomena to study their properties or predict behavior	Allows you to study objects or phenomena under controlled conditions, allows you to conduct experiments in conditions where it is difficult or impossible in reality	Modeling may not reflect all the features of real objects or phenomena, which may lead to inaccurate results.

Source: developed by the author

Appendix 15

Health care index African region, 2019-2023

Africa	Health Care Index	Year
South Africa	62.6	2019
Tunisia	59.6	2019
Nigeria	55.3	2019
Algeria	54.1	2019
Egypt	44.2	2019
Morocco	36.9	2019
South Africa	64.1	2020
Tunisia	57.2	2020
Kenya	55.6	2020
Algeria	54.9	2020
Nigeria	51.6	2020
Egypt	45.8	2020
Morocco	45.7	2020
South Africa	63.9	2021
Tunisia	56.2	2021
Kenya	55.8	2021
Algeria	55.0	2021
Nigeria	48.9	2021
Egypt	46.2	2021
Morocco	45.8	2021
South Africa	64.0	2022
Kenya	63.4	2022
Tunisia	56.5	2022
Algeria	52.9	2022
Nigeria	48.5	2022
Egypt	47.0	2022
Morocco	46.7	2022
South Africa	63.7	2023
Kenya	61.8	2023
Tunisia	57.1	2023
Algeria	53.6	2023
Nigeria	48.5	2023
Egypt	47.6	2023
Morocco	45,8	2023

Source: [307]

[307] *Rating Numbeo.* Health Care Index. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

Appendix 16

Health care index Americas region, 2019-2023

America	Health Care Index	Year	America	Health Care Index	Year
Ecuador	72,5	2019	Panama	60,4	2021
Canada	71	2019	Brazil	57,3	2021
Mexico	69,7	2019	Peru	56,4	2021
United States	69,4	2019	Puerto Rico	55,6	2021
Argentina	69,4	2019	Dominican Republic	55	2021
Colombia	67,5	2019	Trinidad And Tobago	53,8	2021
Chile	65,5	2019	Venezuela	39,7	2021
Uruguay	64,3	2019	Mexico	72,8	2022
Costa Rica	62,6	2019	Canada	71,3	2022
Panama	61,4	2019	Argentina	69,3	2022
Peru	55	2019	Ecuador	69,3	2022
Brazil	54,6	2019	United States	69,1	2022
Puerto Rico	54	2019	Uruguay	68,4	2022
Venezuela	41,2	2019	Colombia	67,2	2022
Canada	71,6	2020	Guatemala	65,9	2022
Ecuador	70,6	2020	Chile	64	2022
Mexico	70,1	2020	Costa Rica	62,7	2022
United States	69,3	2020	Panama	61,1	2022
Argentina	69,3	2020	Brazil	57,8	2022
Guatemala	67,8	2020	Puerto Rico	57,7	2022
Colombia	67,2	2020	Peru	56,2	2022
Uruguay	66,3	2020	Dominican Republic	55,5	2022
Chile	65,4	2020	Trinidad And Tobago	53,4	2022
Costa Rica	62,4	2020	Venezuela	39,3	2022
Panama	59,9	2020	Mexico	72,5	2023
Brazil	56,3	2020	Canada	70,4	2023
Peru	56,2	2020	Ecuador	69,5	2023
Puerto Rico	55,7	2020	Argentina	68,9	2023
Trinidad And Tobago	54,7	2020	United States	68,6	2023
Dominican Republic	54,7	2020	Uruguay	68,4	2023
Venezuela	39,7	2020	Colombia	67,9	2023
Mexico	72,5	2021	Guatemala	67,5	2023
Canada	71,8	2021	Chile	64,4	2023
United States	69	2021	Costa Rica	63,1	2023

Ecuador	68,8	2021	Panama	61	2023
Argentina	68,6	2021	Brazil	58,2	2023
Uruguay	67,7	2021	Puerto Rico	57,3	2023
Colombia	66,7	2021	Peru	55,9	2023
Guatemala	65,9	2021	Dominican Republic	55,5	2023
Chile	63,7	2021	Trinidad And Tobago	53,4	2023
Costa Rica	62,9	2021	Venezuela	39,3	2023

Source: [308]

[308] *Rating Numbeo.* Health Care Index. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

Appendix 17

Health care index in the Asian region, 2019-2023

Asia	Health Care Index	Year	Asia	Health Care Index	Year
Taiwan	86,2	2019	Pakistan	60,5	2021
South Korea	84,5	2019	Indonesia	60,5	2021
Japan	80,4	2019	Kazakhstan	60,1	2021
Thailand	79,1	2019	Kuwait	59	2021
Israel	73,4	2019	Oman	58,4	2021
Qatar	72,4	2019	Vietnam	58,3	2021
Sri Lanka	72,3	2019	Nepal	57,9	2021
Singapore	70,3	2019	Georgia	53,8	2021
Turkey	69,4	2019	Cyprus	52,7	2021
India	68,3	2019	Iran	52,2	2021
United Arab Emirates	68	2019	Iraq	44,6	2021
Malaysia	67,6	2019	Azerbaijan	44	2021
Hong Kong	67,3	2019	Bangladesh	42,7	2021
Jordan	66,1	2019	Taiwan	86,4	2022
Lebanon	65,9	2019	South Korea	82,7	2022
Philippines	65,9	2019	Japan	80,5	2022
China	64	2019	Thailand	77,6	2022
Indonesia	62	2019	Israel	73,8	2022
Pakistan	60,6	2019	Qatar	73,5	2022
Saudi Arabia	59,1	2019	Sri Lanka	72,1	2022
Nepal	57	2019	Singapore	71,1	2022
Kuwait	56,3	2019	Turkey	70,8	2022
Vietnam	54,5	2019	Malaysia	70,1	2022
Georgia	51,3	2019	United Arab Emirates	68,7	2022
Kazakhstan	51,3	2019	Philippines	67,5	2022
Iran	51,2	2019	China	66,4	2022
Cyprus	50,2	2019	Hong Kong	66,3	2022
Bangladesh	40,3	2019	India	65,7	2022
Taiwan	86,7	2020	Jordan	65,6	2022
South Korea	82	2020	Lebanon	62,7	2022
Japan	81,1	2020	Saudi Arabia	60,9	2022
Thailand	77,9	2020	Indonesia	60,4	2022
Qatar	73,3	2020	Kazakhstan	60	2022
Israel	73,3	2020	Pakistan	59,6	2022
Sri Lanka	72,5	2020	Kuwait	59,4	2022
Singapore	70,8	2020	Vietnam	58,9	2022
Turkey	69,8	2020	Oman	58,2	2022
Malaysia	68,1	2020	Nepal	57,9	2022
Philippines	67,5	2020	Georgia	54,2	2022

India	67,1	2020	Iran	52,3	2022
United Arab Emirates	67	2020	Cyprus	52	2022
Hong Kong	66,1	2020	Cambodia	49,4	2022
Jordan	64,6	2020	Azerbaijan	44,8	2022
China	64,5	2020	Iraq	44,6	2022
Lebanon	64,4	2020	Bangladesh	42,3	2022
Pakistan	60,6	2020	Taiwan (China)	85,9	2023
Indonesia	60,5	2020	South Korea	83	2023
Saudi Arabia	59,1	2020	Japan	80,3	2023
Oman	58,2	2020	Thailand	77,9	2023
Vietnam	57,7	2020	Qatar	73,8	2023
Nepal	56,9	2020	Israel	73,5	2023
Kuwait	56,2	2020	Sri Lanka	72	2023
Cyprus	51,8	2020	Turkey	71	2023
Iran	51,7	2020	Singapore	70,9	2023
Georgia	51,2	2020	Malaysia	70	2023
Kazakhstan	50,7	2020	United Arab Emirates	69,6	2023
Azerbaijan	43,2	2020	Philippines	67,8	2023
Bangladesh	42,8	2020	China	67,5	2023
Iraq	41,4	2020	Hong Kong (China)	65,8	2023
Taiwan	86,4	2021	India	65,1	2023
South Korea	82,3	2021	Jordan	64,9	2023
Japan	80,7	2021	Lebanon	63,2	2023
Thailand	78,1	2021	Saudi Arabia	61,2	2023
Israel	73,8	2021	Indonesia	60,5	2023
Qatar	73	2021	Kazakhstan	59,9	2023
Sri Lanka	72,6	2021	Kuwait	59,7	2023
Singapore	70,9	2021	Pakistan	59,5	2023
Turkey	70,7	2021	Vietnam	59,3	2023
Malaysia	69,6	2021	Oman	58,2	2023
United Arab Emirates	68	2021	Nepal	57	2023
Philippines	67,1	2021	Georgia	54,8	2023
China	66,4	2021	Cyprus	54,7	2023
Hong Kong	66,3	2021	Iran	52,3	2023
India	66,2	2021	Azerbaijan	46,8	2023
Jordan	65,4	2021	Iraq	43,5	2023
Lebanon	63,3	2021	Bangladesh	42,3	2023
Saudi Arabia	60,7	2021			

Source: [309]

[309] *Rating Numbeo.* Health Care Index. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

Appendix 18

Health care index in the European region, 2019-2023

Europe	Health Care Index	Year	Europe	Health Care Index	Year
Belgium	79,4	2019	Croatia	64,2	2021
Denmark	79,4	2019	Latvia	62,2	2021
Austria	79,2	2019	Slovakia	60,9	2021
France	78,6	2019	Russia	58,4	2021
Netherlands	77,8	2019	Poland	58,3	2021
Spain	77,8	2019	Greece	57	2021
Czech Republic	74,7	2019	North Macedonia	56,5	2021
United Kingdom	74,7	2019	Bulgaria	56,1	2021
Germany	74,3	2019	Romania	56,1	2021
Norway	74,1	2019	Bosnia And Herzegovina	53,5	2021
Finland	73,5	2019	Ukraine	53,4	2021
Switzerland	72,7	2019	Ireland	52,8	2021
Estonia	72,1	2019	Hungary	51,6	2021
Sweden	71	2019	Serbia	51,6	2021
Portugal	70,7	2019	Albania	50,7	2021
Lithuania	67,6	2019	Belarus	44,4	2021
Italy	67,1	2019	France	80,2	2022
Iceland	66,4	2019	Denmark	80,1	2022
Croatia	64,1	2019	Spain	78,4	2022
Slovenia	62,8	2019	Norway	76,8	2022
Poland	62,2	2019	Austria	76,7	2022
Slovakia	60,1	2019	Finland	76,3	2022
Latvia	59,7	2019	Netherlands	75,6	2022
North Macedonia	59	2019	Belgium	75,5	2022
Belarus	58	2019	Czech Republic	75,3	2022
Russia	57,6	2019	Switzerland	74,8	2022
Greece	55,2	2019	United Kingdom	74,8	2022
Romania	54,5	2019	Estonia	73,3	2022
Bulgaria	54	2019	Germany	73,2	2022
Bosnia And Herzegovina	53,2	2019	Portugal	72	2022
Serbia	52,6	2019	Lithuania	71,9	2022
Ukraine	51	2019	Luxembourg	70,8	2022
Ireland	48,6	2019	Sweden	68,7	2022
Hungary	48,2	2019	Italy	66,8	2022
Denmark	80	2020	Iceland	66,4	2022
France	80	2020	Slovenia	65,2	2022
Spain	78,9	2020	Croatia	64,1	2022
Austria	78,7	2020	Latvia	62,4	2022

Finland	75,8	2020	Slovakia	60,3	2022
Netherlands	74,6	2020	Russia	59,1	2022
Czech Republic	74,6	2020	Poland	57,8	2022
United Kingdom	74,5	2020	Greece	57,3	2022
Norway	74,4	2020	Bulgaria	56,4	2022
Belgium	74,3	2020	Romania	56,2	2022
Germany	73,3	2020	North Macedonia	55,8	2022
Estonia	72,7	2020	Ukraine	54,3	2022
Switzerland	72,4	2020	Bosnia And Herzegovina	54,3	2022
Portugal	71,9	2020	Hungary	53,4	2022
Lithuania	69,5	2020	Serbia	52,5	2022
Sweden	69,2	2020	Ireland	52,3	2022
Malta	68,8	2020	Albania	50,5	2022
Italy	66,6	2020	Belarus	45,6	2022
Iceland	65,9	2020	Malta	45,6	2022
Slovenia	64,6	2020	France	79,4	2023
Latvia	62,9	2020	Denmark	79,2	2023
Croatia	62,7	2020	Spain	77,9	2023
Poland	61	2020	Austria	77,2	2023
Slovakia	60	2020	Netherlands	77,1	2023
Belarus	59	2020	Finland	77,1	2023
Russia	57,6	2020	Norway	76,7	2023
North Macedonia	56,4	2020	Czech Republic	75,5	2023
Greece	56,2	2020	Belgium	75,2	2023
Bulgaria	55,4	2020	Luxembourg	75	2023
Romania	55,1	2020	Switzerland	74,5	2023
Albania	53	2020	United Kingdom	74,1	2023
Ukraine	52,3	2020	Estonia	74,1	2023
Bosnia And Herzegovina	52,3	2020	Lithuania	73,2	2023
Ireland	51,9	2020	Germany	71,9	2023
Serbia	51,3	2020	Portugal	71,5	2023
Hungary	47,8	2020	Sweden	68,6	2023
France	81	2021	Iceland	67	2023
Denmark	80	2021	Italy	66,3	2023
Spain	78,8	2021	Slovenia	65,3	2023
Austria	78,4	2021	Croatia	63,9	2023
Finland	76,4	2021	Latvia	62,4	2023
Netherlands	75,8	2021	Slovakia	60,1	2023
Norway	75,5	2021	Russia	59,7	2023
Czech Republic	75,4	2021	Poland	57,6	2023
Belgium	75,2	2021	Greece	57,5	2023
United Kingdom	74,9	2021	Bulgaria	56,7	2023
Switzerland	74,5	2021	Romania	56,5	2023

Germany	73,8	2021	North Macedonia	55,3	2023
Estonia	72,8	2021	Ukraine	55,2	2023
Portugal	71,9	2021	Bosnia And Herzegovina	54,9	2023
Lithuania	71	2021	Hungary	54,4	2023
Sweden	68,8	2021	Serbia	52,2	2023
Malta	67,1	2021	Ireland	51,8	2023
Italy	66,8	2021	Albania	49,6	2023
Iceland	65,7	2021	Belarus	47,1	2023
Slovenia	65,3	2021	Malta	45,4	2023

Source: [310]

[310] *Rating Numbeo*. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

Appendix19

Health care index in the Oceania region, 2019-2023

Oceania	Health Care Index	Year
Australia	76,4	2019
New Zealand	73,6	2019
Australia	77,4	2020
New Zealand	73,8	2020
Australia	77,7	2021
New Zealand	73,6	2021
Australia	78,1	2022
New Zealand	73,3	2022
Australia	75,3	2023
New Zealand	71	2023

Source: [311]

[311] *Rating Numbeo*. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

Appendix 20

High Health Care

Contry	Health Care Index by Country	Rate
Taiwan	85,9	High Health Care
South Korea	83	High Health Care
Japan	79,6	High Health Care
France	78,8	High Health Care
Netherlands	78,6	High Health Care
Denmark	78,4	High Health Care
Thailand	77,9	High Health Care
Finland	77,5	High Health Care
Spain	77,5	High Health Care
Luxembourg	77,3	High Health Care
Norway	76,6	High Health Care
Austria	76,5	High Health Care
Estonia	75,9	High Health Care
Czech Republic	75,2	High Health Care
Belgium	75,2	High Health Care
United Kingdom	73,7	High Health Care
Lithuania	73,7	High Health Care
Israel	73,6	High Health Care
Qatar	73,5	High Health Care
Switzerland	73,4	High Health Care
Mexico	72,6	High Health Care
Portugal	72,3	High Health Care
Germany	71,8	High Health Care
Sri Lanka	71,5	High Health Care
Australia	71,4	High Health Care
Turkey	71,1	High Health Care
Singapore	70,9	High Health Care
Malaysia	70	High Health Care
Canada	69,7	High Health Care
New Zealand	69,7	High Health Care
United Arab Emirates	69,6	High Health Care

Source: [312]

[312] *Rating Numbeo*. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

Appendix 21

Middle Health Care

Contry	Health Care Index by Country	Rate
Uruguay	68,6	Middle Health Care
Sweden	68,5	Middle Health Care
Argentina	68,3	Middle Health Care
Colombia	68,2	Middle Health Care
United States	68,2	Middle Health Care
Guatemala	68	Middle Health Care
Ecuador	67,9	Middle Health Care
China	67,6	Middle Health Care
Philippines	67,4	Middle Health Care
Iceland	67,2	Middle Health Care
Slovenia	66,4	Middle Health Care
Italy	65,9	Middle Health Care
Hong Kong (China)	65,6	Middle Health Care
India	65,2	Middle Health Care
Jordan	65,1	Middle Health Care
Costa Rica	64,6	Middle Health Care
Croatia	64,5	Middle Health Care
Chile	63,6	Middle Health Care
South Africa	63,5	Middle Health Care
Latvia	62,7	Middle Health Care
Lebanon	62,4	Middle Health Care
Kenya	61,5	Middle Health Care
Saudi Arabia	61,4	Middle Health Care
Panama	60,7	Middle Health Care
Indonesia	60,6	Middle Health Care
Kazakhstan	60,4	Middle Health Care
Russia	60	Middle Health Care
Vietnam	59,9	Middle Health Care
Slovakia	59,7	Middle Health Care
Pakistan	59,5	Middle Health Care
Oman	59	Middle Health Care

Source: [313]

[313] *Rating Numbeo*. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

Appendix 22

Low Health Care

Contry	Health Care Index by Country	Rate
Poland	58,9	Low Health Care
Brazil	58,6	Low Health Care
Kuwait	58,1	Low Health Care
Nepal	58	Low Health Care
Tunisia	57,8	Low Health Care
Puerto Rico	57,3	Low Health Care
Greece	57,2	Low Health Care
Bulgaria	56,9	Low Health Care
Romania	56,4	Low Health Care
Peru	56,3	Low Health Care
Dominican Republic	56,1	Low Health Care
Ukraine	55,3	Low Health Care
Cyprus	55,3	Low Health Care
North Macedonia	55,1	Low Health Care
Bosnia And Herzegovina	54,8	Low Health Care
Georgia	54,5	Low Health Care
Hungary	54,2	Low Health Care
Algeria	53,9	Low Health Care
Trinidad And Tobago	53,5	Low Health Care
Iran	52,3	Low Health Care
Serbia	52,2	Low Health Care
Malta	52	Low Health Care
Ireland	51,9	Low Health Care
Albania	49,3	Low Health Care
Nigeria	48	Low Health Care
Egypt	47,7	Low Health Care
Belarus	47,7	Low Health Care
Azerbaijan	47,5	Low Health Care
Morocco	45,4	Low Health Care
Iraq	43,6	Low Health Care
Bangladesh	42	Low Health Care
Venezuela	39,2	Low Health Care

Source: [314]

[314] *Rating Numbeo*. [accessed 21.03.2023]. Available at: https://www.numbeo.com/health-care/rankings_by_country.jsp

Appendix 23

Patient experiences, 2019-2022

Country	2019	2020	2021	2022	Indicator
Australia	15,2	10,2	14,4	..	Consultation skipped due to costs
Austria	5,2	..	..	..	Consultation skipped due to costs
Canada	..	5,2	..	..	Consultation skipped due to costs
Greece					Consultation skipped due to costs
Estonia	9,8	10,7	12,2	12,9	Consultation skipped due to costs
France	..	3,3	..	..	Consultation skipped due to costs
Germany	..	3,5	..	..	Consultation skipped due to costs
Israel	..	..	5,1	..	Consultation skipped due to costs
Korea	2,6	2,2	2,8	1,1	Consultation skipped due to costs
Luxenburg					Consultation skipped due to costs
Slovenia					Consultation skipped due to costs
Netherlands	..	4,2	4,3	4,3	Consultation skipped due to costs
New Zealand	..	12,9	..	..	Consultation skipped due to costs
Norway	..	3,4	..	..	Consultation skipped due to costs
Poland	..	5,0	..	..	Consultation skipped due to costs
Spain	..	1,9	..	..	Consultation skipped due to costs
Sweden	..	6,3	..	..	Consultation skipped due to costs
Switzerland	..	18,3	..	..	Consultation skipped due to costs
United Kingdom	..	4,6	..	..	Consultation skipped due to costs
United States	..	26,8	..	..	Consultation skipped due to costs
Australia					Doctor giving opportunity to ask questions or raise concerns
Austria					Doctor giving opportunity to ask questions or raise concerns
Canada					Doctor giving opportunity to ask questions or raise concerns
Greece					Doctor giving opportunity to ask questions or raise concerns
Estonia	92,0	..	..	..	Doctor giving opportunity to ask questions or raise concerns
France					Doctor giving opportunity to ask questions or raise concerns
Germany					Doctor giving opportunity to ask questions or raise concerns
Israel	..	..	88,2	..	Doctor giving opportunity to ask questions or raise concerns
Korea	84,2	88,6	88,3	87,3	Doctor giving opportunity to ask questions or raise concerns
Luxenburg	92,0	..	..	..	Doctor giving opportunity to ask questions or raise concerns

Slovenia	85,3	84,4	86,9	..	Doctor giving opportunity to ask questions or raise concerns
Netherlands					Doctor giving opportunity to ask questions or raise concerns
New Zealand					Doctor giving opportunity to ask questions or raise concerns
Norway					Doctor giving opportunity to ask questions or raise concerns
Poland					Doctor giving opportunity to ask questions or raise concerns
Spain					Doctor giving opportunity to ask questions or raise concerns
Sweden					Doctor giving opportunity to ask questions or raise concerns
Switzerland					Doctor giving opportunity to ask questions or raise concerns
United Kingdom					Doctor giving opportunity to ask questions or raise concerns
United States					Doctor giving opportunity to ask questions or raise concerns
Australia					Doctor involving patients in decisions about care or treatment
Austria	..	..	..	90,0	Doctor involving patients in decisions about care or treatment
Canada					Doctor involving patients in decisions about care or treatment
Greece	..	0,9	..	..	Doctor involving patients in decisions about care or treatment
Estonia					Doctor involving patients in decisions about care or treatment
France					Doctor involving patients in decisions about care or treatment
Germany					Doctor involving patients in decisions about care or treatment
Israel	..	..	83,7	..	Doctor involving patients in decisions about care or treatment
Korea	84,4	87,6	89,2	88,0	Doctor involving patients in decisions about care or treatment
Luxenburg	85,7	..	..	..	Doctor involving patients in decisions about care or treatment
Slovenia	84,5	83,0	85,0	..	Doctor involving patients in decisions about care or treatment
Netherlands					Doctor involving patients in decisions about care or treatment
New Zealand					Doctor involving patients in decisions about care or treatment
Norway					Doctor involving patients in decisions about care or treatment
Poland					Doctor involving patients in decisions about care or treatment

Spain					Doctor involving patients in decisions about care or treatment
Sweden					Doctor involving patients in decisions about care or treatment
Switzerland					Doctor involving patients in decisions about care or treatment
United Kingdom					Doctor involving patients in decisions about care or treatment
United States					Doctor involving patients in decisions about care or treatment
Australia					Doctor providing easy-to-understand explanations
Austria	..	..	..	95,0	Doctor providing easy-to-understand explanations
Canada					Doctor providing easy-to-understand explanations
Greece	..	1,0	..	..	Doctor providing easy-to-understand explanations
Estonia	93,5	..	97,9	93,4	Doctor providing easy-to-understand explanations
France					Doctor providing easy-to-understand explanations
Germany					Doctor providing easy-to-understand explanations
Israel	..	..	90,4	..	Doctor providing easy-to-understand explanations
Korea	86,3	91,0	88,0	88,0	Doctor providing easy-to-understand explanations
Luxenburg	93,8	..	..	..	Doctor providing easy-to-understand explanations
Slovenia	90,3	89,1	91,5	..	Doctor providing easy-to-understand explanations
Netherlands					Doctor providing easy-to-understand explanations
New Zealand					Doctor providing easy-to-understand explanations
Norway					Doctor providing easy-to-understand explanations
Poland					Doctor providing easy-to-understand explanations
Spain					Doctor providing easy-to-understand explanations
Sweden					Doctor providing easy-to-understand explanations
Switzerland					Doctor providing easy-to-understand explanations
United Kingdom					Doctor providing easy-to-understand explanations
United States					Doctor providing easy-to-understand explanations

Australia	90,9	91,8	90,6	..	Doctor spending enough time with patients during the consultation
Austria	..	..	..	87,0	Doctor spending enough time with patients during the consultation
Canada					Doctor spending enough time with patients during the consultation
Greece					Doctor spending enough time with patients during the consultation
Estonia	92,3	..	92,2	..	Doctor spending enough time with patients during the consultation
France					Doctor spending enough time with patients during the consultation
Germany					Doctor spending enough time with patients during the consultation
Israel	..	..	89,3	..	Doctor spending enough time with patients during the consultation
Korea	74,0	75,0	81,4	80,4	Doctor spending enough time with patients during the consultation
Luxenburg	89,1	..	..	..	Doctor spending enough time with patients during the consultation
Slovenia	82,6	83,3	84,4	..	Doctor spending enough time with patients during the consultation
Netherlands					Doctor spending enough time with patients during the consultation
New Zealand					Doctor spending enough time with patients during the consultation
Norway					Doctor spending enough time with patients during the consultation
Poland					Doctor spending enough time with patients during the consultation
Spain					Doctor spending enough time with patients during the consultation
Sweden					Doctor spending enough time with patients during the consultation
Switzerland					Doctor spending enough time with patients during the consultation
United Kingdom					Doctor spending enough time with patients during the consultation
United States					Doctor spending enough time with patients during the consultation
Australia	3,1	13,9	..	..	Medical tests, treatment or follow-up skipped due to costs
Austria					Medical tests, treatment or follow-up skipped due to costs
Canada	..	5,7	..	..	Medical tests, treatment or follow-up skipped due to costs
Greece					Medical tests, treatment or follow-up skipped due to costs
Estonia					Medical tests, treatment or follow-up skipped due to costs

France	..	6,2	..	..	Medical tests, treatment or follow-up skipped due to costs
Germany	..	4,2	..	..	Medical tests, treatment or follow-up skipped due to costs
Israel	..	..	5,5	..	Medical tests, treatment or follow-up skipped due to costs
Korea	6,2	4,7	6,9	3,3	Medical tests, treatment or follow-up skipped due to costs
Luxenburg					Medical tests, treatment or follow-up skipped due to costs
Slovenia					Medical tests, treatment or follow-up skipped due to costs
Netherlands	..	3,5	4,0	3,3	Medical tests, treatment or follow-up skipped due to costs
New Zealand	..	8,4	..	..	Medical tests, treatment or follow-up skipped due to costs
Norway	..	5,0	..	..	Medical tests, treatment or follow-up skipped due to costs
Poland	..	0,5	..	..	Medical tests, treatment or follow-up skipped due to costs
Spain	..	5,2	..	..	Medical tests, treatment or follow-up skipped due to costs
Sweden	..	14,3	..	..	Medical tests, treatment or follow-up skipped due to costs
Switzerland	..	3,5	..	..	Medical tests, treatment or follow-up skipped due to costs
United Kingdom	..	26,4	..	..	Medical tests, treatment or follow-up skipped due to costs
United States	2,8	2,2	..	..	Medical tests, treatment or follow-up skipped due to costs
Australia	6,6	8,5	5,6	..	Prescribed medicines skipped due to costs
Austria					Prescribed medicines skipped due to costs
Canada	3,3	..	..	..	Prescribed medicines skipped due to costs
Greece					Prescribed medicines skipped due to costs
Estonia					Prescribed medicines skipped due to costs
France	..	9,3	..	..	Prescribed medicines skipped due to costs
Germany	4,1	..	..	..	Prescribed medicines skipped due to costs
Israel	..	5,1	..	..	Prescribed medicines skipped due to costs
Korea	..	6,2	..	..	Prescribed medicines skipped due to costs
Luxenburg	..	..	6,1	..	Prescribed medicines skipped due to costs
Slovenia	2,2	1,8	2,1	1,7	Prescribed medicines skipped due to costs
Netherlands	..	3,4	2,3	2,5	Prescribed medicines skipped due to costs
New Zealand	..	6,7	..	..	Prescribed medicines skipped due to costs
Norway	..	5,8	..	..	Prescribed medicines skipped due to costs
Poland	..	2,8	..	..	Prescribed medicines skipped due to costs
Spain	2,6	1,1	..	..	Prescribed medicines skipped due to costs

Sweden	..	6,6	..	..	Prescribed medicines skipped due to costs
Switzerland	..	9,1	..	..	Prescribed medicines skipped due to costs
United Kingdom	..	5,6	..	..	Prescribed medicines skipped due to costs
United States	..	23,1	..	..	Prescribed medicines skipped due to costs
Australia					Regular doctor giving opportunity to ask questions or raise concerns
Austria					Regular doctor giving opportunity to ask questions or raise concerns
Canada					Regular doctor giving opportunity to ask questions or raise concerns
Greece					Regular doctor giving opportunity to ask questions or raise concerns
Estonia	89,7	..	..	..	Regular doctor giving opportunity to ask questions or raise concerns
France					Regular doctor giving opportunity to ask questions or raise concerns
Germany					Regular doctor giving opportunity to ask questions or raise concerns
Israel	..	..	94,2	..	Regular doctor giving opportunity to ask questions or raise concerns
Korea					Regular doctor giving opportunity to ask questions or raise concerns
Luxenburg					Regular doctor giving opportunity to ask questions or raise concerns
Slovenia					Regular doctor giving opportunity to ask questions or raise concerns
Netherlands	96,4	94,6	96,3	95,1	Regular doctor giving opportunity to ask questions or raise concerns
New Zealand					Regular doctor giving opportunity to ask questions or raise concerns
Norway					Regular doctor giving opportunity to ask questions or raise concerns
Poland	..	67,6	..	..	Regular doctor giving opportunity to ask questions or raise concerns
Spain	90,7	..	..	82,3	Regular doctor giving opportunity to ask questions or raise concerns
Sweden					Regular doctor giving opportunity to ask questions or raise concerns
Switzerland					Regular doctor giving opportunity to ask questions or raise concerns
United Kingdom					Regular doctor giving opportunity to ask questions or raise concerns
United States					Regular doctor giving opportunity to ask questions or raise concerns
Australia	..	91,2	..	..	Regular doctor involving patients in decisions about care or treatment
Austria					Regular doctor involving patients in decisions about care or treatment

Canada					Regular doctor involving patients in decisions about care or treatment
Greece	..	..	..	94,0	Regular doctor involving patients in decisions about care or treatment
Estonia	..	84,8	..	..	Regular doctor involving patients in decisions about care or treatment
France	87,0	..	..	..	Regular doctor involving patients in decisions about care or treatment
Germany	..	74,1	..	..	Regular doctor involving patients in decisions about care or treatment
Israel	..	88,6	..	..	Regular doctor involving patients in decisions about care or treatment
Korea	..	0,6	..	..	Regular doctor involving patients in decisions about care or treatment
Luxenburg					Regular doctor involving patients in decisions about care or treatment
Slovenia	..	..	91,2	..	Regular doctor involving patients in decisions about care or treatment
Netherlands	93,3	93,3	93,4	92,1	Regular doctor involving patients in decisions about care or treatment
New Zealand	..	89,6	..	..	Regular doctor involving patients in decisions about care or treatment
Norway	..	86,7	..	..	Regular doctor involving patients in decisions about care or treatment
Poland	..	64,4	..	..	Regular doctor involving patients in decisions about care or treatment
Spain	85,0	..	..	75,6	Regular doctor involving patients in decisions about care or treatment
Sweden	..	68,5	..	..	Regular doctor involving patients in decisions about care or treatment
Switzerland	..	84,3	..	..	Regular doctor involving patients in decisions about care or treatment
United Kingdom	..	80,6	..	..	Regular doctor involving patients in decisions about care or treatment
United States	..	89,1	..	..	Regular doctor involving patients in decisions about care or treatment
Australia	..	93,1	..	..	Regular doctor providing easy-to-understand explanations
Austria					Regular doctor providing easy-to-understand explanations
Canada	..	..	..	97,0	Regular doctor providing easy-to-understand explanations
Greece					Regular doctor providing easy-to-understand explanations
Estonia	..	91,2	..	..	Regular doctor providing easy-to-understand explanations
France	92,8	..	..	..	Regular doctor providing easy-to-understand explanations
Germany	..	91,1	..	..	Regular doctor providing easy-to-understand explanations

Israel	..	..	96,2	..	Regular doctor providing easy-to-understand explanations
Korea					Regular doctor providing easy-to-understand explanations
Luxenburg					Regular doctor providing easy-to-understand explanations
Slovenia					Regular doctor providing easy-to-understand explanations
Netherlands	..	93,7	..	..	Regular doctor providing easy-to-understand explanations
New Zealand	96,1	94,9	95,4	95,2	Regular doctor providing easy-to-understand explanations
Norway	..	92,8	..	..	Regular doctor providing easy-to-understand explanations
Poland	..	90,1	..	..	Regular doctor providing easy-to-understand explanations
Spain	..	81,8	..	..	Regular doctor providing easy-to-understand explanations
Sweden	..	81,9	..	..	Regular doctor providing easy-to-understand explanations
Switzerland	..	92,0	..	..	Regular doctor providing easy-to-understand explanations
United Kingdom	..	86,7	..	..	Regular doctor providing easy-to-understand explanations
United States	..	92,1	..	..	Regular doctor providing easy-to-understand explanations
Australia	..	87,3	..	..	Regular doctor spending enough time with patients during the consultation
Austria	..	..	..	94,0	Regular doctor spending enough time with patients during the consultation
Canada	..	82,4	..	..	Regular doctor spending enough time with patients during the consultation
Greece					Regular doctor spending enough time with patients during the consultation
Estonia	91,5	..	..	..	Regular doctor spending enough time with patients during the consultation
France	..	83,5	..	..	Regular doctor spending enough time with patients during the consultation
Germany	..	86,9	..	..	Regular doctor spending enough time with patients during the consultation
Israel	..	..	96,6	..	Regular doctor spending enough time with patients during the consultation
Korea					Regular doctor spending enough time with patients during the consultation
Luxenburg	94,2	93,2	94,0	92,6	Regular doctor spending enough time with patients during the consultation
Slovenia					Regular doctor spending enough time with patients during the consultation
Netherlands					Regular doctor spending enough time with patients during the consultation

New Zealand	..	86,2	..	..	Regular doctor spending enough time with patients during the consultation
Norway	..	81,6	..	..	Regular doctor spending enough time with patients during the consultation
Poland	..	65,2	..	..	Regular doctor spending enough time with patients during the consultation
Spain					Regular doctor spending enough time with patients during the consultation
Sweden	..	69,0	..	..	Regular doctor spending enough time with patients during the consultation
Switzerland	..	86,3	..	..	Regular doctor spending enough time with patients during the consultation
United Kingdom	..	72,7	..	..	Regular doctor spending enough time with patients during the consultation
United States	..	83,5	..	..	Regular doctor spending enough time with patients during the consultation

Source: [315]

[315] *OECD statistics*. [accessed 21.03.2023]. Available at: https://stats.oecd.org/

Appendix 24

Patient Safety, 2019-2022

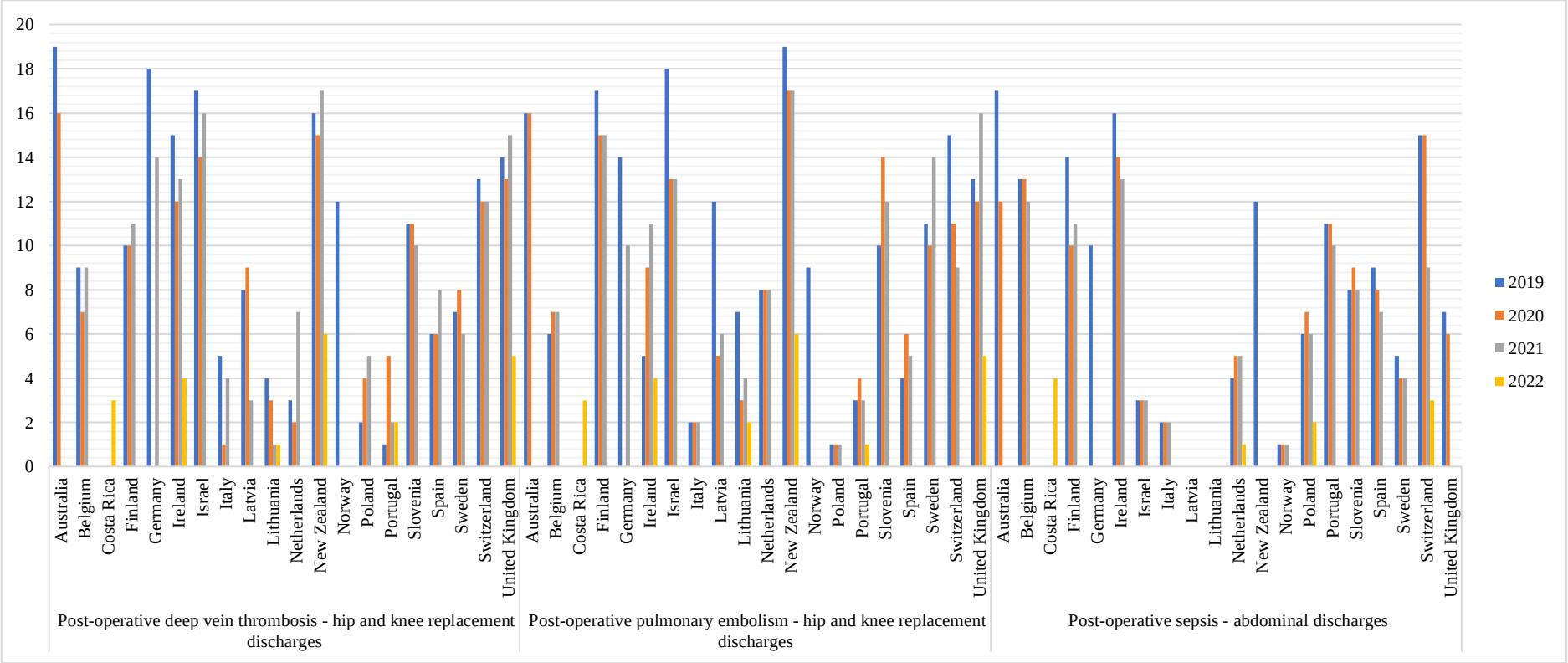


Figure 24.1. Patient Safety, 2019-2022

Source: [316]

[316] *OECD statistics*. [accessed 21.03.2023]. Available at: https://stats.oecd.org/

Table 24.1. Patient Safety by country, 2019-2022

Country	Post-operative deep vein thrombosis - hip and knee replacement discharges	Post-operative pulmonary embolism - hip and knee replacement discharges	Post-operative sepsis - abdominal discharges	Year
Australia	620,5	521,2	4 190,4	2019
Belgium	129,9	161,5	2 732,0	2019
Costa Rica				2019
Finland	143,0	524,5	3 482,1	2019
Germany	329,0	347,2	2 525,5	2019
Ireland	237,1	148,1	4 020,4	2019
Israel	326,8	552,4	953,9	2019
Italy	46,9	32,0	440,1	2019
Latvia	92,7	315,3		2019
Lithuania	42,7	192,4		2019
Netherlands	40,7	213,1	1 150,1	2019
New Zealand	289,0	1 251,2	2 613,7	2019
Norway	192,6	254,1	130,8	2019
Poland	35,8	17,3	1 366,8	2019
Portugal	27,8	105,6	2 533,6	2019
Slovenia	178,8	274,4	1 583,4	2019
Spain	78,1	115,4	1 815,4	2019
Sweden	88,2	305,7	1 151,8	2019
Switzerland	200,3	351,1	3 772,5	2019
United Kingdom	223,8	346,7	1 523,7	2019
Australia	635,4	556,2	3 416,5	2020
Belgium	80,9	203,6	3 437,5	2020
Costa Rica				2020
Finland	134,1	536,4	3 122,3	2020
Germany				2020
Ireland	163,5	286,2	4 100,2	2020
Israel	254,0	505,5	991,2	2020
Italy	19,8	28,9	514,2	2020

Latvia	85,5	128,2		2020
Lithuania	44,6	89,2		2020
Netherlands	40,8	251,9	1 428,6	2020
New Zealand	529,1	1 702,1		2020
Norway			200,9	2020
Poland	45,5	14,6	1 879,9	2020
Portugal	48,0	123,3	3 312,2	2020
Slovenia	156,1	517,7	2 283,1	2020
Spain	72,1	155,7	1 985,9	2020
Sweden	83,7	325,5	1 121,2	2020
Switzerland	163,5	342,8	4 298,4	2020
United Kingdom	214,7	460,9	1 619,0	2020
Australia				2021
Belgium	92,0	232,3	3 229,6	2021
Costa Rica				2021
Finland	155,5	533,1	3 003,5	2021
Germany	251,4	385,8		2021
Ireland	185,2	411,7	4 094,2	2021
Israel	385,5	516,8	939,3	2021
Italy	31,6	25,4	527,9	2021
Latvia	27,5	165,3		2021
Lithuania	13,5	148,4		2021
Netherlands	40,7	328,7	1 604,8	2021
New Zealand	971,9	1 520,1		2021
Norway			245,2	2021
Poland	37,5	21,4	1 706,7	2021
Portugal	24,5	132,0	2 972,6	2021
Slovenia	112,3	415,5	2 254,9	2021
Spain	69,6	162,1	2 051,5	2021
Sweden	39,9	518,1	1 104,8	2021
Switzerland	172,6	355,7	2 787,7	2021
United Kingdom	352,0	768,5		2021

Australia				2022
Belgium				2022
Costa Rica	40,8	204,0	3 174,1	2022
Finland				2022
Germany				2022
Ireland	142,2	320,3		2022
Israel				2022
Italy				2022
Latvia				2022
Lithuania	31,1	134,8		2022
Netherlands			1 388,0	2022
New Zealand	490,2	884,1		2022
Norway				2022
Poland			1 847,1	2022
Portugal	38,8	106,5		2022
Slovenia				2022
Spain				2022
Sweden				2022
Switzerland			2 708,0	2022
United Kingdom	376,7	846,2		2022

Source: [317]

[317] *OECD statistics*. [accessed 21.03.2023]. Available at: https://stats.oecd.org/

Appendix 25

Comparative characteristics of the experience of countries with a public health care system

Criterion	France	United Kingdom
The principle behind the model	Medical service is a quasi-public good. Compulsory medical insurance programs should reimburse only part of the costs of medical care	Medical service is a public good. The rich pay for the poor, the healthy pay for the sick
Share of health care expenditures in GDP	8.5%	6.0%
Sources of financing	Compulsory medical insurance - 50% VHI - 20% State. budget - 10% Personal funds - 20%	The state budget
Monitoring the efficiency of spending funds	Control is exercised by insurers: private insurance companies and the state social insurance organization	Control is exercised by the state represented by the Ministry of Health
Availability of medical care	80% of the population is covered by compulsory medical insurance programs	Universal accessibility
Range of available medical services	Wide range of services through a combination of compulsory medical insurance and voluntary medical insurance programs	A wide range of preventive measures, the range of treatment services is limited by production capabilities
Use of new technologies	Demand for a variety of medical services stimulates the introduction of new technologies	There are no incentive factors, new methods are introduced slowly
Regulation of prices for medical services	Regulated by the government, reviewed 2 times a year	Financial resources are calculated on the basis of standards that take into account the age and sex composition of the population

Source: developed by the author based on[318] [319]

[318] MOULIS, G. et al. *French health insurance databases: what interest for medical research*? In: La Revue de médecine interne, 2015, nr. 36(6), p. 411-417. ISSN 2488663.

[319] CYLUS, J, et al. *United Kingdom: Health system review*. In: Health Systems in Transition, 2015, nr.17(5), p. 1–125. ISSN 1817–6127.

Appendix 26

Analysis of the experience of countries with a social insurance health care system

Criterion	Germany	Japan	Canada	Israel
The principle behind the model	Health is a factor that determines the quality of "human capital". Medical service is the cost necessary to maintain health.	Medical service is a quasi-public good. Compulsory medical insurance programs reimburse part of the costs of medical care.	Medical service is a public good. The health care system should be controlled by the state.	Compulsory healthcare for all citizens, financed by compulsory insurance contributions
Share of health care expenditures in GDP	8.1%	6.6%	8.7%	7-8%
Sources of financing	Compulsory medical insurance - 60% Voluntary medical insurance - 10% State. Budget - 15% Personal funds -15%.	Compulsory medical insurance - 60% State. budget - 10% Public funds - 10% Personal funds - 20%	Federal funds and funds of provincial budgets - 90% Funds of private insurance companies and voluntary donations - 10%.	Mandatory insurance contributions, taxes, employer contributions, payments for medical services
Monitoring the efficiency of spending funds	Control is exercised by private and public insurers.	Control is carried out by insurance companies - private insurers	Control is exercised by the state.	Government bodies control the quality and cost of medical services, as well as medicines
Availability of medical care	90% of the population is covered by compulsory medical insurance programs; 10% - voluntary health insurance programs; At the same time, 3% of those insured under compulsory health insurance have voluntary health insurance.	40% of the population is covered by the national insurance system; 60% - by the professional production insurance system.	98-99% of the population is covered by compulsory medical insurance programs.	High availability of medical care for citizens, including an extensive network of healthcare institutions
Range of available medical services	A wide range of services through a combination of compulsory health insurance and voluntary health insurance programs.	A wide range of services through a combination of compulsory health insurance and voluntary health insurance programs.	Compulsory medical insurance programs provide the necessary range of medical services; the introduction of new techniques is limited.	A variety of services, including basic and specialized medical procedures, advanced treatments

Use of new technologies	Demand for a variety of medical services stimulates the introduction of new technologies.	Demand for a variety of medical services stimulates the introduction of new technologies.	Difficult to overcome barriers to the introduction of new technologies.	Active use of new technologies in medical practice, Israel is considered an innovative leader
Regulation of prices for medical services	Prices are expressed in "points"; the price of a "point" is revised as the economic situation changes.	Approved by the Ministry of Health and Social Welfare.	Regulated by the government, reviewed annually, but changed slowly.	Prices for medical services are regulated by the state, but there is also competition between insurance companies

Source: developed by the author based on[320] [321] [322] [323]

[320] BLÜMEL, M. et al. Germany: health system review. In: Health Systems in Transition, 2020, nr. 22(6). ISSN 1817–6127. [accessed 12.12.2022]. Available at: https://apps.who.int/iris/bitstream/handle/10665/341674/HiT-22-6-2020-eng.pdf

[321] SAKAMOTO, H. et al. *Japan health system review*. In: Health systems in transition, 2018, nr. 8(1). ISSN 1817–6127. [accessed 10.12.2022]. Available at: https://apps.who.int/iris/bitstream/handle/10665/259941/9789290226260%E2%80%90eng.pdf?sequence=1

[322] MARCHILDON, G. P. et al. Canada: health system review. In: Health Systems in Transition, 2020, nr. 22(3). ISSN 1817–6127. [accessed 12.12.2022]. Available at: https://apps.who.int/iris/bitstream/handle/10665/336311/HiT-22-3-2020-eng.pdf

[323] ROSEN, B. et al. *Israel: health system review*. In: Health Systems in Transition, 2009, nr. 11(2), p.1-226. ISSN 1817–6127. [accessed 10.12.2022]. Available at: https://apps.who.int/iris/bitstream/handle/10665/107953/HiT-11-2-2009-eng.pdf?sequence=4

Appendix 27

Analysis of the experience of countries with private healthcare systems

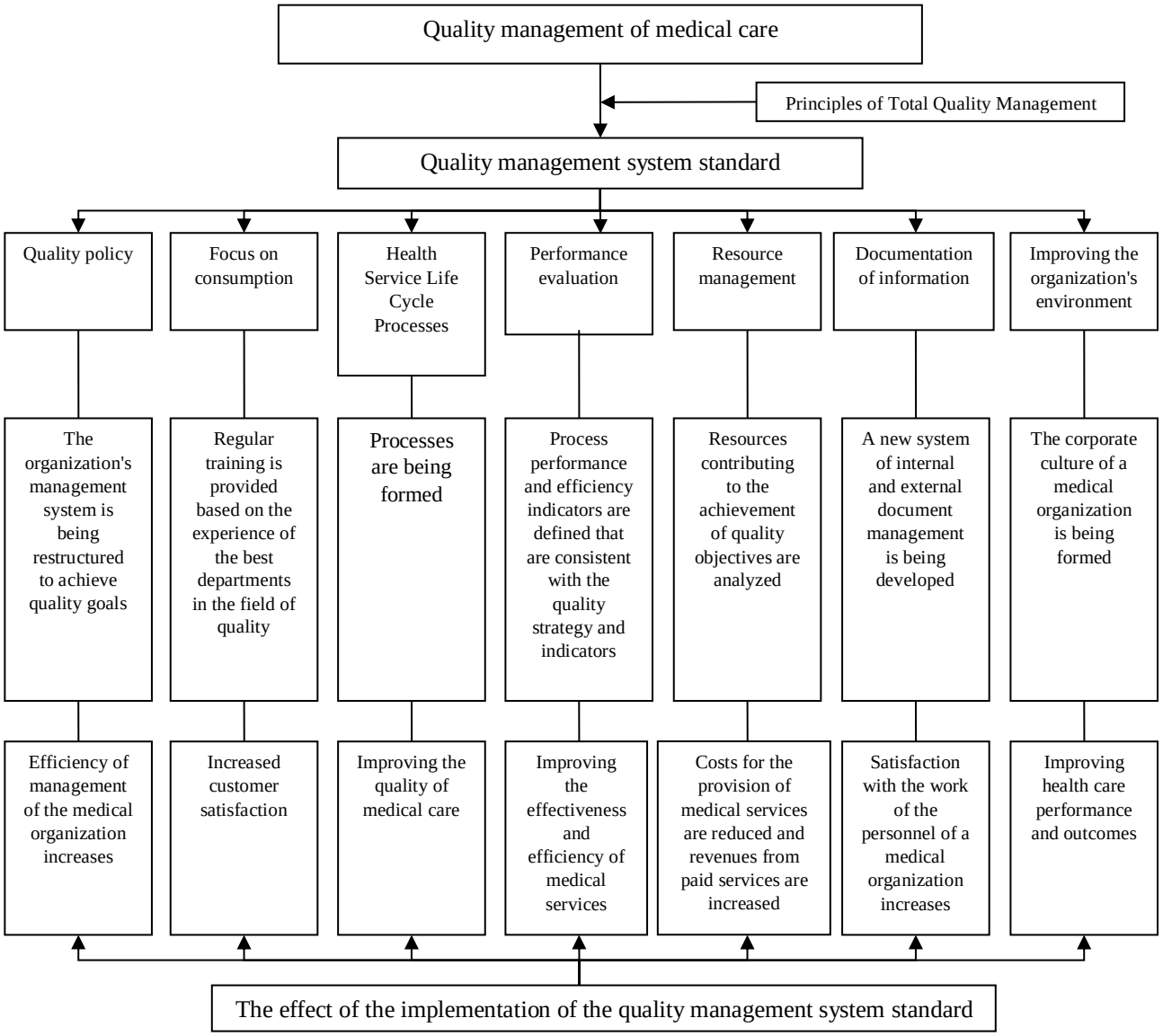
Criterion	USA	Brazil	Australia
The principle behind the model	Medical service is a private good, i.e., a product that can be bought or sold.	Mixed system with compulsory public and private insurance	Compulsory private insurance and national health system
Share of health care expenditures in GDP	14%	About 10% of GDP	About 10% of GDP
Sources of financing	Private insurance - 40% Personal funds - 20% Programs for the elderly and low-income -40%	Taxes, social contributions, public and private insurance	Mandatory insurance premiums, taxes, private insurance, payments for medical services
Monitoring the efficiency of spending funds	Control is carried out by insurance companies - private insurers.	Mixed control of the state and private sector, problems with inequality and accessibility	Partial control of the state, medical technology assessment agency
Availability of medical care	Limited by patients' ability to pay, programs for the elderly and low-income do not cover all those in need.	Uneven availability across different regions of the country, high impact of poverty and inequality	Extensive, but availability may vary by location
Range of available medical services	A wide variety of curative and preventive medical services.	Variety of services, but availability of specialized services may be limited	Wide range including basic medical services and specialized procedures
Use of new technologies	The largest investments in R&D are made in the healthcare sector.	The introduction of new technologies into medical practice is not always uniform	Fairly high, active implementation of new technologies in medical practice
Regulation of prices for medical services	There is virtually no regulation. The price is determined as a result of an agreement between the patient, the insurer and the health care facility.	Prices for health services may be unregulated, which can lead to inequalities and overpayments	Partial government regulation, competition and price transparency laws

Source: developed by the author based on[324] [325] [326]

[324] BARSUKIEWICZ, C. K., RAFFEL, M. W., RAFFEL, N. K. *The US health system: Origins and functions*. Boston: Cengage Learning, 2010. 304 p. ISBN 1418052981.
[325] CASTRO, M. C. et al. *Brazil's unified health system: the first 30 years and prospects for the future*. In: The lancet, 2019, nr. 394(1019), p. 345-356. ISSN 22352-4642.
[326] HEALY, J. et al. *Australia: Health system review*. In: Health Systems in Transition, 2006, nr. 8(5). ISSN 1817–6127. [accessed 10.12.2022]. Available at: https://apps.who.int/iris/bitstream/handle/10665/107803/HiT-8-5-2006-eng.pdf

Appendix 28

Quality management system for medical services, typical for medical institutions in countries around the world



Source: developed by the author based on[327] [328]

[327] GUMPERT, M., REESE, J. P. *Quality Management Systems in the Ambulant Sector: An Analytical Comparison of Different Quality Management System*s. In: International Journal of Environmental Research and Public Health, 2019, nr. 16(3), p. 444-451. ISSN 1660-4601.

[328] HAMIDI, Y., ZAMAN, P. A. *Quality management in health systems of developed and developing countries: which approaches and models are appropriate?* In: Journal of Research in Health Sciences, 2008, nr. 8(2), p. 40-50. ISSN 2228-7795.

Appendix 29

Characteristics of models for improving quality management of medical services

Model	Characteristic	Example Country
EFQM model (European Foundation for Quality Management)[329]	integral management with an emphasis on continuous improvement. It includes nine criteria (leadership, policy and strategy, people management, partnerships, resources and processes, key performance results and results of people, clients and society)	used in European countries such as United Kingdom, Germany, France, Italy, as well as in other regions of the world (Asia, Latin America).
MBQA model (Malcolm Baldrige Quality Award)[330]	focused on improving the quality and productivity of the organization and is based on seven criteria (leadership, strategic planning, customer and market orientation, measurement, analysis and knowledge management, human resource orientation, process and results management), puts emphasis on strategic management, results analysis and continuous improvement.	
Six Sigma model[331]	The methodology emphasizes minimizing defects and shortcomings in processes. When applied to medical services, it can be used to reduce errors in diagnosis, treatment and administrative procedures.	The model is mainly used in the USA and India.
TQM (Total Quality Management) model[332]	Involving all levels of staff in improving quality, creating a culture of continuous improvement and focusing on patient needs.	The model is typically in use in Japan and the USA, but today it has spread almost everywhere.
Lean Healthcare model [333]	Aims to identify and eliminate redundant activities and processes, which can lead to more efficient and high-quality health care.	The model is popular in Japan and the USA.

Source: developed by the author based on [329-333]

[329]The EFQM Model. [accessed 16.11.2022]. Available at: https://efqm.org/the-efqm-model/

[330]Malcolm Baldrige National Quality Award. [accessed 21.11.2022]. Available at: https://www.nist.gov/baldrige/baldrige-award

[331] AHMED, S. *Integrating DMAIC approach of Lean Six Sigma and theory of constraints toward quality improvement in healthcare*. In: Reviews on environmental health, 2019, nr. 34(4), p. 427-434. ISSN 00487554.

[332] PATEL, G. *Total quality management in healthcare*. In: The Midas Journal, 2009, nr. 23(3), p. 1-4. ISSN 2182-9543.

[333] CATALYST, N. *What is lean healthcare*? In: NEJM Catalyst, 2018, nr. 4(2). [accessed 28.12.2021]. Available at: https://catalyst.nejm.org/doi/full/10.1056/CAT.18.0193

Appendix 30

Comparison of healthcare quality management tools used in Israel and other countries

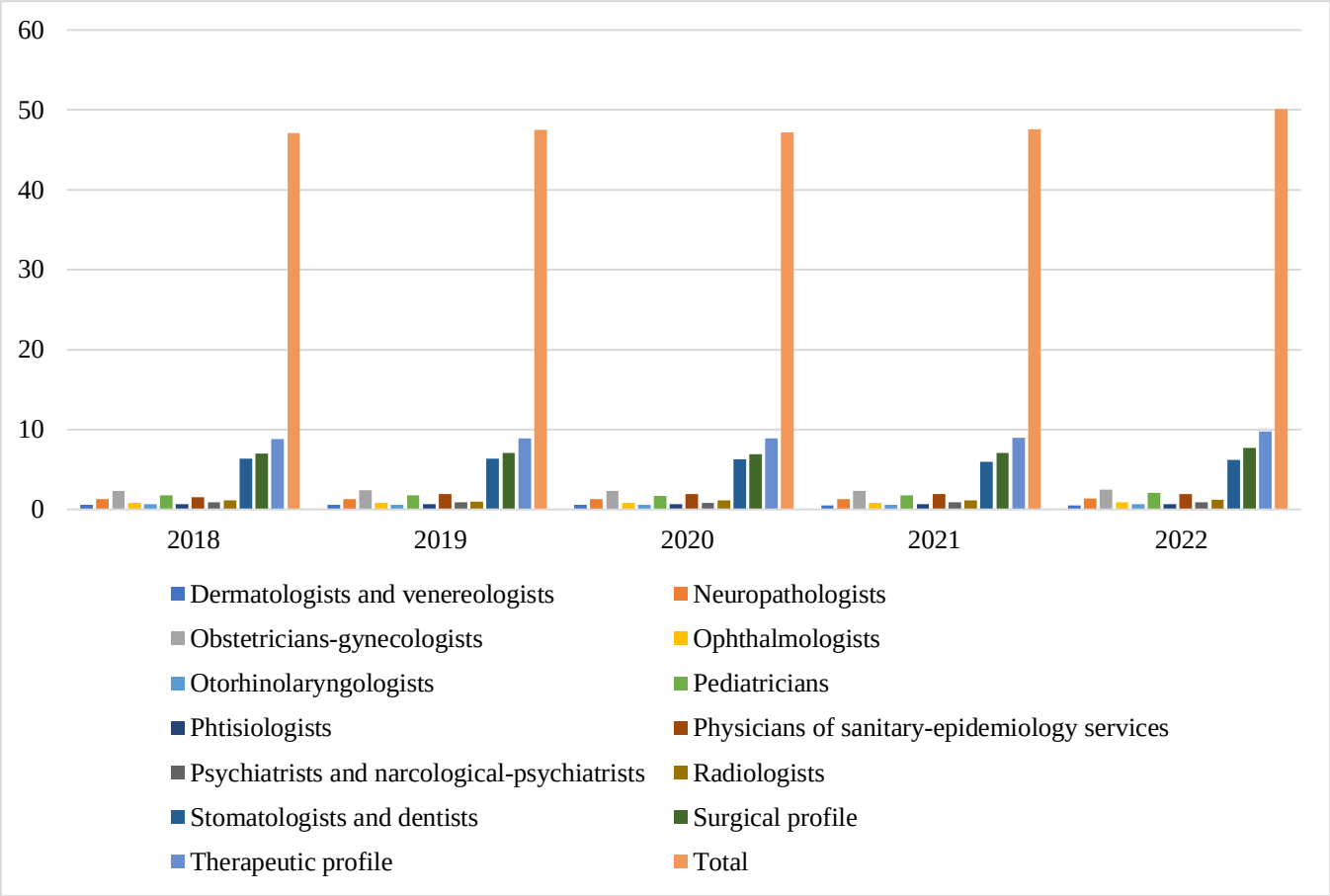
Tool	US	UK	Canada	Western Europe	Australia	Moldova	Israel
Legislation							
Quality indicators							
Clinical guidelines							
Accreditation							
Expert review							
Financial incentive							
Registration							
Specific directions:							
Infection control							
Choosing wisely							
Patient safety							
Patient Experience							
Health disparities							

	Not used
	Somewhat used
	Widely used

Source: developed by the author

Appendix 31

Physicians by Specialty, per 10000 inhabitants in the Republic of Moldova, 2018-2022



Source: developed by the author based on[334]

[334] *National bureau of statistics of the republic of Moldova.* [accessed 21.03.2023]. Available at: https://statbank.statistica.md/PxWeb/pxweb/en/30%20Statistica%20sociala/30%20Statistica%20sociala__08%20SAN__SAN060/?rxid=2345d98a-890b-4459-bb1f-9b565f99b3b9

Appendix 32

National Expenditure on Health in Israel depending on the source of funding 2019-2022

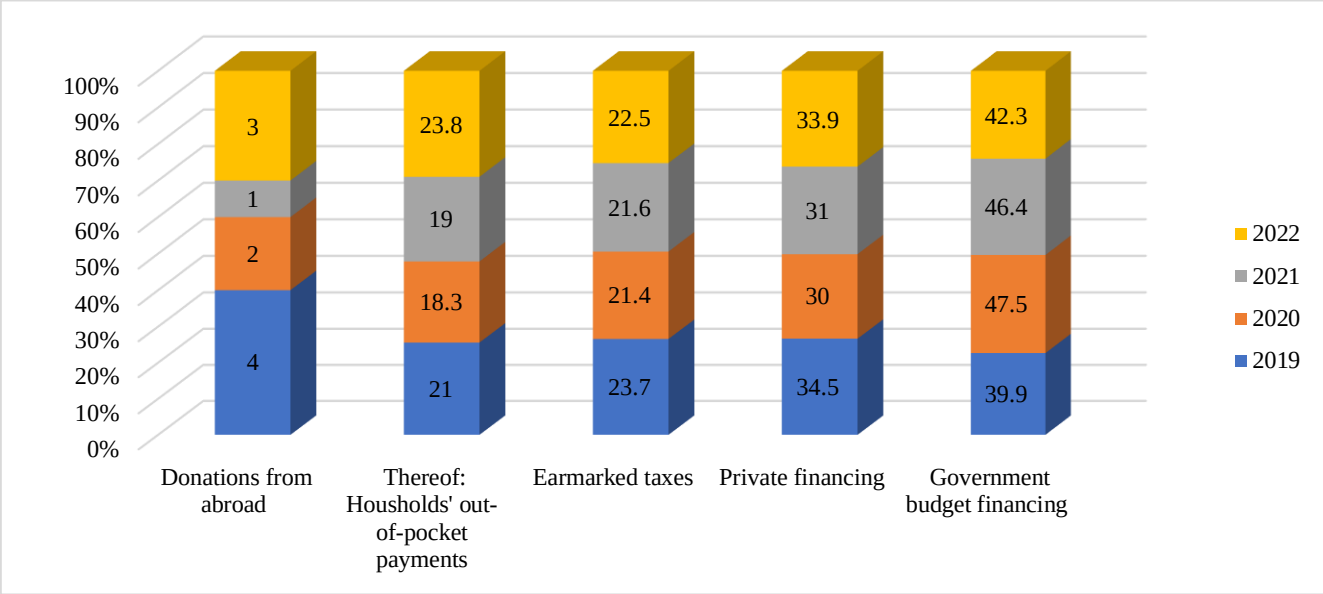


Figure 32.1. National Expenditure on Health in Israel depending on the source of funding 2019-2022 , %

Source: developed by the author based on[335]

[335] *Central Bureau of Statistics of Israeli*. [accessed 21.12.2022]. Available at: https://www.cbs.gov.il/en/Statistics/Pages/Generators/Time-Series-DataBank.aspx?level_1=4

Table 32.1. National Expenditure on Health in Israel depending on the source of funding 2019-2022, million dollars

Period	Grand Total Original data in current prices N.I.S. millions Current Prices	Government budget financing Original data in current prices N.I.S. millions Current Prices	Earmarked taxes Original data in current prices N.I.S. millions Current Prices	Private financing Original data in current prices N.I.S. millions Current Prices	Thereof: Housholds' out-of-pocket payments Original data in current prices N.I.S. millions Current Prices	Donations from abroad Original data in current prices N.I.S. millions Current Prices
2019	107 288	42 793	25 460	36 958	22 479	2 077
2020	118 236	56 210	25 267	35 473	21 669	1 286
2021	126 387	58 692	27 307	39 185	23 966	1 203
2022	132 566	56 037	29 825	44 944	31 527	1 760

Source: developed by the author based on[336]

Table 32.2. National Expenditure on Health in Israel depending on the source of funding 2019-2022, %

Period	Government budget financing Original data in current prices percentages As percent of total Current Prices	Earmarked taxes Original data in current prices percentages As percent of total Current Prices	Private financing Original data in current prices percentages As percent of total Current Prices	Thereof: Housholds' out-of-pocket payments Original data in current prices percentages As percent of total Current Prices	Donations from abroad Original data in current prices percentages As percent of total Current Prices
2019	39,9	23,7	34,5	21,0	1,9
2020	47,5	21,4	30,0	18,3	1,1
2021	46,4	21,6	31,0	19,0	1,0
2022	42,3	22,5	33,9	23,8	1,3

Source: developed by the author based on[337]

[336] *Central Bureau of Statistics of Israeli*. [accessed 21.12.2022]. Available at: https://www.cbs.gov.il/en/Statistics/Pages/Generators/Time-Series-DataBank.aspx?level_1=4

[337] *Central Bureau of Statistics of Israeli*. [accessed 21.12.2022]. Available at: https://www.cbs.gov.il/en/Statistics/Pages/Generators/Time-Series-DataBank.aspx?level_1=4

Appendix 33

Doctors per 1000 inhabitants, 2022

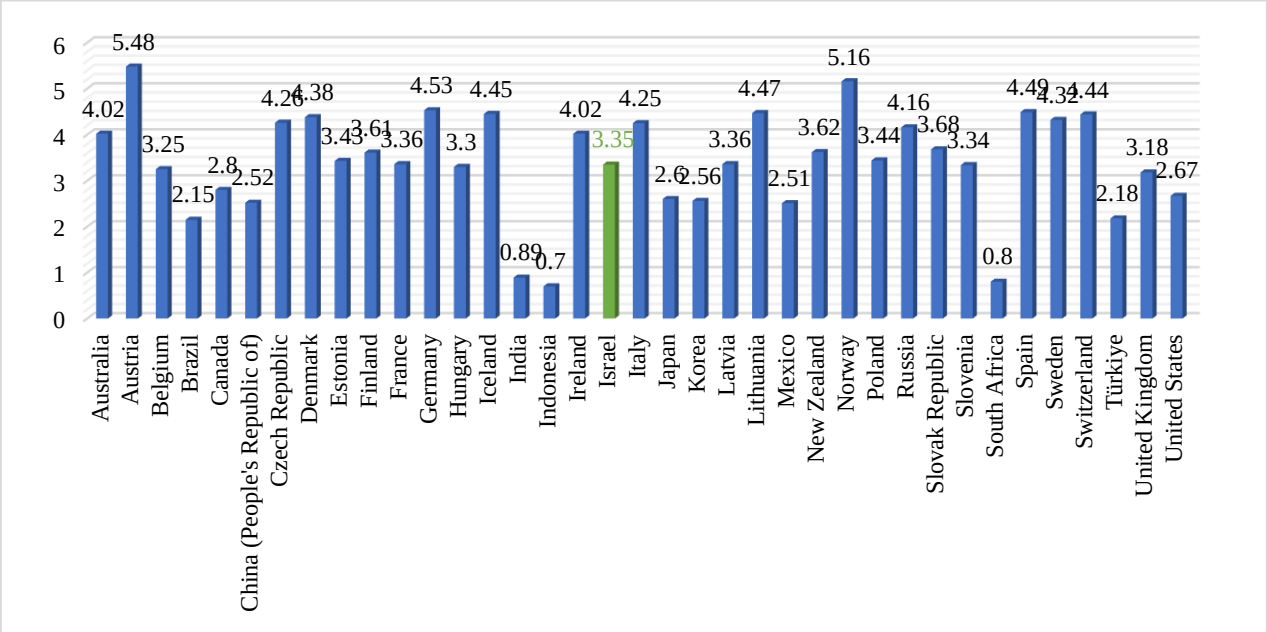


Figure 33.1. Doctors per 1000 inhabitants, 2022

Source: [338]

[338] *OECD statistics*. [accessed 21.03.2023]. Available at: https://data.oecd.org/healthres/doctors.htm

Table 33.1. Doctors per 1000 inhabitants, 2022

County	Count	County	Count
Australia	4,02	Japan	2,6
Austria	5,48	Korea	2,56
Belgium	3,25	Latvia	3,36
Brazil	2,15	Lithuania	4,47
Canada	2,8	Mexico	2,51
China (People's Republic of)	2,52	New Zealand	3,62
Czech Republic	4,26	Norway	5,16
Denmark	4,38	Poland	3,44
Estonia	3,43	Russia	4,16
Finland	3,61	Slovak Republic	3,68
France	3,36	Slovenia	3,34
Germany	4,53	South Africa	0,8
Hungary	3,3	Spain	4,49
Iceland	4,45	Sweden	4,32
India	0,89	Switzerland	4,44
Indonesia	0,7	Türkiye	2,18
Ireland	4,02	United Kingdom	3,18
Israel	3,35	United States	2,67
Italy	4,25		

Source: [339]

[339] *OECD statistics*. [accessed 21.03.2023]. Available at: https://data.oecd.org/healthres/doctors.htm

Appendix 34

Licenced physicians employed in Israel, 2012-2020

Year	Licenced (1)	Licenced and reside in Israel (2)	Licenced and employed in Israel (3)	Licenced and employed in the health industry (4)
2012	32 404	29 129	24 661	23 494
2013	33 374	30 253	25 426	23 725
2014	34 301	31 134	26 219	24 494
2015	35 270	32 024	27 705	25 731
2016	36 256	32 868	28 086	26 358
2017	37 437	34 028	29 423	27 353
2018	38 768	35 376	30 591	28 618
2019	40 167	36 709	31 866	29 803
2020	41 343	37 883	32 758	30 529

Source: [340]

[340] *Central Bureau of Statistics of Israeli*. [accessed 25.02.2023]. Available at: https://www.cbs.gov.il/en/subjects/Pages/Health.aspx

Appendix 35

Hospitals by type and ownership in Israel, 2019-2021

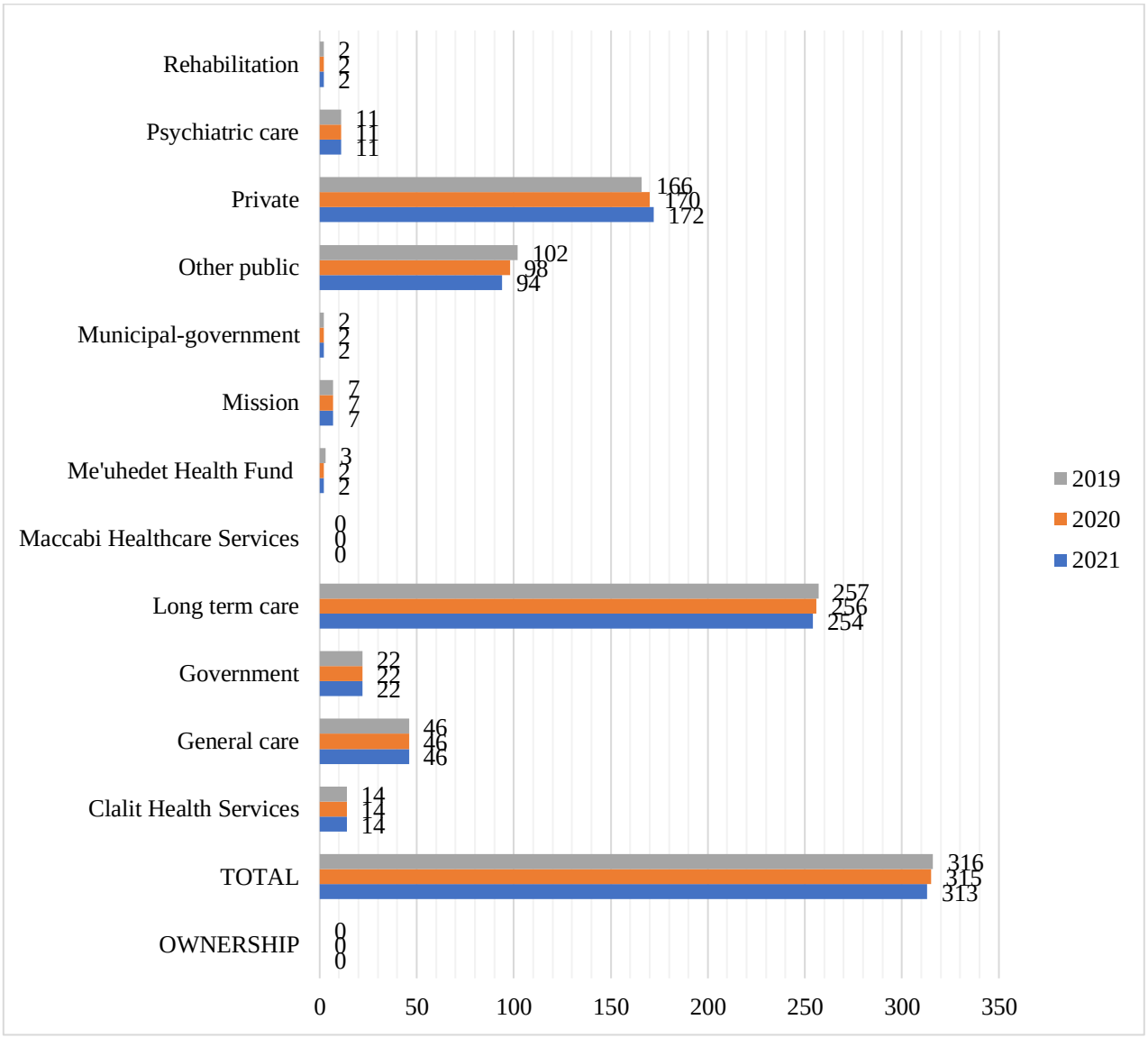


Figure 35.1. Hospitals by type and ownership in Israel, 2019-2021

Source: developed by the author based on[341]

[341] *Central Bureau of Statistics of Israeli*. [accessed 21.12.2022]. Available at: https://www.cbs.gov.il/en/publications/Pages/2022/Health-Statistical-Abstract-of-Israel-2022-No.73.aspx

Table 35.1. Hospitals by type and ownership in Israel, 2019-2021

Ownership	Rehabilitation	Long term care (2)	Psychiatric care	General care	Grand total
Government	243	1 780	2 923	6 000	10 946
Municipal-government	64	32	30	1 478	1 604
Clalit Health Services (3)	343	551	339	4 864	6 097
Me'uhedet Health Fund	-	179	-	-	179
Mission	20	139	20	506	685
Other public (4)	198	6 830	170	3 095	10 293
Private	62	15 797	78	465	16 402
TOTAL	**930**	**25 308**	**3 560**	**16 408**	**46 206**

Source: [342]

[342] *Central Bureau of Statistics of Israeli*. [accessed 21.12.2022]. Available at: https://www.cbs.gov.il/en/publications/Pages/2022/Health-Statistical-Abstract-of-Israel-2022-No.73.aspx

Appendix 36

Hospital beds per 1000 inhabitants, 2022

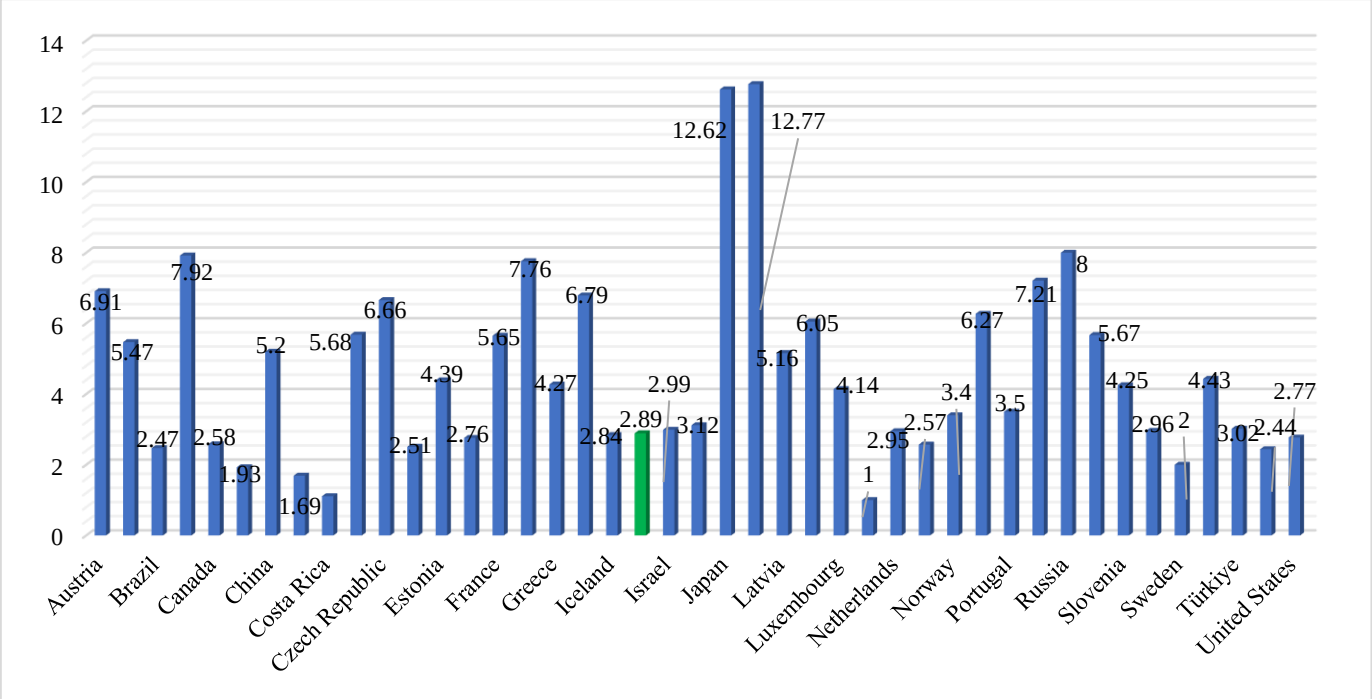


Figure 36.1. Hospital beds per 1000 inhabitants, 2022

Source: developed by the author based on[343]

[343] *Central Bureau of Statistics of Israeli*. [accessed 21.12.2022]. Available at: https://www.cbs.gov.il/en/publications/Pages/2022/Health-Statistical-Abstract-of-Israel-2022-No.73.aspx

Table 36.1. Hospital beds per 1000 inhabitants by country, 2022

Country	Count	Country	Count
Austria	6,91	Japan	12,62
Belgium	5,47	Korea	12,77
Brazil	2,47	Latvia	5,16
Bulgaria	7,92	Lithuania	6,05
Canada	2,58	Luxembourg	4,14
Chile	1,93	Mexico	1
China	5,2	Netherlands	2,95
Colombia	1,69	New Zealand	2,57
Costa Rica	1,11	Norway	3,4
Croatia	5,68	Poland	6,27
Czech Republic	6,66	Portugal	3,5
Denmark	2,51	Romania	7,21
Estonia	4,39	Russia	8
Finland	2,76	Slovak Republic	5,67
France	5,65	Slovenia	4,25
Germany	7,76	Spain	2,96
Greece	4,27	Sweden	2
Hungary	6,79	Switzerland	4,43
Iceland	2,84	Türkiye	3,02
Ireland	2,89	United Kingdom	2,44
Israel	2,99	United States	2,77
Italy	3,12		

Source: [344]

[344] *Central Bureau of Statistics of Israeli*. [accessed 21.12.2022]. Available at: https://www.cbs.gov.il/en/publications/Pages/2022/Health-Statistical-Abstract-of-Israel-2022-No.73.aspx

Appendix 37

Beds in hospitals of Israel by ownership, 2022

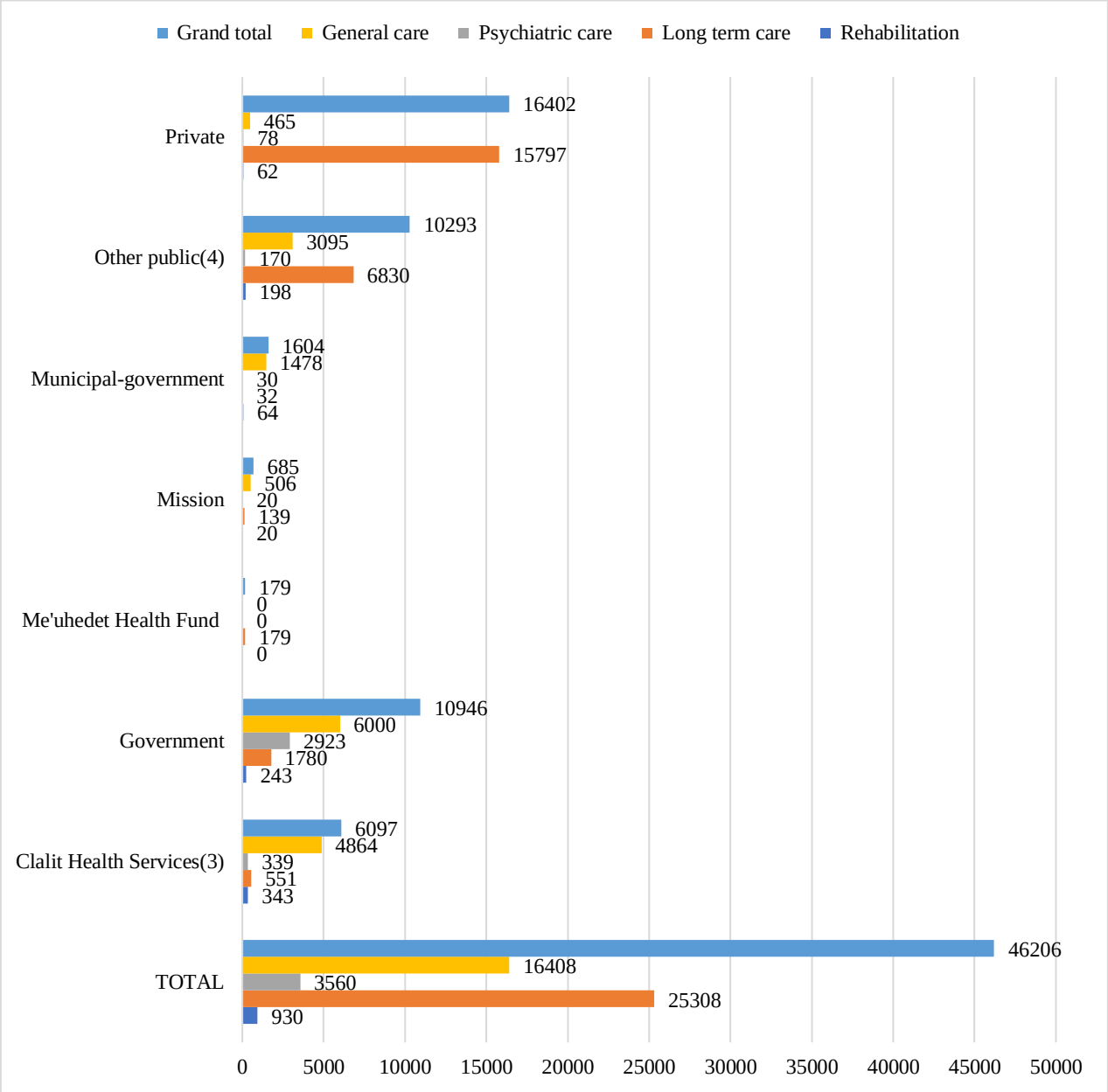


Figure 37.1. Beds in hospitals of Israel by ownership, 2022

Source: developed by the author based on[345]

[345] *Central Bureau of Statistics of Israeli*. [accessed 21.12.2022]. Available at: https://www.cbs.gov.il/en/publications/Pages/2022/Health-Statistical-Abstract-of-Israel-2022-No.73.aspx

Table 37.1. Beds in hospitals of Israel, by ownership, 2022

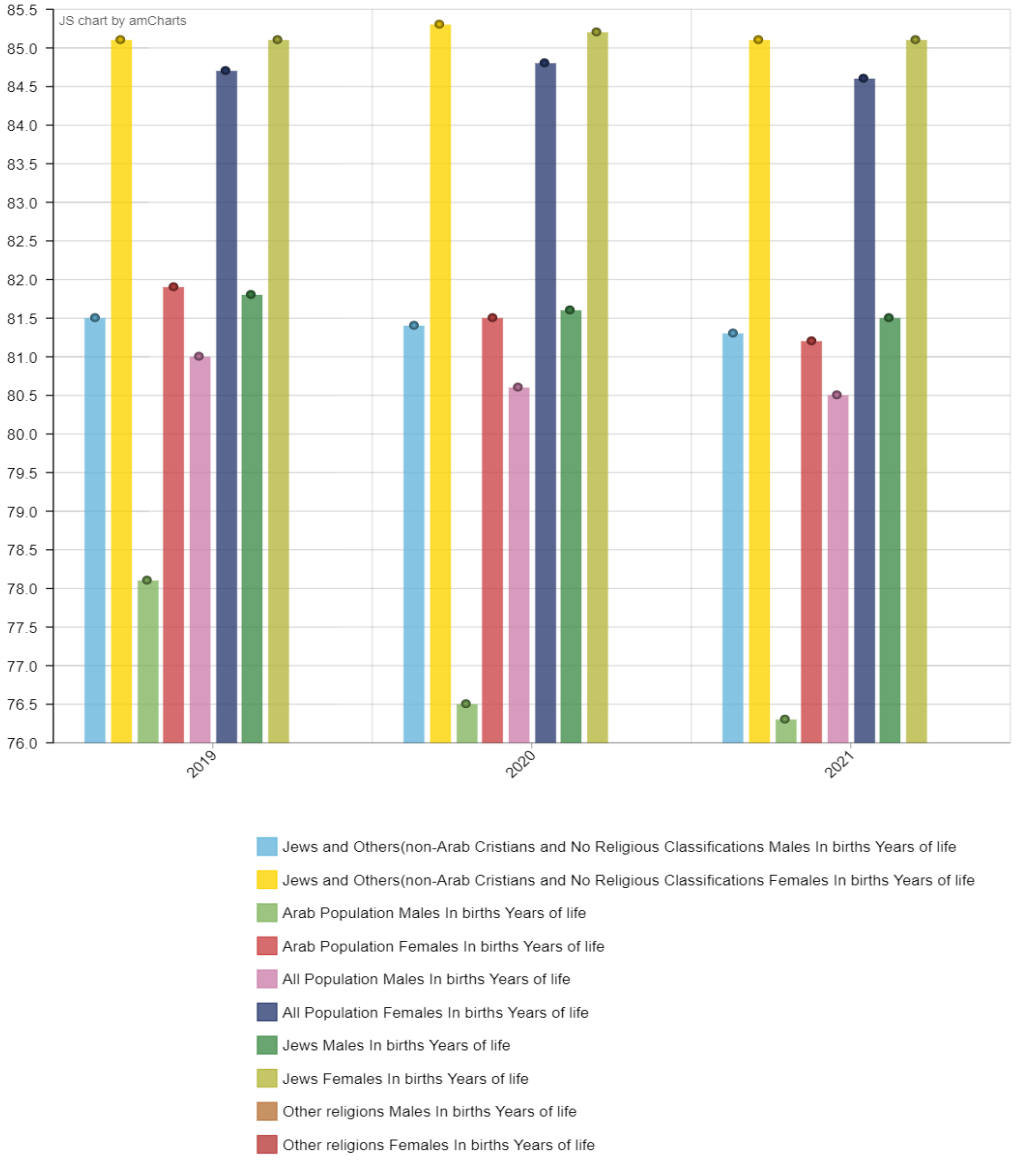
Ownership	Rehabilitation	Long term care (2)	Psychiatric care	General care	Grand total
Government	243	1 780	2 923	6 000	10 946
Municipal-government	64	32	30	1 478	1 604
Clalit Health Services (3)	343	551	339	4 864	6 097
Me'uhedet Health Fund	-	179	-	-	179
Mission	20	139	20	506	685
Other public (4)	198	6 830	170	3 095	10 293
Private	62	15 797	78	465	16 402
TOTAL	**930**	**25 308**	**3 560**	**16 408**	**46 206**

Source: [346]

[346] *Central Bureau of Statistics of Israeli*. [accessed 21.12.2022]. Available at: https://www.cbs.gov.il/en/publications/Pages/2022/Health-Statistical-Abstract-of-Israel-2022-No.73.aspx

Appendix 38

Life expectancy of the Israeli population in years of age, 2019-2021

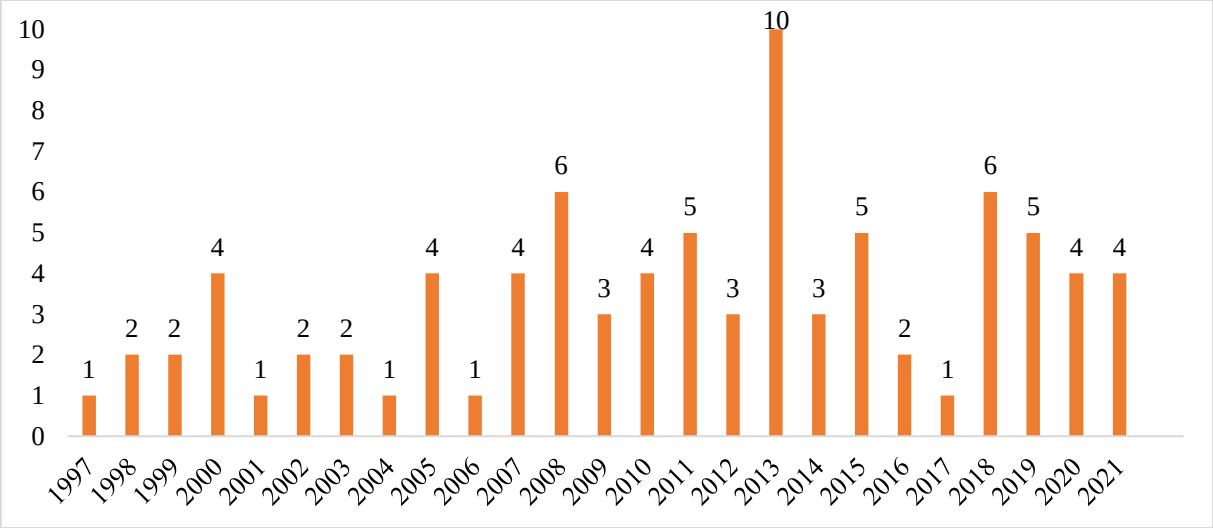


Source: [347]

[347] *Central Bureau of Statistics of Israeli*. [accessed 21.12.2022]. Available at: https://www.statista.com/statistics/970780/life-expectancy-at-birth-in-israel-by-gender/

Appendix 39

Number of clinical guidelines published by the Israeli Medical Association, by year



Source: developed by the author based on[348]

[348] Israeli Medical Association. [accessed 21.02.2023]. Available at: https://jewishmedicalassociationuk.org/medicine-in-israel/israel-medical-association/

Appendix 40

List of public and private hospitals in Israel

	Name	Type of ownership	Location
1.	Galilee Medical Center	State	Israel, Nahariya
2.	Rivka Ziv Medical Center	State	Israel, Safed
3.	Poriya Medical Center	State	Israel, Tiberias
4.	Rambam Medical Center	State	Israel, Haifa
5.	Bnei Zion Hospital	State	Israel, Haifa
6.	Hillel Yafe Medical Center	State	Israel, Hadera
7.	Tel Aviv Medical Center	State	Israel. Tel Aviv
8.	Sheba Medical Center	State	Israel, Ramat Gan
9.	Wolfson Hospital	State	Israel, Holon
10.	Shamir Medical Center	State	Israel, Zerifin
11.	Barzilai Hospital	State	Israel, Ashkelon
12.	Carmel Medical Center	Clalit Health Fund	Israel, Haifa
13.	Emek Medical Center	Clalit Health Fund	Israel, Afula
14.	Meir Medical Center	Clalit Health Fund	Israel, Kfar Sava
15.	Rabin Medical Center	Clalit Health Fund	Israel, Petah Tikva
16.	Kaplan Medical Center	Clalit Health Fund	Israel, Rehovot
17.	Soroka Medical Center	Clalit Health Fund	Israel, Beersheba
18.	Yoseftal Hospital	Clalit Health Fund	Israel, Eilat
19.	Schneider Children's Hospital	Clalit Health Fund	Israel, Petah Tikva
20.	Assuta Ashdod hospital	Maccabi health fund	Israel, Ashdod
21.	Maayaney Hayeshua	Other public	Israel, Beni Brak
22.	Shaare Zedek Hospital	Other public	Israel, Jerusalem
23.	Hadassah Medical Center	Other public	Israel, Jerusalem
24.	EMMS Hospital	Other public	Israel, Nazareth
25.	Sacred Family Hospital	Other public	Israel, Nazareth
26.	French Hospital	Other public	Israel, Nazareth
27.	Laniado Hospital	Other public	Israel, Netanya
28.	Elisha Hospital	Private	Israel, Haifa
29.	Horev Clinic	Private	Israel, Haifa
30.	Assuta Clinic	Private	Israel, Haifa
31.	Italian Hospital	Private	Israel, Haifa
32.	Herzliya Clinic	Private	Israel, Herzliya
33.	Assuta Clinic	Private	Israel, Tel Aviv
34.	Assuta Rishon Le'zion clinic	Private	Israel, Rishon Le'zion
35.	Assuta Beersheba	Private	Israel, Beersheba

Source: developed by the author based on [349]

[349] *Israeli hospitals*. [accessed 03.02.2023]. Available at: https://www.hevra.org.il/%D7%A8%D7%A9%D7%99%D7%9E%D7%AA-%D7%91%D7%AA%D7%99-%D7%97%D7%95%D7%9C%D7%99%D7%9D/

Appendix 41

Therapeutic sequence in public general hospitals in Israel, 2023

Hospital name	Institution grade %	Internal department %	Surgical Ward %	Other department %	Overall satisfaction %
Soroka	87	84	87	96	88,5
Billinson	87	87	83	89	86,5
Meir	84	83	83	87	84,25
Kaplan	82	72	82	93	82,25
Carmel	88	87	89	90	88,5
Emek	85	84	85	89	85,75
Golda	89	86	89	95	89,75

Source: [350]

[350] *Quality indicators in institutions***.** [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality

Appendix 42

Attitude and respect for the patient in public general hospitals in Israel, 2023

Hospital name	Institution grade %	Internal department %	Surgical Ward %	Other department %	Overall satisfaction %
Soroka	89	87	91	89	89
Billinson	91	93	87	92	90,75
Meir	88	87	88	90	88,25
Kaplan	87	79	88	95	87,25
Carmel	92	91	91	95	92,25
Emek	88	88	88	93	89,25
Golda	92	92	90	95	92,25

Source: [351]

[351] *Quality indicators in institutions***.** [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality

Appendix 43

Providing information in public general hospitals in Israel, 2023

Hospital name	Institution grade %	Internal department %	Surgical Ward %	Other department %	Overall satisfaction %
Soroka	87	84	87	96	88,5
Billinson	87	87	83	89	86,5
Meir	84	83	83	87	84,25
Kaplan	82	72	82	93	82,25
Carmel	88	87	89	90	88,5
Emek	85	84	85	89	85,75
Golda	89	86	89	95	89,75

Source: [352]

[352] *Quality indicators in institutions***.** [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality

Appendix 44

Physical conditions in public general hospitals in Israel, 2023

Hospital name	Institution grade %	Internal department %	Surgical Ward %	Other department %	Overall satisfaction %
Soroka	82	79	86	89	84
Billinson	85	83	81	88	84,25
Meir	80	80	77	84	80,25
Kaplan	71	61	76	79	71,75
Carmel	84	83	81	87	83,75
Emek	81	76	88	85	82,5
Golda	83	80	83	85	82,75

Source: [353]

[353] *Quality indicators in institutions***.** [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality

Appendix 45

Treatment effectiveness in public general hospitals in Israel, 2023

Hospital name	Institution grade %	Internal department %	Surgical Ward %	Other department %	Overall satisfaction %
Soroka	87	85	87	93	88
Billinson	89	90	85	89	88,25
Meir	87	87	87	86	86,75
Kaplan	86	79	88	90	85,75
Carmel	88	86	89	92	88,75
Emek	84	85	82	89	85
Golda	91	88	90	95	91

Source: [354]

[354] *Quality indicators in institutions***.** [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality

Appendix 46

Overall patient satisfaction in public general hospitals in Israel, 2023

Hospital name	Institution grade %	Internal department %	Surgical Ward %	Other department %	Overall satisfaction %
Soroka	82	79	82	96	84,75
Billinson	85	86	80	86	84,25
Meir	81	82	76	86	81,25
Kaplan	74	61	72	91	74,5
Carmel	84	80	86	89	84,75
Emek	75	69	80	87	77,75
Golda	86	86	84	91	86,75

Source: [355]

[355] *Quality indicators in institutions***.** [accessed 22.01.2023]. Available at: https://datadashboard.health.gov.il/portal/dashboard/serviceQuality

Appendix 47

Performance in quality indicators in the community over time

Indicator	First Year	Performance in the First Year	Performance, 2014	Performance, 2018
Influenza vaccine, asthma	2003	23.1%	**41.7%**	35.3%
Asthma medication ratio>0.5	2014		67.4%	**70.9%**
Spirometry in COPD	2013	52.0%	**57.9%**	**75.5%**
Mammography	2003	51.6%	**69.3%**	**72.5%**
Colorectal screening	2003	11.8%	**58.3%**	**64.8%**
PAP smear, 3y	2014		48.1%	51.5%
Influenza vaccine >65y	2003	43.9%	**63.4%**	60.4%
Pneumococcal vaccine	2008	70.9%	**76.6%**	77.5%
Periodic testing for Hb A1c in diabetes	2003	85.2%	**90.0%**	90.7%
Hb A1c – good control	2003	42.0%	**66.4%**	**70.8%**
Ab A1c >9%	2003	17.8%	**11.6%**	**9.6%**
LDL in diabetes	2003	83.5%	**90.8%**	90.9%
LDL <100 in diabetes	2003	39.2%	**63.1%**	66.0%
Eye exam in diabetes	2003	56.5%	**75.0%**	72.5%
Microalbumin tested	2003	38.8%	**78.6%**	**81.2%**
Influenza vaccine, diabetes	2003	38.6%	**61.6%**	59.8%
BP documented in diabetes	2003	38.7%	**90.0%**	90.7%
BMI documented in diabetes	2008	81.8%	**88.0%**	84.8%
Pneumococcal vaccine, diabetes	2008	76.3%	**81.9%**	**84.4%**
BP controlled in diabetes	2011	82.3%	**83.7%**	83.0%
Diabetic nephropathy	2011	31.5%	30.5%	32.1%
Cholesterol tested, 35-54y	2003	60.2%	**86.1%**	**88.1%**
Cholesterol tested, 55-74y	2003	63.2%	**76.7%**	75.3%
LDL controlled	2013	83.5%	**83.9%**	84.2%
LDL <100 in high risk patients	2013	27.8%	**30.8%**	34.4%
BP documented, 20-54y	2003	21.8%	**91.2%**	**92.5%**
BP documented, 55-74y	2003	30.6%	**81.9%**	80.8%
Body-mass index documented	2008	56.5%	**88.2%**	**89.6%**
Smoking status documented	2011	79.4%	**87.9%**	**90.7%**
Statins in ischemic heart disease	2014		82.2%	82.4%
Hemoglobin test in infants	2008	71.7%	**85.3%**	**88.3%**
Anemia in infants	2014		8.1%	8.2%
Benzodiazepines, elderly	2011	4.9%	5.2%	4.8%
Tertiary prevention, hip fracture	2015	25.5%	25.5%	28.1%
Antibiotics DDD per 1000	2014		20.8	19.1
Use of cephalosporins/quinolones	2014		22.1%	25.2%
Community psychiatrist care following psychiatric admission	2015		32.5%	37.3%

Bold print represents substantial improvement in comparison with previous time point (see Methods section). COPD = chronic obstructive pulmonary disease; PAP smear = Papanicolaou smear; LDL = low-density lipoprotein; BP = blood pressure; DDD = defined daily dose**.**

Source: developed by the author based on [356] [357] [358] [359]

[356] Ministry of Health. *National Program for Quality Indicators in the Community, Report for 2003-2005*, December 2006. [accessed 28.10.2022]. Available at: https://48fc89f4-e14d-48de-bdc0-ec96de79873e.filesusr.com/ugd/76a237_65674297b6444be7bb36ab2bd97034ac.pdf

[357] Ministry of Health. *National Program for Quality Indicators in the Community, Report for 2008-2010*, March 2012. [accessed 28.10.2022]. Available at: https://48fc89f4-e14d-48de-bdc0-ec96de79873e.filesusr.com/ugd/76a237_dd6bacba52ea4a6f89c6026351ec8e8b.pdf

[358] Ministry of Health. National Program for Quality Indicators in the Community, Report for 2011-2015. Available at https://48fc89f4-e14d-48de-bdc0-ec96de79873e.filesusr.com/ugd/76a237_8196a25144b843a78190e56a80cae1e1.pdf

[359] *International Profiles of Health Care Systems*, 2020. [accessed 28.10.2022]. Available at: https://www.commonwealthfund.org/international-health-policy-center/system-profiles

Appendix 48

Study Questionnaires

Objective data collected for each hospital

1) Hospital's name: _____
2) Number of employed physicians _____
3) Number of employed nurses _____
4) Number of total directly employed hospital workers _____
5) Does the hospital have a quality committee?
   a) Yes
   b) No
6) If you answered "yes", who sits on the committee (please mark all who apply):
   a) Hospital's director general
   b) Hospital's deputy director general(s)
   c) Nursing director
   d) Administrative director
   e) Members of the quality unit
   f) Members of the risk management unit
   g) Members of the infection prevention unit
   h) Members of the human resources department
   i) Members of the patient experience / service unit
   j) Members of the finance department
   k) Members of the information technology department
   l) Pharmacy
   m) Others – please specify: _____
7) Does the hospital have a senior leader responsible for quality?
   a) Yes
   b) No
8) If you answered "yes", who is this leader?
   a) Hospital's director general
   b) Hospital's deputy director general(s)
   c) Nursing director
   d) Administrative director
   e) A senior physician
   f) A senior nurse
   g) A senior administrator
   h) Other – please specify: _____
9) Does the hospital have a senior leader responsible for patient safety and risk management?
   a) Yes
   b) No
10) If you answered "yes", who is this leader?
   a) Hospital's director general
   b) Hospital's deputy director general(s)
   c) Nursing director
   d) Administrative director
   e) A senior physician
   f) A senior nurse
   g) A senior administrator
   h) Other – please specify: _____
11) Are quality and patient safety managed by the same person?

a) Yes
b) No

12) Does the hospital have a senior leader responsible infection prevention?
a) Yes
b) No

13) If you answered "yes", who is this leader?
a) Hospital's director general
b) Hospital's deputy director general(s)
c) Nursing director
d) Administrative director
e) A senior physician
f) A senior nurse
g) A senior administrator
h) Other – please specify: _____

14) Does the hospital have an infection prevention and control unit which meets the MOH's requirements?
a) Yes
b) The hospital has an infection prevention and control unit but it does not fully meet the MOH's requirements
c) No

15) Does the hospital have a senior leader responsible for patient's experience / service?
a) Yes
b) No

16) If you answered "yes", who is this leader?
a) Hospital's director general
b) Hospital's deputy director general(s)
c) Nursing director
d) Administrative director
e) A senior physician
f) A senior nurse
g) A senior administrator
h) The service director
i) Other – please specify: _____

17) Does the hospital monitor its performance in quality indicators?
a) Yes
b) No

18) If you answered "yes", which tools are used for this goal? (please mark all that apply):
a) Timely leadership meetings
b) Timely meetings at the department's level
c) Timely meetings for leadership and the departments
d) During annual work plans meetings with the departments
e) During semiannual / quarterly follow-up meetings with the departments
f) Email communications between leadership members
g) Email communications between leadership and the departments
h) A computerized report system that allows reports to be "pulled"
i) A computerized report system that allows reports to be "pushed"
j) Other – please specify: _____

19) Does the hospital monitor the frequency of adverse events?
a) Yes
b) No

20) If you answered "yes", which tools are used for this goal? (please mark all that apply):
a) Timely leadership meetings

b) Timely meetings at the department's level
c) Timely meetings for leadership and the departments
d) Timely meetings of the quality and patients safety unit(s)
e) During annual work plans meetings with the departments
f) During semiannual / quarterly follow-up meetings with the departments
g) Email communications between leadership members
h) Email communications between leadership and the departments
i) A computerized report system that allows reports to be "pulled"
j) A computerized report system that allows reports to be "pushed"
k) Other – please specify: _____

21) Does the hospital monitor the frequency of "near-miss" events?
a) Yes
b) No

22) If you answered "yes", which tools are used for this goal? (please mark all that apply):
a) Timely leadership meetings
b) Timely meetings at the department's level
c) Timely meetings for leadership and the departments
d) Timely meetings of the quality and patients safety unit(s)
e) During annual work plans meetings with the departments
f) During semiannual / quarterly follow-up meetings with the departments
g) Email communications between leadership members
h) Email communications between leadership and the departments
i) A computerized report system that allows reports to be "pulled"
j) A computerized report system that allows reports to be "pushed"
k) Other – please specify: _____

23) Does the hospital monitor the frequency of healthcare-associated infections?
a) Yes
b) No

24) If you answered "yes", which tools are used for this goal? (please mark all that apply):
a) Timely leadership meetings
b) Timely meetings at the department's level
c) Timely meetings for leadership and the departments
d) Timely meetings of the infection prevention unit
e) Timely meetings of the institutional committee for infection prevention
f) During annual work plans meetings with the departments
g) During semiannual / quarterly follow-up meetings with the departments
h) Email communications between leadership members
i) Email communications between leadership and the departments
j) A computerized report system that allows reports to be "pulled"
k) A computerized report system that allows reports to be "pushed"
l) Other – please specify: _____

25) Does the hospital monitor waiting times for ambulatory services?
a) Yes
b) No

26) If you answered "yes", which tools are used for this goal? (please mark all that apply):
a) Timely leadership meetings
b) Timely meetings at the department's level
c) Timely meetings for leadership and the departments
d) Timely meetings of the ambulatory services / outpatient clinics leadership
e) During annual work plans meetings with the departments
f) During semiannual / quarterly follow-up meetings with the departments

g) Email communications between leadership members
h) Email communications between leadership and the departments
i) A computerized report system that allows reports to be "pulled"
j) A computerized report system that allows reports to be "pushed"
k) Other – please specify: _____

27) Does the hospital monitor patient's experience / satisfaction?
a) Yes
b) No

28) If you answered "yes", which domains are monitored? (please mark all that apply):
a) Inpatient services
b) The emergency department
c) Outpatient services
d) Other – please specify: _____

29) If you answered "yes", which tools are used for this goal? (please mark all that apply):
a) Timely leadership meetings
b) Timely meetings at the department's level
c) Timely meetings for leadership and the departments
d) Timely meetings of the patient experience / service unit
e) During annual work plans meetings with the departments
f) During semiannual / quarterly follow-up meetings with the departments
g) Email communications between leadership members
h) Email communications between leadership and the departments
i) A computerized report system that allows reports to be "pulled"
j) A computerized report system that allows reports to be "pushed"
k) Other – please specify: _____

30) Does the hospital monitor providers' well-being / burnout?
a) Yes
b) No

31) If you answered "yes", which tools are used for this goal? (please mark all that apply):
a) Timely leadership meetings
b) Timely meetings at the department's level
c) Timely meetings for leadership and the departments
d) Timely meetings of the human resources department
e) During annual work plans meetings with the departments
f) During semiannual / quarterly follow-up meetings with the departments
g) Email communications between leadership members
h) Email communications between leadership and the departments
i) A computerized report system that allows reports to be "pulled"
j) A computerized report system that allows reports to be "pushed"
k) Other – please specify: _____

32) Is the hospital accredited by Joint Commission International (JCI)?
a) Yes, currently accredited
b) No, the hospital was previously accredited but voluntarily withdrawn
c) No, the hospital was previously accredited and we intend to be re-accredited within the next two years
d) No, but we intend to be accredited within the next two years
e) No

33) Did the hospital have at least one "examining committee" following an adverse event within the last year?
a) Yes
b) No

34) Did the hospital have at least one “review and quality committee” within the last year?
    a) Yes
    b) No
35) If you answered “yes”, how many different topics did such committee(s) examine?
    a) 1
    b) 2
    c) 3
    d) 4
    e) 5 or more
36) If you answered “yes”, were any changes / improvements done following the committee(s)’ work?
    a) Yes – improved policies written
    b) Yes – improved implementation of policies
    c) Yes – improved work processes
    d) Yes – improved equipment / infrastructure
    e) Yes – other improvements, please specify: _____
    f) No
37) Did the hospital have any training on quality for staff within the last two years?
    a) Yes
    b) No
38) Did the hospital have any training on patient safety for staff within the last two years?
    a) Yes
    b) No
39) Did the hospital have any training on patient experience for staff within the last two years?
    a) Yes
    b) No

Source: developed by the author

Appendix 49

Hospital characteristics and the choice of tools to promote quality

Hospital attribute	CEO / Deputy CEO in charge of Quality	Training in quality	Median number of quality committee members	Median number of tools employed
Ownership:				
Government	3 (60%)	3 (75%)	7	8
Clalit	5 (71%)	6 (86%)	8.5	8
Other	1 (50%)	2 (100%)	9	6.5
P value	0.830	0.631	0.241	0.185
Size:				
Large	3 (43%)	5 (83%)	8.5	8
Medium	4 (100%)	4 (100%)	7	8.5
Small	2 (67%)	2 (67%)	7	7
P value	0.163	0.670	0.463	0.325
JCI accredited:				
Yes	6 (67%)	6 (75%)	8	8
No	3 (60%)	5 (100%)	7.5	8
P value	1.000	0.487	0.752	0.092
Location:				
Periphery	3 (60%)	3 (60%)	8	8
Center	6 (67%)	8 (100%)	8	8
P value	1.000	0.128	0.356	0.470

Source: developed by the author

Appendix 50

Tools used to promote patient safety in Israeli hospitals

Parameter	Category	Frequency	Mean ± SD (Median)
A senior leader is in charge of the patient safety program	Yes	14 (100%)	-
Role of the senior leader	Director General / CEO	1 (7.1%)	-
	Deputy Director General / Deputy CEO	5 (36%)	-
	Chief nursing officer	1 (7.1%)	-
	Senior physician	6 (43%)	-
	Senior nurse	1 (7.1%)	-
Person in charge of the patient safety program is also responsible for the quality program	Yes	9 (64%)	-
The hospital monitors adverse events	Yes	14 (100%)	-
Tools used to monitor adverse events:	Timely leadership meetings	13 (93%)	-
	Timely meetings at the department's level	11 (79%)	-
	Timely meetings for leadership and the departments	11 (79%)	-
	Timely meetings of the quality and patient safety unit(s)	13 (93%)	-
	Annual work plans meetings with the departments	11 (79%)	-
	Semiannual / quarterly follow-up meetings with the departments	8 (57%)	-
	Email communications between leadership members	12 (86%)	-
	Email communications between leadership and the departments	10 (71%)	-
	A computerized report system that allows reports to be "pulled"	10 (71%)	-
	A computerized report system that allows reports to be "pushed"	6 (43%)	-
Number of tools used	NA	NA	8.1 ± 3.2 (9.5, 6.5-11)
The hospital monitors near-miss events	Yes	14 (100%)	-

Tools used to monitor near-miss events:	Timely leadership meetings	10 (71%)	-
	Timely meetings at the department's level	11 (79%)	-
	Timely meetings for leadership and the departments	12 (86%)	-
	Timely meetings of the quality and patient safety unit(s)	12 (86%)	-
	Annual work plans meetings with the departments	12 (86%)	-
	Semiannual / quarterly follow-up meetings with the departments	7 (50%)	-
	Email communications between leadership members	9 (64%)	-
	Email communications between leadership and the departments	11 (79%)	-
	A computerized report system that allows reports to be "pulled"	10 (71%)	-
	A computerized report system that allows reports to be "pushed"	5 (36%)	-
Number of tools used	NA	NA	7.0 ± 2.8 (7.5, 4.8-9.3)
The hospital used a root cause analysis of a sentinel event via a committee (n=13)	Yes	9 (69%)	
The hospital had at least one “Review and Quality” committee	Yes	13 (93%)	
Number of different topics covered by the committee	-	-	3.2 ± 1.9 (3, 2-5)
Benefits of the committees’ work	Improved policies written	8 (62%)	
	Improved implementation of policies	9 (69%)	
	Improved work processes	11 (85%)	
	Improved equipment / infrastructure	9 (69%)	
	Other (patient experience, clinicians’ well-being)	1 (3.4%)	
Does the hospital provide training in patient safety?	Yes	12 (92%)	

Source: developed by the author

Appendix 51

Hospital characteristics and the choice of tools to promote patient safety

Hospital attribute	CEO / Deputy CEO in charge of patient safety	Person in charge of patient safety is also in charge of quality	RCA committee within the last year	Review & Quality committee within the last year	Training in patient safety	Median number of mech. employed for adverse events	Median number of mech. employed for near miss events
Ownership:							
Government	3 (60%)	4 (80%)	2 (40%)	4 (80%)	3 (75%)	7	4
Clalit	3 (43%)	4 (57%)	5 (83%)	7 (100%)	7 (100%)	9.5	9
Other	0 (0%)	1 (50%)	2 (100%)	2 (100%)	2 (100%)	10	9
P value	0.350	0.634	0.141	0.379	0.279	0.143	0.098
Size:							
Large	3 (43%)	6 (86%)	5 (71%)	6 (86%)	6 (100%)	10	9
Medium	2 (50%)	2 (50%)	2 (50%)	4 (100%)	3 (75%)	9.5	9
Small	1 (33%)	1 (33%)	2 (100%)	3 (100%)	3 (100%)	7	4
P value	0.907	0.101	0.718	0.369	0.773	0.143	0.098
JCI accredited:							
Yes	4 (44%)	5 (56%)	6 (67%)	8 (89%)	8 (100%)	10	9
No	2 (40%)	4 (80%)	3 (75%)	5 (100%)	4 (80%)	7	5
P value	1.000	0.580	1.000	1.000	0.385	0.088	0.063
Location:							
Periphery	1 (20%)	1 (20%)	4 (80%)	5 (100%)	5 (100%)	10	7
Center	5 (55%)	8 (89%)	5 (63%)	8 (89%)	7 (88%)	9	8
P value	0.003	0.023	1.000	1.000	1.000	0.906	0.532

Source: developed by the author

Appendix 52

Tools used to promote infection control in Israeli hospitals

Parameter	Category	Frequency	Mean ± SD (Median)
A senior leader is in charge of the infection control program	Yes	14 (100%)	-
Role of the senior leader	Director General / CEO	1 (7.1%)	-
	Deputy Director General / Deputy CEO	6 (43%)	-
	Chief nursing officer	1 (7.1%)	-
	Senior physician	5 (36%)	-
	Senior nurse	1 (7.1%)	-
The hospital has an infection control unit	Yes, fully compatible with MOH requirements	10 (71%)	-
	Yes, but partially compatible with MOH requirements	3 (21%)	-
	No	1 (7.1%)	-
The hospital monitors hospital-acquired infections	Yes	14 (100%)	-
Tools used to monitor infection control: (n=13)	Timely leadership meetings	12 (92%)	-
	Timely meetings at the department's level	10 (77%)	-
	Timely meetings for leadership and the departments	11 (85%)	-
	Timely meetings of the infection prevention unit	13 (100%)	-
	Timely meetings of the institutional committee for infection prevention	11 (85%)	-
	Annual work plans meetings with the departments	12 (92%)	-
	Semiannual / quarterly follow-up meetings with the departments	8 (62%)	-
	Email communications between leadership members	10 (77%)	-
	Email communications between leadership and the departments	9 (69%)	-
	A computerized report system that allows reports to be "pulled"	6 (46%)	-
	A computerized report system that allows reports to be "pushed"	6 (46%)	-
Number of tools used	NA	NA	8.3 ± 3.0 (9, 6.5-10.5)

Source: developed by the author

Appendix 53

Tools used to promote patient experience in Israeli hospitals

Parameter	Category	Frequency	Mean ± SD (Median)
A senior leader is in charge of the patient experience program	Yes	14 (100%)	
Role of the senior leader	Deputy Director General / Deputy CEO	1 (7.1%)	
	Chief nursing officer	1 (7.1%)	
	Senior nurse	2 (14%)	
	Senior administrator	1 (7.1%)	
	Patient experience officer	8 (57%)	
	Other	1 (7.1%)	
The hospital monitors patient experience	Yes	13 (93%)	
Tools used to monitor patient experience:	Timely leadership meetings	13 (93%)	
	Timely meetings at the department's level	13 (93%)	
	Timely meetings for leadership and the departments	12 (86%)	
	Timely meetings of the patient experience / service unit	12 (86%)	
	Annual work plans meetings with the departments	13 (93%)	
	Semiannual / quarterly follow-up meetings with the departments	7 (50%)	
	Email communications between leadership members	10 (71%)	
	Email communications between leadership and the departments	10 (71%)	
	A computerized report system that allows reports to be "pulled"	7 (50%)	
	A computerized report system that allows reports to be "pushed"	6 (43%)	
	Internal surveys	2 (6.8%)	
Number of tools used	NA	NA	7.1 ± 2.9 (7, 6-9.3)
Does the hospital provide training in patient experience? (n=13)	Yes	13 (100%)	-

Source: developed by the author

Appendix 54

Hospital characteristics and the choice of tools to promote patient experience

Hospital attribute	Patient experience officer in charge of patient Experience	Patient experience monitored	Median number of tools employed
Ownership:			
Government	1 (20%)	4 (80%)	7
Clalit	7 (100%)	7 (100%)	9
Other	0 (0%)	2 (100%)	7
P value	0.005	0.333	0.863
Size:			
Large	3 (43%)	7 (100%)	7
Medium	3 (75%)	3 (75%)	8
Small	2 (67%)	3 (100%)	7
P value	0.582	0.719	0.679
JCI accredited:			
Yes	5 (56%)	9 (100%)	9
No	3 (60%)	4 (80%)	7
P value	1.000	0.357	0.200
Location:			
Periphery	3 (60%)	5 (100%)	7
Center	5 (56%)	8 (89%)	7
P value	1.000	1.000	0.813

Source: developed by the author

Appendix 55

Tools used to decrease waiting times in Israeli Hospitals

Parameter	Category	Frequency	Mean ± SD (Median)
The hospital monitors waiting times	Yes	13 (93%)	
Tools used to monitor waiting times:	Timely leadership meetings	11 (79%)	
	Timely meetings at the department's level	10 (71%)	
	Timely meetings for leadership and the departments	9 (64%)	
	Timely meetings of the ambulatory services / outpatient clinics leadership	10 (71%)	
	Annual work plans meetings with the departments	11 (79%)	
	Semiannual / quarterly follow-up meetings with the departments	8 (57%)	
	Email communications between leadership members	10 (71%)	
	Email communications between leadership and the departments	10 (71%)	
	A computerized report system that allows reports to be "pulled"	7 (50%)	
	A computerized report system that allows reports to be "pushed"	5 (36%)	
	Reports from ombudsman	1 (3.4%)	
Number of tools used	NA	NA	8.3 ± 3.0 (7.5, 4.7-9)

Source: developed by the author

Appendix 56

Hospital characteristics and the choice of tools to decrease waiting times

Hospital attribute	Waiting times monitored	Median number of tools employed
Ownership:		
Government	4 (80%)	5
Clalit	7 (100%)	9
Other	2 (100%)	6.5
P value	0.333	0.322
Size:		
Large	7 (100%)	7
Medium	3 (75%)	8.5
Small	3 (100%)	5
P value	0.719	0.859
JCI accredited:		
Yes	9 (100%)	9
No	4 (80%)	7
P value	0.357	0.200
Location:		
Periphery	5 (100%)	5
Center	8 (89%)	8
P value	1.000	0.880

Source: developed by the author

Appendix 57

Tools used to promote clinicians' well-being in Israeli hospitals

Parameter	Category	Frequency	Mean ± SD (Median)
The hospital monitors waiting times	Yes	10 (71%)	
Tools used to monitor clinicians' well-being:	Timely leadership meetings	8 (62%)	
	Timely meetings at the department's level	4 (31%)	
	Timely meetings for leadership and the departments	4 (31%)	
	Timely meetings of the human resources department	6 (46%)	
	During annual work plans meetings with the departments	6 (46%)	
	During semiannual / quarterly follow-up meetings with the departments	4 (31%)	
	Email communications between leadership members	4 (31%)	
	Email communications between leadership and the departments	4 (31%)	
	A computerized report system that allows reports to be "pulled"	4 (31%)	
	A computerized report system that allows reports to be "pushed"	2 (15%)	
	Internal surveys	2 (15%)	
	Well-being committee	1 (3.4%)	
Number of tools used	NA	NA	3.9 ± 3.9 (3, 0-9)

Source: developed by the author

Appendix 58

Google reviews of a selection of public general hospitals in Israel

Table 58.1. Number of Google reviews on a sample of Israel's public general hospitals

Hospital name	Stars reviews 1	Stars reviews 2	Stars reviews 3	Stars reviews 4	Stars reviews 5	Total reviews	Average rating
Soroka	110	37	58	64	150	419	3,3
Beilinson	67	38	84	270	100	559	3,5
Meir	46	70	94	200	171	581	3,7
Kaplan	44	31	46	62	92	275	3,5
Carmel	31	28	30	64	104	257	3,7
Emek	40	40	80	32	74	266	3,2
Golda	29	38	44	89	228	428	4

Source: developed by the author

Table 58.2. Examples of Google reviews of a selection of Israel's public general hospitals

Hospital	Tehnical aspect	Interpersonal aspect
Soroka	slava kulakov Local expert · 64 reviews · 421 photos ★★★★★ 4 years ago Beautiful design both inside and outside the building, plus illumination and the newest cancer center just built. 2	Ran Dayan 1 review ★★★★★ 2 years ago My father underwent surgery in the second surgical department Hernia (hernia). I just wanted to say a big thank you to Dr. Roman Streltsov The director of the department Professor Sebag, Professor Shaked and to all the brothers and sisters who did not rest for a moment. The services and the smile always came together, professionalism at a really high level and warmth that is hard to believe you can get anywhere else. I always had someone to talk to and I always knew what was going on with my father at any moment. Thank you very much Surgeon B for the tremendous effort.♥♥♥ Translated by Google · See original (Hebrew) 1
	אורן אמסלם Local Guide · 16 reviews · 61 photos ★★★★★ 3 years ago Among the largest hospitals in Israel, there is everything there, departments for children, adults, women, and all the departments for children, women, and adults. There are many disputes for everything, and it is also convenient. There is parking at the entrance, activities for the sick children. I even saw that at the Purim party they brought the players of Beer Sheva with Barak Becher. I just love this place. Yesterday I was 7 years old, wish me a happy birthday Zeza in my photos Translated by Google · See original (Hebrew)	Jane Hodd 6 reviews ★★★★★ 6 months ago The very best care and treatment my son could have received after being in a terrible road accident. The staff are so talented, knowledgeable and caring. Outstanding! A huge thank you to everyone involved in his nearly 7 weeks there. View translation (Russian) 1
	NITZAN GEVA (N.G) Local Guide · 117 reviews · 3,003 photos ★★★★☆ a year ago 	[] Local Guide · 171 reviews · 1,246 photos ★★★★☆ 2 years ago Soroka Hospital: The service and professionalism of the staff and doctors is excellent. The treatment is wonderful. There are many places that still need renovation. Translated by Google · See original (Hebrew) 8
	תמי חיים Local Guide · 229 reviews · 216 photos ★★★★☆ 11 months ago Lack of parking spaces Translated by Google · See original (Hebrew) Like	חנוך ששונקר Local Guide · 38 reviews · 10 photos ★★★★☆ 10 months ago Professional treatment. Good attitude, a lot of help to the patient. I was hospitalized for two days and received good medical care. More Translated by Google · See original (Hebrew) Like

	Lev Rubinchik Local Guide · 117 reviews · 877 photos ★★★☆☆ a year ago It's just a problem with parking .... Air conditioners work in fits and starts. There are not enough places to sit, you have to break the recommended interval. A long wait .... Pros: The toilet is clean. Translated by Google · See original (Russian) Like	**josef binjamin** Local Guide · 66 reviews · 7 photos ★★★☆☆ 2 years ago The maternity department has an amazing and good team that wants to help. On the other hand, there are also lazy women who don't feel like working and helping. The experience is not good. Translated by Google · See original (Hebrew) 1
	Michael Local Guide · 64 reviews ★★★☆☆ 2 years ago Horrible waiting times, the old sections need emergency renovations. 1	**Mariela Contreras** Local Guide · 115 reviews · 30 photos ★★★☆☆ a year ago The attention of the nursing staff is very good, the doctors are good, but they are eager to discharge. The only thing is that any person enters and they wait for the sick patients to fall asleep to rob them. My husband was robbed asleep. The attention of the very good nursing staff, the good doctors, however eager to discharge. The only thing is that anyone enters and they wait for sick patients to fall asleep to steal them. My husband was robbed in his sleep Translated by Google · See original (Spanish) Like
	דנה יוניק Local Guide · 31 reviews · 1 photo ★★☆☆☆ 11 months ago You must fix the automatic phone number system.. you ask for one thing and are directed to a completely different department. By the time you get to where you need to be you lose your health. Translated by Google · See original (Hebrew) Like	**רחלי א** 5 reviews ★★☆☆☆ 2 years ago Reception at the maternity ward is not successful at all, there is no attitude, there is no care until you receive a woman to give birth and take you to the delivery room, it takes a lot of time, as much as a woman suffers, until she gets to the delivery room, they ask a lot of questions at the reception, really everything is casual and indifference In addition to that, excellent delivery rooms, an amazing and professional staff from childhood, a warm attitude, caring, there is nothing more.... Third child, I'm glad I gave birth there.... Translated by Google · See original (Hebrew) 1
	Roman Markovich Local Guide · 20 reviews ★★☆☆☆ a year ago Disastrous parking situation. Especially for the disabled. Translated by Google · See original (Russian) Like	**Svetlana Kolopenko** 1 review ★★☆☆☆ 9 months ago The service is terrible. And the most disgusting skin department. We came in with wounds on our legs. The doctor who received us did not even deign to call the nurses to remove the bandages, but told her daughter to take off the bandages. She took pictures of the wounds and sat down at the computer to write something to her daughter (even though she underage) said take it with the same bandages. (treatment of wounds and bandages is all one-time washing.) my daughter rewound a little and we went home without receiving any treatment. Translated by Google · See original (Russian) Like
	אליהו כהן 3 reviews · 1 photo ★☆☆☆☆ a year ago It's really horrible what's going on in a hospital, I don't understand why they didn't make bigger parking lots, all the parking lots are full to capacity, there's not even a red and white parking lot, an hour to look for a parking lot, and even if you can't find one, you have to pay 25 shekels, theft in broad daylight. Let's not talk about the wait in all the departments, in short, a smelly hospital, it's better to travel a little further and get to another hospital, just not Soroka. Translated by Google · See original (Hebrew) 1	**רונה זהר קמפבל** 4 reviews · 1 photo ★☆☆☆☆ 2 months ago The most disgusting hospital I have ever been to Can't believe it exists in Israel Terrible staff members who speak disrespectfully and hurt the patient The place is not maintained We have pigeons in the room!!!!!!!! Translated by Google · See original (Hebrew) 
	Eliran Salomon Local Guide · 28 reviews · 1 photo ★☆☆☆☆ 2 years ago A hospital in which there is no enforcement of smoking everywhere even though there are designated areas.. It is sad that this is a place that is responsible for public health when cigarette smoke is harmful to health Translated by Google · See original (Hebrew) 2	**Fatima Hassan** 8 reviews · 8 photos ★☆☆☆☆ 6 years ago Horrible to wait 5 hours for a minor surgery Translated by Google · See original (Hebrew) 1
Beilinson	**Wolfgang H** Local Guide · 204 reviews · 461 photos ★★★★★ 2 years ago Great hospital. Great doctors great nurses. The emergency room was very well prepared for tourists Like	**Micah Iticovici** Local Guide · 22 reviews · 116 photos ★★★★★ 2 years ago Amazing place to do your internal medicine rotation. Incredibly high quality medical care provided by some of the best physicians I've been fortunate enough to learn from. Like

Manarola Pro
Local Guide · 207 reviews · 1,946 photos

★★★★★ a year ago

A hospital that successfully disguised itself as a museum, professional and kind staff of brothers/nurses/doctors.

Translated by Google · See original (Hebrew)

9

חליל כבהא
Local Guide · 89 reviews · 42 photos

★★★★★ 3 months ago

Excellent service and very good cleanliness and most importantly the doctors and nurses (of course in the male and female language) are professionals.

Translated by Google · See original (Hebrew)

Like

avi sadeh
158 reviews · 703 photos

★★★★☆ a week ago NEW

The service itself is good medically and administratively, and I know more than one department. But, there is a very, very difficult parking problem, even for a disabled vehicle.

Translated by Google · See original (Hebrew)

Like

Koala
Local Guide · 52 reviews · 12 photos

★★★★☆ 7 years ago

Every customer is treated properly

Translated by Google · See original (Hebrew)

Like

דבורה רותם
Local Guide · 376 reviews · 3,166 photos

★★★★☆ a year ago

A large hospital with all the necessary departments and professional service

Translated by Google · See original (Hebrew)

Like

Amir Zitawi
Local Guide · 773 reviews · 2,184 photos

★★★★☆ 6 years ago

Professional staff in the entire hospital

Translated by Google · See original (Hebrew)

Like

Kfir Chromoy
11 reviews · 5 photos

★★★☆☆ 5 months ago

If you can find parking in time, and walk 3km to the emergency room, you're in luck.

Like

Mario Jacelli
Local Guide · 13 reviews · 13 photos

★★★☆☆ 4 years ago

It took me 4 hours to sew a wound...but the nurses were polite and they treated me good!

Like

Yosef shmuel Handyman
Local Guide · 240 reviews · 240 photos

★★★☆☆ 6 years ago

Still under renovations, it is difficult to get from place to place. However, there is a noticeable improvement in the service

Translated by Google · See original (Hebrew)

2

Mario Jacelli
Local Guide · 13 reviews · 13 photos

★★★☆☆ 4 years ago

It took me 4 hours to sew a wound...but the nurses were polite and they treated me good!

Like

نادر غنائم
Local Guide · 41 reviews · 35 photos

★★☆☆☆ 6 years ago

Very old and does not meet the level

to the State of Israel

Translated by Google · See original (Hebrew)

Like

Mike Benlulu
Local Guide · 60 reviews · 7 photos

★★☆☆☆ 5 years ago

The place became a real market
The times that determine really don't match when you arrive can wait an hour even more
A doctor there does not really show care and sensitivity to patients
Especially in the neurology department, I really wouldn't recommend being there

Translated by Google · See original (Hebrew)

6

	אברימי הורביץ Local Guide · 106 reviews a year ago Sorting - bad Other departments - unknown Translated by Google · See original (Hebrew) Like	רועי Local Guide · 231 reviews · 332 photos 5 years ago We arrived Friday 21:00 at 5:00 and we have not yet been released, Israel 2018, one senior doctor from each field on the emergency room + his department + +++, the State of Israel and the hospitals have not yet learned that a doctor should be a doctor and a person is needed to be the hospital manager at night, such a character is mandatory The reality is, a doctor can't do all of the above and also hold the hospital, security guard 1 in the ER at night in light of what is happening. Recently it's not enough, and the dirt, for 8 hours I haven't seen a single cleaning worker and the pictures speak for themselves, don't be sick at night, wait for the morning Translated by Google · See original (Hebrew)  5
	liat a 12 reviews · 3 photos a year ago The appointment making department is appalling appalling appalling, in hospital rules there is one big cut for all the patients Translated by Google · See original (Hebrew) 2	רבקה קאוסה 3 reviews 9 months ago A shocking experience! Lack of interest and regard for the patient. Need to work on service awareness and priorities. Translated by Google · See original (Hebrew) Like
	Danny Rodin 29 reviews 2 years ago There are no signs at all on the outpatient clinics building, guess where you are going. There is no intention, no one knows anything about his life. It took me half an hour to find the Gastro Institute. Staff members are not helpful, just shrug you off. Translated by Google · See original (Hebrew) 8	רבקה קאוסה 3 reviews 9 months ago A shocking experience! Lack of interest and regard for the patient. Need to work on service awareness and priorities. Translated by Google · See original (Hebrew) Like
Meir	Tal Kvores Local Guide · 562 reviews · 4,147 photos 3 years ago Hospital with all the services needed, including pediatric department, ER and imaging ... Provided care over the average and stuff very nice and helpful. Like	Max and Libby Strous 21 reviews 2 years ago I have to compliment the staff of the Miyun department of Meir hospital. From the moment I was received to the very last explanation from the doctor, 4 hours later, I felt assured that I was getting the best attention. English, Hebrew didn't matter. Kol hakavod to all the staff and bloodtest dept. 3

	Maor Daya Local Guide · 629 reviews · 2,144 photos ★★★★★ 10 months ago refers to the maternity ward. The staff is helpful and kind, the rooms are clean and there is parking next to the hospital. Translated by Google · See original (Hebrew)  1	**Sivan Cohen** Local Guide · 209 reviews · 1,027 photos ★★★★★ 3 weeks ago NEW An excellent hospital in every sense of the word. A very dedicated team, patient, doing holy work. Treats every patient with great patience. Kind people, worthy of appreciation ❤ More Translated by Google · See original (Hebrew)  Like
	Leonid Mendiouk Local Guide · 74 reviews · 270 photos ★★★★☆ 6 years ago Very nice team, good service. I would give five stars if Hospital and Children Department will look newer and cleaner. 1	**אלמוג ב.ג** Local Guide · 72 reviews · 104 photos ★★★★☆ 6 years ago The staff in the emergency room was caring, even though they were working under a heavy load, they were treated efficiently. Thanks Translated by Google · See original (Hebrew) Like
	יולנדה הירש סופר 34 reviews · 1 photo ★★★★☆ 2 years ago Human capital is amazing. Good and safe service and care. A star was dropped for incomplete information, if the tests taken are not directly related to the department where you are hospitalized, the doctors of the department have no ability or desire to provide the information about the tests. Translated by Google · See original (Hebrew) Like	**Ronen Benjamin** Local Guide · 39 reviews · 23 photos ★★★★☆ 6 years ago Hospital crowded grey old buildings 1
	Maggy Solomon 193 reviews · 266 photos ★★★☆☆ 2 years ago Good team. Good doctors. Terrible level of cleanliness. In the rooms, toilets and showers and corridors. Even the elevators are dirty and this is still during the Corona era. There is no restriction for visitors and companions. A train station and everyone brings the bacteria and viruses with them. Translated by Google · See original (Hebrew) 1	**Liat Angel** Local Guide · 73 reviews · 12 photos ★★★☆☆ a year ago The fact that there is a lack of medical personnel is noticeable... come with a lot of patience Translated by Google · See original (Hebrew) 1
	Ofra Matzov-Cohen Local Guide · 625 reviews · 25,884 photos ★★★☆☆ a year ago After the release I will write willingly. It is desirable to urgently improve the level of food served to patients, to address the taste and appearance 🙏🌍 Get well and all the best! Translated by Google · See original (Hebrew) Like	**Lora Gold** Local Guide · 269 reviews ★★★☆☆ 3 years ago Bad and unpleasant service. Hardly answer or confront people The cabbies do give a kind welcome. Translated by Google · See original (Hebrew) Like
	Avi Herskowitz Local Guide · 317 reviews · 201 photos ★★☆☆☆ 10 months ago Good service provider but there is a parking problem Translated by Google · See original (Hebrew) Like	**Grace Baker** Local Guide · 154 reviews · 11 photos ★★☆☆☆ a year ago While the treatment received in the women's emergency room has been excellent, I've never seen so many workers and hospital staff not wear a mask when walking among patients. 1
	Jessica Kosmin 7 reviews · 15 photos ★★☆☆☆ 7 months ago It's a dirty hospital. Cleaning staff do not clean well enough. Hair, blood, food crumbs all over the ER floors and pediatric ward. 3	**Ron Afriat** Local Guide · 37 reviews · 2 photos ★★☆☆☆ 9 months ago The attitude of the staff is excellent, the problem is with the management, waiting for hours for an X-ray because of combinations and an unorganized queue. Translated by Google · See original (Hebrew) 1

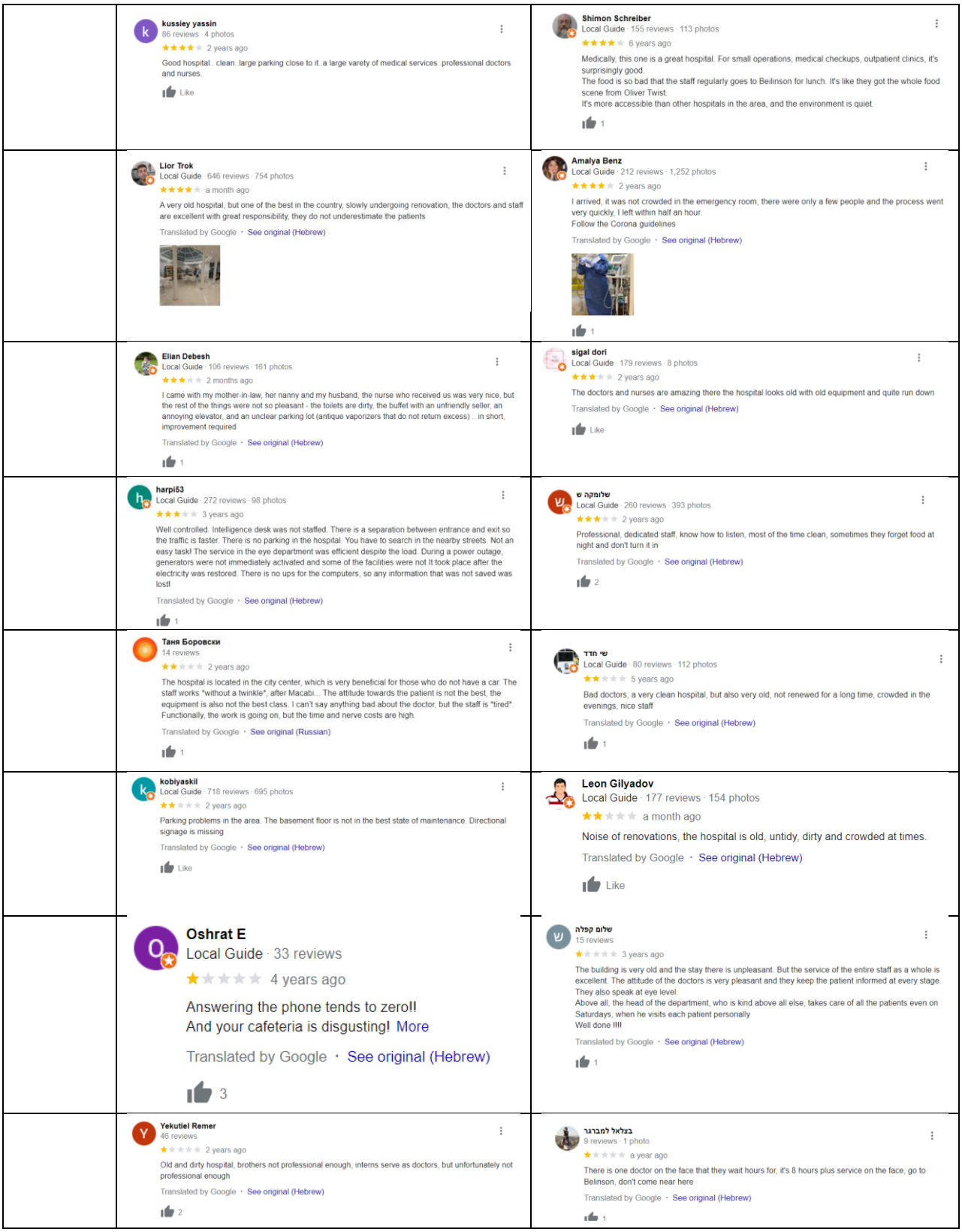
	Roee DINOVICH Local Guide · 121 reviews · 1,895 photos ★☆☆☆☆ a month ago Drink prices in the hospital on the patient floors are expensive. Grape juice for NIS 10 Translated by Google · See original (Hebrew)  Like	**Mendel Rubenstein** Local Guide · 171 reviews · 35 photos ★☆☆☆☆ 6 months ago After the visit to the ER I understand why people get upset with doctors. A hospital without management Translated by Google · See original (Hebrew) 5
	ofir yungerman 109 reviews · 10 photos ★☆☆☆☆ a year ago An outdated hospital stuck somewhere in the 90's. We arrived on Friday morning for an inspection at the maternity ward at week 40 plus 2. We should note that the maternity ward was quite empty! What probably caused the team to take the time was a lack of water. At first we waited something like 45 minutes to connect to the monitor. And then they told us to wait for the doctor.. After an hour and a half we gave up and went home. After 4 hours of wasting precious time we understood the idea. Bad experience. Good For the 1st birth we went to Ichilov. Translated by Google · See original (Hebrew)	**Marianela Tenenbaum** 5 reviews ★☆☆☆☆ a week ago NEW Only one doctor in the entire medical guard. 6 hours waiting for a simple diagnosis Translated by Google · See original (Spanish) Like
Kaplan	**Isaeed Nemer** Local Guide · 207 reviews · 386 photos ★★★★★ 2 years ago One of the best hospitals in country 3	**Mike Fihman** Local Guide · 386 reviews · 1,494 photos ★★★★★ 4 years ago Plastic surgery in this hospital is a department where literate people work with great dedication and a desire to help if necessary, in the department of plastic surgery there is Dr. Moran Lemberger and Dr. Mendez, very attentive and knowledgeable doctors, but most importantly, the desire to delve into the problem and find the right one. algorithm for solving a problem, this is a rarity these days. Despite this, I want to note that for 3 months we have been constantly visiting this department with an ambiguous problem and have not received a proper solution. Already all the doctors of this department have reviewed and ... It overshadows the state of affairs The doctors were unable to solve the problem Translated by Google · See original (Russian) 
	Dorit Barkan Local Guide · 568 reviews · 3,498 photos ★★★★★ 4 years ago The entrance to the hospital is possible from road 40, there is another entrance through road 412. General Hospital. Very large and growing at a fast pace. With all the pleasant experiences associated with the hospital, along with the unpleasant experiences associated with life, suffering and death... Besides all these, I think it's a good hospital. In recent years, new departments have been built. A parking space is sometimes very difficult to find... I park at the Ekron junction and arrive on foot... but not everyone can do it. Translated by Google · See original (Hebrew)  3	**אוריה דהן** 7 reviews ★★★★★ 9 months ago The staff in the ER and maternity really surprised! Amazing and human team!!! The attitude was always warm and respectful And they even sent an amazing reflexologist named Livat who did a pampering treatment Without a doubt, we will return at the next birth in AZ Thank you. *(The anesthetist was less nice..) Translated by Google · See original (Hebrew) Like
	Netanel Local Guide · 69 reviews · 851 photos ★★★★☆ a year ago My overall satisfaction with the medical center is positive. The place is on the main roads and pretty easy to reach. It's usually hard to find a parking spot in the middle of the day unless you are willing to pay. There are several gates so make sure to enter from the right gate, otherwise, you might walk a lot to reach your destination. 2	**ליז לוגסי** Local Guide · 66 reviews · 1 photo ★★★★☆ 4 months ago The attitude (secretaries, nurses and doctors), the professionalism, the waiting times, the availability, everything (more correctly) Perfect By phone, you have to take a day off to reach them by phone. Translated by Google · See original (Hebrew) Like
	רותי אלטון 5 reviews ★★★★☆ 10 months ago We arrived at the ER on Friday night and my mother was treated fairly and professionally. In the intermediate heart department: a professional and kind, welcoming staff that treats the patient at eye level. It is indeed a little crowded and the department has not been painted for a long time, but the care and attitude are the most important and we accept that here wholeheartedly Translated by Google · See original (Hebrew) Like	**avital bel** Local Guide · 65 reviews · 8 photos ★★★★☆ 2 years ago The maternity ward is great. Spacious rooms and lovely midwives! But other departments are a little less nice... in slow sorting and no service. There is no communication between the staff and the employee regarding his place in line, why there is a delay, etc... As in every hospital there are angelic doctors and there are also antipathetic doctors alongside them and it is always sad to come across such. Translated by Google · See original (Hebrew) Like
	Moran Ben Hur Local Guide · 427 reviews · 1,850 photos ★★★☆☆ 3 years ago Sometimes quick treatment sometimes wait. For sure not a very pleasant place, quite old-fashioned with long corridors Translated by Google · See original (Hebrew) 	**אלי גבאי** Local Guide · 107 reviews · 319 photos ★★★☆☆ 6 years ago There are reasonable departments, but there are times when the treatment of patients is beyond criticism. Trying not to get there. If possible go somewhere else. Translated by Google · See original (Hebrew) 3

	אבי דגן 1 review ★★★☆☆ 8 years ago There is no parking space for the car. The access road to the hospital is very dangerous Translated by Google · See original (Hebrew) 1	איתמר כוכבי Local Guide · 157 reviews · 26 photos ★★★☆☆ 7 years ago Such an unpleasant place (relative to a hospital). Reasonable service and professionalism Translated by Google · See original (Hebrew) 1
	bracha dagan 6 reviews ★★☆☆☆ a month ago Let's start with the fact that the instructions for getting to the institute are really bad. The announcement system indicates everything except the MRI institute. Also, the exit floor does not appear. It says 1- but not 1 for the exit. People return to the institute to ask where they are leaving from? So urgently improve the instructions for arriving at the institute. Thank you. Again, the wait is longer than usual. Translated by Google · See original (Hebrew) Like	שרה שלף Local Guide · 166 reviews · 164 photos ★★☆☆☆ 2 years ago Sitting dressed in a pyjama...from 16:00 (scheduled appointment) at the pain clinic. One nurse doing her best and one clerk doing her best to make a mess. The treatment in the operating room requires preparation and then blurring. There are 3 before !!! That is about three hours or so. I have been fasting since 10:00 in the morning. One arrived without an appointment and was received before everyone else after entering the doctor for a moment... It turns out there was a delay - happening. But they were all booked for the same time. I have never encountered such a relationship. Translated by Google · See original (Hebrew) 1
	omri tal Local Guide · 340 reviews · 2,169 photos ★★☆☆☆ 6 years ago Parking at a terrible price, a queue that never ends Translated by Google · See original (Hebrew) 1	Vitaly Haim Feldman Local Guide · 34 reviews · 52 photos ★★☆☆☆ 6 years ago After spending 10 hours in the emergency room, I can't give a higher score. I hope that professionally in the department they will be at a sufficient level. Translated by Google · See original (Hebrew) 2
	Yirmy Yasovsky Local Guide · 40 reviews · 75 photos ★☆☆☆☆ a year ago Even in the paid (!) Parking there is often no space 😫 Translated by Google · See original (Russian) 1	Armen Agasaryan Local Guide · 117 reviews · 657 photos ★☆☆☆☆ 2 months ago Avoid this place if you care about your health, time and nerves. Unprofessional, filthy and show u attitude when you complain for waiting 3 hours for a 2 minute procedure. Simply terrible. Like
	talnet netal 2 reviews ★☆☆☆☆ 9 months ago It is not clear how a hospital in Israel is maintained at such a poor level, wards in shantytowns, Heart surgery department, for patients a pair of toilets and a shower for the whole department (thoracic surgery department), The level of cleanliness in the public areas as well as in their departments is shocking, I am convinced that if there was an audit by the Ministry of Health they would close the place Men and women are kept in the same room Cleanliness level of a central station, wheelchairs cannot be accepted, Translated by Google · See original (Hebrew) Like	Leonid Waisfeld Local Guide · 8 reviews · 121 photos ★☆☆☆☆ 4 years ago 12 hours waiting for emergency help is not it too much? 3
Carmel	ג 3 reviews ★★★★★ 2 years ago Very clean, excellent service, a doctor who did an excellent examination, great nurses, efficient! Score 10!!! Translated by Google · See original (Hebrew) Like	Mr Nice 10 reviews · 10 photos ★★★★★ 4 years ago The medics here are awesome. One of the best crews in terms of talent, dedication and efficiency I've seen during my lifetime. I hope that the day I die, I'd have it easily. Otherwise, I'd consider it a luck if those guys and girls would handle my last moments. 10/10  1
	Ben Rakov Local Guide · 46 reviews · 13 photos ★★★★★ a year ago Excellent hospital Fast and professional service More Translated by Google · See original (Hebrew) Like	Assil Mahamid Local Guide · 80 reviews · 99 photos ★★★★★ 9 months ago Amazing ER department with quick efficient medical management. Like

	Leah Krais Local Guide · 41 reviews ★★★★☆ 5 years ago Very inconvenient to park and difficult to get to. It belongs to the health insurance fund, therefore Clalit clients are mainly served. Translated by Google · See original (Russian) Like	**תמר כהן** 3 reviews ★★★★☆ 2 years ago My daughter had an amazing birth experience this week at the hospital - the staff was at her disposal with full willingness to help her as much as possible. Thanks to Irena and Lanserin (if I'm not mistaken in the name) who did everything .... More Translated by Google · See original (Hebrew) 1
	Omar Asi Local Guide · 200 reviews · 6,223 photos ★★★★☆ 4 years ago It is a small hospital and the treatment there is very good. Its most important negatives.. There are not enough parking spaces for visitors! More Translated by Google · See original (Arabic) Like	**Rima Mahmoud** Local Guide · 10 reviews · 19 photos ★★★★☆ 6 years ago One of the most advanced and powerful medical centers in the country. Excellent human treatment for each and every patient, caring, reliable service from the dedicated doctors and nurses in the thoracic surgery department. Visits are prohibited after 9 in the evening, from 2 to 4 p.m. We do not allow more than one or two visitors per patient in order to protect the patients as much as possible. Emphasis is placed on the cleanliness of the place to prevent the bacteria from passing to the patients. Disadvantages: only one elevator works, busy and slow, so you have to wait a lot. And it's also hard to find parking, and it's a shame that such technical problems are found in this important health center. Translated by Google · See original (Hebrew) Like
	Chaim Panigel Local Guide · 720 reviews · 3,710 photos ★★★☆☆ 4 years ago A huge hospital. that has to move location, there is no parking, there are not enough doctors, besides, it is a clean and orderly place Translated by Google · See original (Hebrew) Like	**זהבה משרקי** Local Guide · 48 reviews · 3 photos ★★★☆☆ 2 weeks ago NEW A general hospital, it is recommended to bring a referral and a commitment, even though it's from the general, the clerks are too lazy to take it out of the computer, everything is fine. Translated by Google · See original (Hebrew) Like
	CB Ben Local Guide · 184 reviews · 1,950 photos ★★★☆☆ 2 years ago A good hospital ,. But need to improvement, there have not enough parking space... 2	**יגאל כהן** Local Guide · 171 reviews · 376 photos ★★★☆☆ 4 years ago The level of medical knowledge is high in Israel Too bad it doesn't reach the citizens. The hospital is good Translated by Google · See original (Hebrew) Like
	Guy Sender Local Guide · 471 reviews · 777 photos ★★☆☆☆ 5 years ago A general hospital is similar to any public hospital. The parking situation is horrible. Translated by Google · See original (Hebrew)  3	**zvi mor** Local Guide · 101 reviews ★★☆☆☆ 10 months ago I was in the emergency room in Radek B. The examination room has 2 devices. There is no privacy for patients and their companions in the same room Waiting for the test for a long time with drops in the eyes not nice Translated by Google · See original (Hebrew) 1
	דגנית שלום 2 reviews ★★☆☆☆ 8 months ago Everything is good, just a shame there is no parking Translated by Google · See original (Hebrew) Like	**ilan yaniv** Local Guide · 22 reviews · 13 photos ★★☆☆☆ 4 years ago Need as little as possible. Bad attitude and reasonable results and below. Translated by Google · See original (Hebrew) 3
	יוליה קיראבה Local Guide · 319 reviews · 1,008 photos ★☆☆☆☆ a year ago Probably the most neglected hospital in Haifa, it's hard to find a parking lot, it's dirty, you have to wait for doctors in the emergency room for a very long time, the coffee shop is very expensive. Translated by Google · See original (Russian) 2	**Julie Ammons** 163 reviews ★☆☆☆☆ 2 months ago Even when not busy, waiting 8+ hours, no one answers questions, absolutely terrible care and service! The vital signs monitors have leads that become disconnected and alarms go off for hours and yet no one checks the monitors. Disgrace! Each time we ask the staff for help they walk by and ignore us. The nurses literally sit around laughing and joking as patients call for help. At the check in desk employees can't be bothered to look way from their phones. No interest in helping people. I am literally horrified. As someone else said, better to stay home and die than come here.

	usti_play u.s.t 3 reviews a month ago suffocated air conditioners barely work very crowded there are no windows especially in the maternity ward corridors on the inside. No renovation for years maybe. Small rooms. Translated by Google · See original (Hebrew) Like	**Илья Андреев** Local Guide · 35 reviews · 21 photos 9 months ago Terrible place. In emergency we was more than 4 hours, and we was alone. My wife was in condition when she can be only in horizontal position. But personal says that we can't use bed. This clinic and clalit - never again! 2
Emek Medical Center	**Moldovan Cosmin** Local Guide · 492 reviews · 4,411 photos 5 years ago Top medical facility with top-trained medical personnel.  Like	**John "Dork" Smith** 4 reviews 5 months ago This is a sensitive topic but I feel a strong need to let everyone know that there are still good people out there. I want to thank dr tina, an anesthesiologist at the emek hospital. About a month ago I tried to end my life. It was late in the evening, she wasn't on duty and she saw that something was wrong with me. She approached me and asked if I needed help. For hours she listened to me, gave me advice on how to move on and how to see the future of my life in a different light. In today's reality it is difficult to find people who will give of their free time to help others in need without receiving anything in return. Dear dr tina, if you remember me, I thank you for the attention and time you gave me, for making me understand that there is a way to deal with problems without running away from them. You are an amazing person! She is definitely an excellent person and deserves the best the world has to offer. The emek hospital, you have won a doctor who is literally an asset. I would like to ask the relevant parties to thank her for her humanity and kindness. 12 **Response from the owner** 2 months ago Hello dear John we are so happy to know you feel better! we sent Dr Tina your kind words! Thank you
	סמדר Local Guide · 156 reviews · 3,515 photos 2 years ago To park in the parking lot closest to the Shmona building, you need to take the far right lane and continue with it to the end. This is what building number 8 looks like from the outside and inside, everything is shiny and clean. The horse was photographed right at the entrance to the hospital, its owner went in to do a corona test. Translated by Google · See original (Hebrew)  1	**Khristina Ermak** Local Guide · 27 reviews · 148 photos 5 years ago Despite the fact that the hospital building itself is very modest, the doctors working there are just wonderfull! The staff is very friendly, everyone helps each other. On the territory of the hospital there is a wonderful bakery: great ... More Translated by Google · See original (Russian)  2
	Teri Moshe Local Guide · 27 reviews · 4 photos 4 months ago From the morning hours until 2:00 p.m. there is no parking in the place, there is a heavy load of vehicles that are forced to park in red and white, and in addition, they get fined by the hospital inspectors, the Emek Hospital must take care of the patients who come for check-ups against their will to free parking after half an hour of searching for parking anyway, they charge 25 8 and can't find parking and the resulting traffic jam is forced to give up and leave the parking area outside the hospital. Translated by Google · See original (Hebrew) 1	**Nirit S Hanan** 2 reviews 6 months ago After a week of hospitalization in internal ward D, a new ward, A dedicated and available nursing team, a power team that always helped with a smile and politeness. Transferring between departments for tests was quick and efficient, doctors who listen and are available gave a good attitude. Thank you . keep it up Translated by Google · See original (Hebrew) Like
	יוסי סופר Local Guide · 110 reviews · 23 photos a year ago There is no chance to find a parking lot even for disabled people. Good medical service. More Translated by Google · See original (Hebrew) Like	**ja sch** 29 reviews 2 years ago We gave birth to our son at a good time at the Emek Medical Center in Afula, this time in the new maternity ward, a more comfortable and relaxed atmosphere. The midwives are lovely and so are the postpartum nurses. Two years ago when our daughter was born, the ward was still under construction and we were in the old ward so it was unpleasant. There is nothing to compare. The babies have something to upgrade in terms of service to make it easier for the mothers. Let there be only happiness for everyone in expanding the mind! Translated by Google · See original (Hebrew) 3
	מ ל 270 reviews · 241 photos 3 years ago Excellent medical center Excellent attitude to patients. A team recruited for the task tries to provide excellent service. Parking for guests at killer prices Buffets also at ridiculous prices It's time to stop this robbery Translated by Google · See original (Hebrew) Like	**Aisam Mitwali** Local Guide · 132 reviews · 2 photos 2 years ago The waiting time was very long, more than 8 hours Translated by Google · See original (Arabic) Like

	Mustafa Mahameed (مصطفى محاميد) Local Guide · 72 reviews · 129 photos ★★★☆☆ 9 months ago Overcrowded and rudimentary hospital Not up to date with the current technological renaissance Translated by Google · See original (Arabic) Like	**סיגל עמר** 6 reviews · 5 photos ★★★☆☆ 2 years ago Disgusting treatment, there is no communication between place and place, attitude strives for 0, in short this is the last hospital I would go to, instead of a finger they amputate your hand, you arrive with stomach pains and are discharged with one kidney. And I'd rather not add Translated by Google · See original (Hebrew) 6
	Shiren Shibli 24 reviews · 2 photos ★★☆☆☆ a year ago Sad☹ The staff are doing their best, I really appreciate it 👏 but the department and the staff are small compared to the patients who arrive and there is no privacy when you explain why you came and what the problem is, the whole department participates in the conversation and this is the most disturbing 🤦‍♀️ there must be privacy for the patient please upgrade and invest more even if you ask for donations from people 👍 Good luck to us ❤ Translated by Google · See original (Hebrew) Like	**שחף קטינא** 1 review ★★☆☆☆ 3 years ago Shame on the health system. Order for 8 o'clock and after 3 hours he still hasn't entered Translated by Google · See original (Hebrew) 2
	Vladimir Local Guide · 29 reviews · 2 photos ★★☆☆☆ a year ago Two objective fat minuses: each arrival in miyun is at least 3 hours of waiting, even if the case is urgent. And the second is a spicy pepper soup in the ward for patients with stomach ulcers. This is categorically wrong. The rest below is subjective. I liked the staff, a lot of friendly people, it's nice to communicate. But I didn't like that they didn't take requests seriously. Several times I asked to change the insert into the vein - they do not change it, although there is already a lot of blood around. The rooms are cramped and uncomfortable, it is more pleasant to sit in the corridor than to lie down. I compare it with the rambam, in which being in the ward itself was cool. And in the end, the hospital has a rule - if they do an analysis under anesthesia, then they will not let you go home after it. In my case, nothing was found, an erroneous suspicion was. But they still keep him in the ward instead of sending him home. As a result, yes, they let me go home, but in the evening and the whole day I was gone because of this.	**Roy Enoshi** 3 reviews ★★☆☆☆ 4 months ago Control doctors show care towards metofilm when there is no appointment. They are approached to ask what is going on and the answer is - you will answer according to the turn. pure shame. Translated by Google · See original (Hebrew) Like
	sergai g 2 reviews · 1 photo ★☆☆☆☆ 10 months ago Sloppy bastard. With parking problems, taking turns at the appointed time you won't get More Translated by Google · See original (Russian)  Like	**manasheh vaiphei** 3 reviews · 1 photo ★☆☆☆☆ a year ago I can't say all of the nurses are bad but upon observation half of the nurses are so irritating, they don't care much of the patient its really a bad news but i had to admit it, it's the truth. 3
	Is Milse Pög 13 reviews · 1 photo ★☆☆☆☆ 5 years ago A low budget local hospital, not a lot to expect. Haven't heard a single good thing about this hospital all my life. What I have heard is mostly of long waiting times, low quality care, ... More 6	**Anna Bell** 8 reviews ★☆☆☆☆ 4 months ago Terrible service I've heard good things about the hospital before, their appointment service is about an hour long wait ... More Translated by Google · See original (Hebrew) 1
Golda	**Ophir W** Local Guide · 498 reviews · 2,610 photos ★★★★★ 3 years ago A small hospital and the attitude is amazing Well done 🙏 Translated by Google · See original (Hebrew)  1	**ron weinberger** 6 reviews · 3 photos ★★★★★ 2 years ago A hospital with wonderful service, care for the patients, amazing nursing teams, if you need help, one phone call and within a minute a nurse appears to help. The patients are treated with a lot of professionalism and compassion. Amazing doctors explain, guide and treat as if it were their own family. Although the hospital structure is less well maintained, the service and care you receive greatly outweighs the aesthetics. When it hurts and you want more love and less beauty. Exception Translated by Google · See original (Hebrew) 1
	Иван Тукмачёв Local Guide · 14 reviews · 3 photos ★★★★★ 4 years ago A very clean hospital with a team of caring, professional doctors. Personally, when I was admitted to this hospital, I received appropriate treatment. They keep and are very careful about cleanliness, the treatment is one of the most professional in all the places I've been in the treatment of the disease. There are many technologies with the latest means and you don't have to wait long to receive adequate treatment. I was hospitalized because of acute pneumonia and already after 3 days I felt much better and healthier. Translated by Google · See original (Hebrew) Like	**לאה חן** 12 reviews ★★★★★ 2 years ago I visited the ophthalmologist together with my brother who was invited for surgery. Kind staff, pleasant, professional and empathetic. There is an app that updates you in real time during all stages of the surgery from the moment of anesthesia to recovery. Really relaxing. Translated by Google · See original (Hebrew) Like



Source: developed by the author

Appendix 59

SWOT Analysis of Israel Public General Hospitals

Quality criteria for medical services	Strengths	Weaknesses	Opportunities	Threats
Efficiency of diagnosis and treatment	- high quality medical care - highly qualified medical staff	-limited financial resources	- development of medical tourism	-shortage of medical staff
Availability and access to health services	- a wide network of medical institutions; - variety of specializations and services provided by hospitals; - technologies for online recording and consultations	- queues for appointments and treatment	-expanding cooperation with international partners	- political conflicts and instability
Compliance with treatment and safety standards	-strict control procedures for the quality of medical services; -professional hospital staff.	insufficient training of staff to comply with standards and protocols -possible misunderstandings or lack of clarity in understanding the standards	-implementation of telemedicine and online consultations -training and advanced training	-increasing requirements for compliance with standards -change in medical standards - lack of resources
Reviews and patient satisfaction	-strict control procedures for the quality of medical services; -professional hospital staff.	-Bureaucratic procedures	- Modernization of medical infrastructure	- the negative impact of negative reviews on the hospital's reputation. -competition with private medical institutions
Timely provision of services and treatment	-application of modern technologies	-uneven distribution of medical resources; -long wait in queues -lack of specialists	-optimization of patient reception processes	- technical load, unexpected failures

Source: developed by the author

Appendix 60

Case-Problem of the path "Quality of structure" - problem: Inequalities in healthcare and measures to reduce them

Table 60.1. Case-Problem of the path "Quality of structure" - problem: Inequality in healthcare

Tool	Application characteristics
Reducing Inequality	Hospitals must expand their functions, but the main reasons for health care gaps are related to social factors. There is a need to improve access to care and reduce waiting times, as well as culturally sensitive care. Overcoming language barriers and training staff to provide culturally competent care are important to improve health care. Greater funding for measures to reduce health care inequalities should be considered, including increasing the number of doctors and beds in less developed areas.
Staff training	Staff training in culturally competent care should be provided at all levels. Interpretation services for non-Hebrew speaking patients should be available for all major languages in Israel, including Arabic, Russian and Amharic.
Financing	Additional regulatory steps must be taken to reduce out-of-pocket costs and increase government funding. The number of doctors, nurses and allied health workers in the periphery should be increased with proper incentives such as shorter work shifts, funding for scholarship programs and improved training for nurses and allied health workers. Waiting times for procedures and consultations should be made available to the public across a wide range of services with real-time data.

Source: developed by the author

Table 60.2. Actions to reduce health inequalities

Direction	Index	Proposed goal/objective
Budgeting	Affordable care	The percentage of personal expenses has been reduced to 30%
	Costs to reduce health inequalities	At least 3% of national health expenditure
Staffing	Staff of doctors, nurses and allied health workers	Within 90% of staffing levels in central Israel
Cultural Competence	Cultural Competence Training	At least 90% of clinical and administrative staff will be trained
Access to care	Edge latency is tracked, publicly reported, and improved over time	During 80% of waiting time in central Israel
	Distance to care	The distance to the nearest provider is determined by regulations and controlled

Source: developed by the author

Appendix 61

Case Study Pathway "Process Quality" - Problem: Implementation of innovation is not central to most Israeli hospitals

Tool	Application characteristics
FHIR standard tools	Implementation of the FHIR standard for data exchange in the healthcare system. Transferring responsibility for data to the patient to make better use of big data and artificial intelligence.
User Journey Tool	Defining the "user journey" for hospital patients and employees. Meet the diverse needs of the patients served by the hospital. Patients should be made aware of the hospital's additional benefits. Addressing cultural differences in serving different populations. Establishing an innovation unit to map the hospital's "core users" to identify their needs and challenges.
Tools for automation and individual approach to the patient	Developing and using technology and automation tools to support patient-centered care with dignity and respect. The importance of hospital staff collaborating with different patients to determine their needs and jointly develop solutions. The need for close interaction between developers of technological tools and medical personnel. Support government and healthcare organizations to test new technologies and applications in real-world settings.

Source: developed by the author

Appendix 62

Case-Problem of the "Quality of Result" path - Problem: negative patient experience

Tool	Application characteristics
Patient Care Training	Provide patient care training to all staff through on-the-job workshops. Establishing clinicians as role models for staff in patient communication. Do not rely solely on patient surveys due to methodological shortcomings. Use qualitative methods such as focus groups, interviews and observations. Form think tanks with diverse stakeholders, including patients and family members, to improve patient care.
Digital Health	Using digital health and telemedicine to improve patients' lives. Virtual platforms like Zoom and Teams can be used for various types of health care, including mental health treatment and dermatology. Benefits of virtual appointments include more convenient times for patients, easier access to care, and increased efficiency. "Hospital at Home" in Israel provides treatment at home for patients with minor illnesses, reducing hospitalizations and providing supervision by medical staff.

Source: developed by the author

Appendix 63

Patient Safety Tools and Measures for Inter-Organizational Learning Gap

Direction	Tools	Index	Proposed goal/objective
Structure	-Lean; -systematic approaches to change management.	Database of adverse events, near misses, anonymous recommendations from the data review and monitoring committee	A national database will be created and used
Process		Use of data review and monitoring committees	Each hospital must report to at least two committees annually
		Use of RCA committees	Every event with a significant negative outcome followed by an RCA committee, local or external
		Handover Compliance	Compliance is at least 90%, according to observations.
		Compliance with medication reconciliation	At least 80% of drug changes are documented and explained.
Outcome		Event rate, per hospital	Goal - zero, no events
		Medication errors	10% fewer medication errors over one year
		Safety culture	Score at least 80% on the AHRQ questionnaire.
		Preventable hospitalization for complications of chronic diseases	Decrease by 10% compared to last year

Source: developed by the author based on [360]

[360] FAMOLARO, T., YOUNT, N., HARE., R., et al. *Hospital Survey on Patient Safety Culture: 2018 User Database Report***.** AHRQ: 2018. 56 p. [accessed 22.01.2023]. Available at: https://www.ahrq.gov/sites/default/files/wysiwyg/sops/quality-patient-safety/patientsafetyculture/2018hospitalsopsreport.pdf.

Appendix 64

Activities and tools to solve problems of ensuring the quality of medical services in Israeli hospitals

Problem	Medical quality management tool. services	Event
The direction of innovation is not central to most Israeli hospitals.	Legislation Quality indicators Clinical guidelines	- Using the FHIR standard - Motivation to innovate - User path - Cooperation with local authorities and between hospitals - Resources for innovation - Automation technologies - Individual approach to the patient
No single entity in the Israeli health care system, be it the Ministry of Health or the health funds, has overall quality oversight.	Legislation Expert review	Program to introduce quality issues in hospitals National Quality Council Relicensing Organizational learning Measures to assess the organization of the health system
Insufficient budget for the health care system.	Financial incentive	Payment method Medical tourism Health system financing measures
Israeli legislation does not establish requirements for quality improvement.	Legislation Quality indicators Registration	Standards for the structure of departments in a hospital
Work to improve quality and patient safety is not unified	Clinical guidelines Accreditation Registration	Topics such as quality, patient safety, infection control, and patient-centered care should be included in the curriculum of medical and nursing schools, physician residency programs, and nursing continuing education programs.
The information included in the clinical practice guideline is developed through a systematic review and meta-analysis (where possible) of the compelling evidence in the literature on the broad topic.	Clinical guidelines	Clinical guidelines should be published regularly by an organization such as NICE Document “Choose wisely”
There is little inter-organizational learning	Clinical guidelines Accreditation	Patient safety should be monitored by senior hospital managers Patient Safety Measures
Difficulties in measuring quality indicators	Quality indicators Clinical guidelines Expert review	Use of supervision, evaluation, monitoring tools Quality indicators should be developed based on broad consensus among clinicians, the Israeli Medical Organization, health funds and the Ministry of Health.
Incomplete coverage of accreditations and licensing	Legislation Accreditation Expert review	Establishment of an Israeli accreditation body Transition to a national system with unique areas of accreditation

Patient Experience	Clinical guidelines Expert review Financial incentive	Patient care training for all staff through on-the-job workshops. Digital Health
Inequalities in health care	Legislation Quality indicators Financial incentive	Reducing inequality Training Financing

Source: developed by the author

Appendix 65

Criteria for selecting health care quality indicators and patient experience indicators

Table 65.1. Criteria for selecting indicators of the quality of medical services

	Criteria	Contents of indicator selection criteria
1	Relevance, usefulness	• The impact of disease or risk on health and health care costs. What are the health impacts and health care costs associated with each disease, risk, or patient group? • Importance. Are relevant stakeholders concerned about the quality issue and have they endorsed the indicator? • Opportunity for improvement. Is there evidence that less than optimal productivity exists, for example does it vary among service delivery organizations? • Clarity of purpose and context. Is the purpose of the indicator, as well as the organizational and clinical contexts, clearly described?
2	Scientific validity	• Validity. Does the indicator measure what it is supposed to measure? This indicator must make logical and clinical sense (external validity); it should correlate well with other indicators of the same aspects of quality of care (construct validity) and should capture meaningful (i.e., evidence-based) aspects of quality of care (content validity). • Sensitivity and specificity. Does the indicator detect only a small number of false positives and false negatives? • Reliability. Does the intervention provide consistent results across different populations and settings?
3	Practicality	• Previous experience. Is this measure being used in pilot programs or in other countries? • Availability of necessary data throughout the system. Can the information needed for measurement be collected at the required scale and in the required time frame? • Cost or cost of measurement. How much will it cost to collect the data needed for the measurement? • Ability of data and measurements to support subgroup analyses. Can this measurement be used to compare different population groups (e.g., assess differences due to socioeconomic status)?
4	Significance	• Comparability. Does this indicator allow for meaningful comparisons between organizations, regions, countries, or at least one of these levels? • Ease of use. Is this indicator easy to understand and does it relate to things that are important to the target audience? • Discriminatory. Does the indicator make a clear distinction between good and bad performers?

Source: developed by the author

Table 65.2. Patient experience indicators that can be used in the application of three ways to manage the quality of health care services

Direction	Index	Proposed goal/objective
Resources	Staffing schedule of the inpatient treatment department in accordance with regulatory documents	1 Clinical Director, 2 Additional Staff, 1 Administrative Officer for a 500 bed hospital
	Learning from the patient's experience	At least 90% of clinical and administrative staff will undergo annual training
	Patient Council/Hospital Board Representative	100% of hospitals will have a patient representative and/or “patient council” on board
Process	Define the patient journey in each clinical setting and draw actionable conclusions	90% of clinical departments will map their patient journey and have at least one quality improvement project based on this
	Overriding patients' own medical records	100% of patients discharged home will have access to their medical history.
	Easy to understand, service specific, comparable information available online covering every aspect of care – safety, satisfaction, dignity and respect.	Information will be available for 100% of discharged patients
	Outcome measures that include patient perceptions of the success of procedures and graduations.	Measures will be implemented and used on an ongoing basis
Outcome	Survey results for inpatients, emergency department visitors, and outpatients	90% are satisfied or very satisfied with their care
Alternative ways to measure patient experience	Focus groups, in-depth interviews, observations	These alternative assessment methods will be implemented in 100% of hospitals.
	Formative assessment during stay	Patient satisfaction is assessed during the hospital stay and used to improve care provided.
	Support after discharge	At least 70% of patients will call again a week after discharge to make sure they are okay and to evaluate how they are feeling.

Source: developed by the author

Appendix 66

Examples of structure, process and outcome quality indicators for various quality aspects to measure quality in Israeli hospitals

Quality aspects (examples)	Structure	Process	Outcome
Efficiency	Availability of staff and equipment Expenses for professional training of staff	Providing medications to patients Timeliness of treatment	Hospital readmission rates Postoperative mortality in cardiac surgery Preventable hospitalization rates Activities of daily living Measurement of patient-reported health outcomes
Patient safety	Availability of safe medicines Volume of operations performed	Using the Safe Surgery Checklist. Staff compliance with hand hygiene rules False-positive rates of cancer screening tests	Complications of diagnosis or treatment Incidence of nosocomial infections Foreign body left during the procedure
Patient Focus	Patient rights Availability of patient information	Attending physicians spend sufficient time with patients during consultation Measuring patient-reported experience	Activities of daily living Patient satisfaction Willingness to recommend the hospital Measuring patient-reported health outcomes

Source: developed by the author

DECLARATION ON ASSUMING THE RESPONSIBILITY

By signing below, I certify personal responsibility that the materials presented in the doctoral thesis are the result of independent scientific research and processing. I am aware that otherwise I will be punishable fully of the law.

Dreiher Dalia

„_____„_____2023

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LIST OF PUBLISHED WORKS

Articole în reviste ştiinţifice:

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Articole în lucrările conferinţelor şi altor manifestări ştiinţifice:

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1. Dreiher D., Robu E. *Quality management in healthcare: concepts, principles and standards*. In: The international scientific conference „The modern paradigms of the national and global economy development" 30 – 31.10. 2020. Chisinau: Moldova State University, 2020, p.26-33. ISSN 978-9975-152-70-9.
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Act of implementation

May 25, 2023

Certification

We, the undersigned, Prof. Ran Balicer, Chairman of the Israeli Society of for Quality in Healthcare and Ms. Mali Kusha, Coordinator of the Israeli Society of for Quality in Healthcare, carefully studied the thesis of **Ms. Dalia Dreiher,** named:

TOOLS FOR MANAGING THE QUALITY OF MEDICAL SERVICES IN ISRAELI HEALTHCARE ORGANIZATIONS

Given the ongoing changes in the healthcare system in Israel, we see significant potential in applying the ideas listed in the thesis in the domain of quality in the Israeli healthcare system.

Sincerely

Prof. Ran Balicer
Chairman

Ms. Mali Kusha
Coordinator

Israeli Society for Quality in Healthcare

ACT

of implementing of the results of the scientific research carried out by Dreiher Dalia in the doctoral dissertation "TOOLS FOR MANAGING THE QUALITY OF MEDICAL SERVICES IN ISRAELI HEALTHCARE ORGANIZATIONS"

Specialty 521.03 - Economy and management in the field of activity

This act confirms that the results of scientific research in a doctoral dissertation "TOOLS FOR MANAGING THE QUALITY OF MEDICAL SERVICES IN ISRAELI HEALTHCARE ORGANIZATIONS" by **Dreiher Dalia** were studied in **Soroka Medical Center**.

Based on the fact of the study, we can conclude that the doctoral dissertation is an original, innovative and comprehensive scientific research. For **Soroka Medical Center** particular interest is the content of the structural components of the mechanism for improving the quality of services in medical institutions, including a set of tools that contribute to improving the quality of services provided in public hospitals in Israel.

From our point of view, the mechanism proposed by the author to improve the quality of services in medical institutions will allow **Soroka Medical Center** to lay the foundations for the full implementation of the approach of modern quality management of medical services and will increase the degree of satisfaction of hospital patients.

We are grateful to **Dreiher Dalia** for the provided material, and in the future we expect the introduction of the main aspects of the doctoral dissertation.

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