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QUALITY MANAGEMENT IN THE HEALTH CARE SYSTEMS OF POLAND AND UKRAINE: A COMPARATIVE ANALYSIS OF INSTITUTIONAL DIMENSIONS

Nadia MACZUGA

Pomeranian University in Starogard Gdanski; nadia.maczuga@twojestudia.pl, ORCID: 0000-0002-1141-3754

Purpose: The purpose of this article is to compare the institutional frameworks of quality management in the health care systems of Poland and Ukraine.
Design/methodology/approach: The study applies a comparative, system-level desk research design using the Institutional Quality Maturity Model (IQMM) to analyze five dimensions of quality governance based on legal acts, policy documents, and reports from national and international health institutions.
Findings: The results indicate substantial differences in institutional maturity: Poland demonstrates a more integrated and stable quality governance framework, whereas Ukraine remains characterized by fragmented but evolving institutional arrangements shaped by ongoing reforms.
Research limitations/implications: The study is based on desk research and secondary data, which limits the direct assessment of clinical, organizational, and implementation-related outcomes, particularly in the context of ongoing reforms in Ukraine. The analysis focuses on institutional arrangements and provides a basis for future empirical research on quality governance.
Practical implications: The findings underline the importance of strengthening institutional and governance-level frameworks for quality management rather than relying exclusively on organizational or clinical interventions. The IQMM may support policymakers and system-level decision-makers in identifying institutional gaps relevant to the design of quality-oriented health system reforms.
Social implications: The study highlights how institutional arrangements in health care systems influence patient safety, public trust, and equity in access to health services. By informing quality-oriented health policies, the findings may contribute to improved quality of life and greater societal confidence in public health institutions.
Originality/value: The paper introduces the IQMM as a structured analytical framework for system-level comparison of quality governance and provides a basis for comparative research and policy-oriented assessment of institutional conditions supporting quality reforms.
Keywords: quality management, health care systems, Poland, Ukraine, institutional governance.
Category of the paper: Research paper.

1. Introduction

The quality of health care services constitutes one of the fundamental pillars of contemporary health care systems, shaping patient safety, the efficiency of resource utilization, and public trust. The literature emphasizes that improving quality requires not only the implementation of managerial tools at the organizational level of health care providers, but above all stable and coherent system-level frameworks encompassing regulation, supervision, financing mechanisms, and organizational culture (WHO, 2020; OECD, 2019).

From a global perspective, the achievement of high-quality health systems has been identified as a critical prerequisite for improving population health outcomes and for attaining the Sustainable Development Goals, particularly in low- and middle-income and transforming health systems, where patient safety and system-level approaches to error prevention constitute integral components of quality improvement (Kruk et al., 2018; Leape, Berwick, 2005).

Both Poland and Ukraine are implementing reforms aimed at strengthening the quality and safety of health care. Poland has established institutional oversight mechanisms, including the CMJ accreditation system and quality monitoring instruments, while Ukraine has been developing the foundations of a quality system for over a decade in the context of ongoing institutional and financial transformation (Anufriyeva et al., 2022). These two countries represent different stages of quality system development, making a comparative analysis particularly relevant for understanding their institutional capacities and structural limitations.

In studies concerning Poland and Ukraine, organizational-level analyses predominate, focusing on the implementation of standards, certification processes, or organizational culture within individual health care providers (Maczuga, 2013b, 2018). In contrast, there is a lack of research addressing the institutional level, which defines the framework conditions for quality across the health care system as a whole. This gap hampers a comprehensive assessment of the effectiveness of quality-oriented reforms and limits the formulation of policy-relevant recommendations for countries undergoing systemic transformation.

The study addresses the following research question: “How do differences in institutional arrangements related to the quality of health care services in Poland and Ukraine influence the direction and effectiveness of ongoing reforms?”

The article contributes to the literature by:

- proposing a structured framework for the institutional analysis of quality management,
- providing a synthesized comparison of key quality dimensions in the health care systems of Poland and Ukraine,
- identifying developmental gaps and systemic barriers relevant to countries undergoing systemic transformation.

The subsequent sections of the article present a review of the literature, the analytical model, the research methodology, the results of the comparative analysis, the discussion, and the conclusions along with practical recommendations.

2. Literature Review

2.1. Concepts of Quality in Health Care

In the management science literature, the Donabedian model (1988) is widely acknowledged as a foundational analytical framework for structuring quality assessment, distinguishing between structural conditions, managerial processes, and performance outcomes. In this perspective, the model serves not as a clinical tool, but as a conceptual basis for designing and evaluating system-level quality management and governance arrangements. Its application is evident in contemporary quality governance frameworks developed by international organizations, including the World Health Organization (WHO) and the OECD, as well as in regulatory and supervisory practices implemented by national health authorities.

This perspective is strongly rooted in the conceptual framework developed in response to the Institute of Medicine's Crossing the Quality Chasm report, which emphasized patient safety, effectiveness, efficiency and system-wide responsibility for quality improvement (Berwick, 2002).

From a managerial standpoint, quality improvement has been supported by a range of management-oriented approaches, such as Total Quality Management (TQM), Lean Management, Six Sigma, the EFQM Excellence Model, and ISO standards. These frameworks are designed to enhance organizational effectiveness, support process optimization, and improve strategic alignment between operational activities and quality objectives (Berwick, Fox, 2016). However, research increasingly demonstrates that the performance effects of such management tools are contingent upon the broader institutional context, particularly the coherence of regulatory frameworks, the integration of quality-related data into managerial decision-making, and the maturity of organizational culture and leadership practices (Maczuga, 2015).

2.2. Systemic approaches to quality

From a system-level perspective, the quality of care is not viewed as the sole outcome of actions undertaken by individual health care providers, but rather as the result of the proper design of the entire institutional ecosystem. The World Health Organization (WHO, 2020) identifies several key elements in this regard, including:

- coherent quality-related regulations,
- a clear allocation of institutional responsibilities,
- oversight and supervision mechanisms,
- integration of quality-related data,
- a culture of patient safety.

The OECD (2019) emphasizes the importance of governance stability, understood as the capacity of a system to design, implement, and monitor quality policies, which is particularly critical in countries undergoing health system transformation. The concept of patient safety as a core dimension of quality has been extensively elaborated in the literature, emphasizing system learning, organizational responsibility and the prevention of adverse events as key mechanisms of quality improvement (Hughes, 2008).

Earlier analyses of patient safety reforms highlighted that sustainable improvement requires a shift from individual blame toward systemic approaches to error prevention and organizational learning (Leape, Berwick, 2005).

2.3. Pro-quality tools and solutions in selected countries

In the international literature, quality oversight systems in countries with a high level of institutional development have been widely described, including the Care Quality Commission (CQC) in the United Kingdom, the Australian Council on Healthcare Standards (ACHS), clinical audit models developed by the Healthcare Quality Improvement Partnership (HQIP), and the concept of the "10 Building Blocks of High-Performing Primary Care" (Bodenheimer et al., 2014). These systems serve as reference points for quality-oriented reforms in Central and Eastern Europe, including Poland and Ukraine. Systematic reviews also indicate that business excellence models are increasingly used as supplementary frameworks for quality assessment in health care organizations, although their applicability depends on organizational maturity and governance capacity (Kamal, 2023).

Comparative analyses of health system improvement initiatives demonstrate that successful quality reforms are highly context-dependent and rely on adaptive governance, leadership capacity and sustained institutional learning rather than on the mechanical transfer of best practices. Evidence from international case studies across diverse health systems confirms that quality improvement is a complex, non-linear process shaped by national institutional conditions (Braithwaite et al., 2017).

However, their direct transfer to transforming health care systems is limited by differences in institutional stability, governance capacity, financing mechanisms, and data infrastructure, which require context-sensitive adaptation rather than straightforward replication. Beyond traditional clinical and organizational indicators, patient-reported outcome measures have been increasingly recognized as an important component of quality assessment, as they capture patients' perspectives on health outcomes and the effectiveness of care (Black, 2013).

2.4. Quality management in Poland – research findings

Since the early 2000s, the Polish health care system has progressively developed institutional arrangements for quality management, integrating regulatory instruments, supervisory mechanisms, organizational solutions, and digital tools within a coherent governance framework. A key milestone in this process was the establishment of the Centre for Monitoring Quality in Health Care (CMJ), which introduced a nationwide accreditation system functioning as a system-level management instrument rather than solely an evaluative mechanism. The development of institutional quality arrangements in Poland has been guided by national health policy priorities, including the National Health Programme for 2021-2025, which defines quality improvement, patient safety and organizational effectiveness as key objectives of health system performance (Ministerstwo Zdrowia, 2021).

Empirical evidence from national and international studies indicates that CMJ accreditation contributes to the strengthening of quality governance by formalizing management structures, standardizing quality-related processes, and supporting internal coordination and communication within health care organizations (Chojnacka, 2023; Maczuga, 2021). In this sense, accreditation operates as an institutional lever that aligns organizational practices with system-wide quality objectives and enhances managerial capacity for quality-oriented decision-making.

The introduction of the Act on Quality in Health Care and Patient Safety in 2023 established a formal framework for reporting adverse events, monitoring quality indicators, and developing internal patient safety management systems. According to reports issued by the Ministry of Health and the National Health Fund (NFZ), these regulations are intended to enhance transparency and strengthen system-level oversight of quality governance (NFZ, 2023; OECD, 2019).

An important component of Poland's quality-oriented policy is the gradual linkage of health care financing with quality-related activities. The National Health Fund (NFZ) has introduced incentive mechanisms that reward the fulfillment of quality requirements, such as obtaining accreditation or developing patient safety management systems. Although these mechanisms remain partial in scope, the literature indicates their positive impact on work organization, error reduction, and the strengthening of a quality-oriented organizational culture (Dahl, 2022).

Previous research suggests that higher levels of digital maturity are associated with the development of formal quality management structures and more systematic quality-oriented activities in health care organizations (Maczuga, 2025).

In summary, the Polish health care system has developed institutional foundations for quality management, including the operation of a central supervisory body (the Centre for Monitoring Quality in Health Care – CMJ), the gradual linkage of quality with financing mechanisms, the development of digital infrastructure, and the strengthening of a patient safety culture. However, the literature emphasizes that further system development requires a greater

integration of quality-related data into managerial decision-making processes and a stronger alignment between quality outcomes and financial incentives (OECD, 2019; NFZ, 2023).

At the policy level, the World Health Organization has emphasized the need for coherent, system-wide strategies for quality improvement that integrate governance arrangements, data infrastructures and accountability mechanisms. The Pathways to Quality framework developed for the WHO European Region highlights quality of care as a core component of health system performance and resilience, particularly in countries undergoing institutional transformation (World Health Organization Regional Office for Europe, 2021).

2.5. Quality management in Ukraine – findings from previous research

Ukraine has been implementing quality-related reforms under conditions of broad systemic transformation, encompassing changes in financing mechanisms, service delivery organization, and institutional oversight. The establishment of the National Health Service of Ukraine (NHSU) in 2017 introduced greater transparency in contracting arrangements; however, international analyses indicate that quality-related issues remain largely fragmented (World Bank, 2020; WHO, 2020). The legal framework underpinning these reforms is defined by statutory and executive regulations adopted in 2017-2018, which established state financial guarantees for health care services, created the National Health Service of Ukraine, and regulated the provision of primary health care (Verkhovna Rada of Ukraine, 2017; Cabinet of Ministers of Ukraine, 2017, 2018).

The literature emphasizes that the absence of a unified accreditation system and a central institution responsible for quality oversight is associated with significant regional variation in standards and practices, particularly in transitional health systems such as Ukraine (Maczuga, 2012).

Limitations in the development of quality also concern information infrastructure. Reports by the World Health Organization and the National Health Service of Ukraine indicate that the interoperability of medical data systems remains limited, and the reporting of adverse events is irregular, which hinders the monitoring of quality outcomes at the system level (WHO, 2020; NHSU, 2022). Research also highlights the significance of cultural barriers, including hierarchical management styles and staff concerns about the consequences of error disclosure, which contribute to a low level of patient safety culture (Artemenko et al., 2020). Differences in motivation, work engagement and perceived efficiency among medical staff have also been identified as an important institutional factor influencing the performance of health care systems in Poland and Ukraine, particularly in contexts characterized by significant disparities in system efficiency (Goncharuk, Lewandowski, 2020).

The results of the author's previous studies confirm that quality-oriented initiatives in Ukraine are often local in nature and are not fully supported by coherent regulatory frameworks, which limits their sustainability and scalability (Maczuga, 2015, 2018). International literature indicates that the Ukrainian health system remains at an early stage of quality

institutionalization, characterized by fragmented regulations, limited oversight, and partial solutions in the area of quality-related data systems (WHO, 2020; OECD, 2019; Maczuga, 2012).

At the same time, the financing reform implemented by the National Health Service of Ukraine creates a foundation for the gradual strengthening of a system-level approach to quality, which in the literature is described as a potential direction for the further institutional development of the Ukrainian health care system. In cooperation with international partners, including the World Bank, the Ministry of Health of Ukraine identified priority areas for the restoration and modernization of the health care system, emphasizing infrastructure, financing mechanisms and institutional coordination (Ministry of Health of Ukraine, 2022, 2023). Recent policy-oriented analyses emphasize that strengthening institutional capacity, governance coherence and international cooperation will be critical for building a resilient and quality-oriented health care system in Ukraine in the post-crisis period (Slobodian, 2025).

2.6. Research gap and the relevance of the PL–UA comparative analysis

In the literature on quality in health care, analyses focused at the organizational level predominate, encompassing the implementation of standards, certification systems, continuous improvement tools, and patient safety culture. These studies provide valuable insights into internal organizational practices; however, they address only to a limited extent the institutional conditions that determine the capacity to implement quality-oriented interventions (Berwick, Fox, 2016; WHO, 2020).

In the context of countries undergoing systemic transformation—such as Poland and Ukraine—this gap is particularly significant. There is a lack of comparative studies that examine regulatory stability, oversight structures, the linkage between quality and financing, or the level of data digitalization as factors influencing the effectiveness of reforms. Existing publications focus primarily on selected quality tools (e.g., accreditation, ISO, Lean), without incorporating a coherent institutional perspective.

The author's research on quality in medical institutions in both countries indicates the existence of differences resulting not only from organizational practices, but also from distinct institutional conditions, such as oversight structures, financing mechanisms, and patient safety culture (Maczuga, 2013a, 2015, 2018, 2021). This gap points to the need for a system-level analysis that encompasses regulatory and institutional frameworks as well as cultural and technological determinants.

In light of the above, there is a need to develop a structured framework for comparative analysis that enables the identification of differences and similarities in the institutional dimensions of quality in Poland and Ukraine. Such an approach allows for a better understanding of how systemic conditions influence the direction and sustainability of quality reforms.

These considerations justify the application of the institutional analytical model presented in the subsequent section of the article.

3. Methods

3.1. Assumptions and logic of the model

Based on a review of the literature and findings concerning the determinants of quality in Poland and Ukraine, the Institutional Quality Maturity Model (IQMM) was developed. The model serves as an analytical tool enabling a comparative assessment of the level of development of institutional quality mechanisms in health care systems. Its structure reflects the assumptions of Donabedian's framework (the relationships between structure, process, and outcomes), the concept of quality governance as articulated by the WHO and the OECD, as well as the body of research on maturity models in the public sector.

The IQMM assumes that the quality of care results from the configuration of five key institutional dimensions:

1. regulatory stability,
2. oversight institutions and accreditation systems,
3. the linkage between financing and quality,
4. patient safety culture and communication,
5. the interoperability of quality-related data.

The level of development of these dimensions determines the degree of institutional quality maturity, which influences the capacity of the health care system to implement sustainable quality-oriented reforms. The model adopts a system-level perspective, enabling the analysis of structural determinants of quality that extend beyond individual health care providers and encompass the institutional framework of the state.

3.2. Model structure

The logic of the model is presented in Figure 1. The five institutional dimensions are positioned at the foundational level as elements defining the framework conditions of the health care system. They are then linked to an intermediate level—*institutional quality maturity* (IQMM), which serves as a synthetic indicator of the system's readiness to implement reforms. The final component of the model is the outcome level, reflecting the effectiveness of quality reforms.

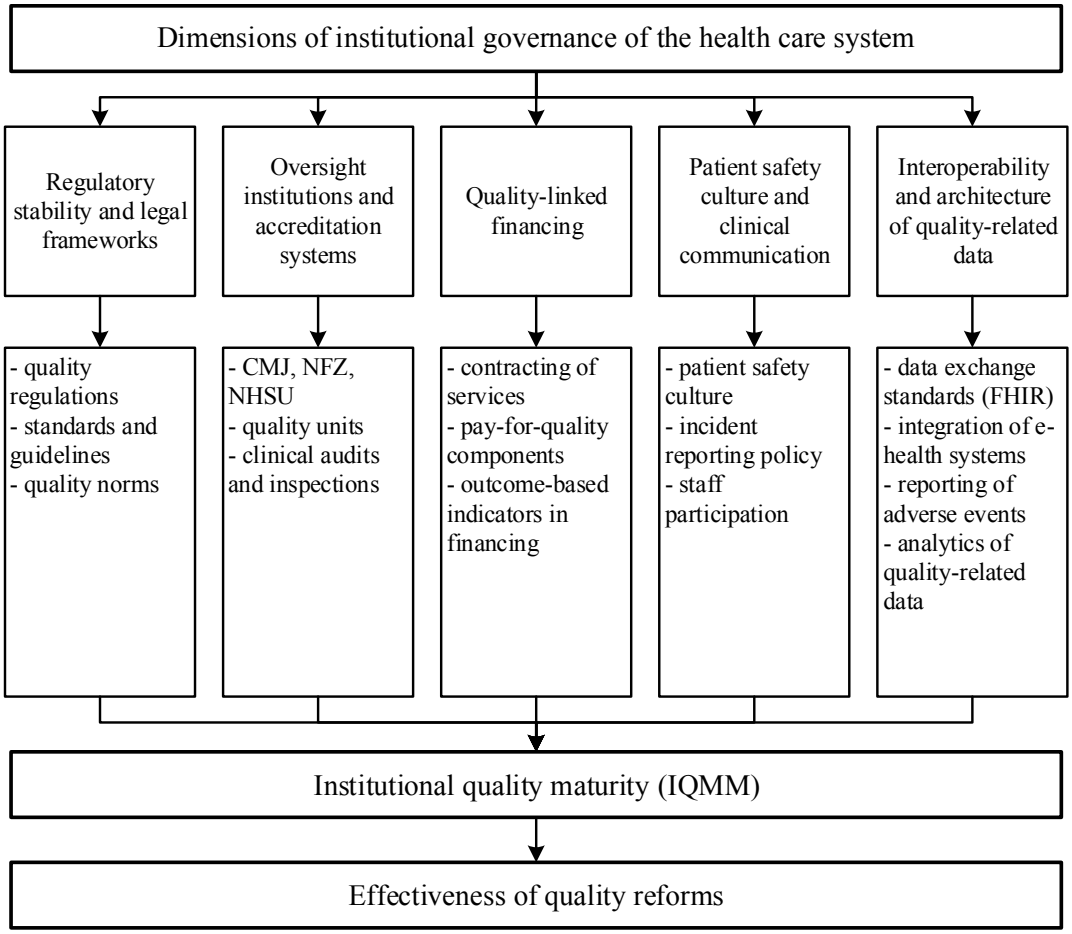

Figure 1. Institutional model of comparative analysis of quality management in health care.
Source: Author's own elaboration.

3.3. Relevance of the model for comparative analysis

The application of the IQMM enables a structured and multidimensional assessment of differences between the health care systems of Poland and Ukraine. The model makes it possible to identify which institutional elements facilitate the implementation of quality reforms and which constitute systemic barriers. As a result, both similarities and differentiating mechanisms between the two systems can be captured in a more comprehensive manner than in approaches based solely on organizational tools (e.g., accreditation or certification).

The IQMM provides the basis for the operationalization of research variables and the construction of the comparative procedure used in the analysis. The subsequent section of the article presents the data coding method, the selection of sources, and the approach to building the comparative matrix aligned with the structure of the model.

3.4. Data sources

A mixed-method approach based on the analysis of secondary data (desk research) was applied in the study. Triangulation was conducted using four groups of sources:

- legal acts and regulations related to quality in health care in Poland and Ukraine (including the quality act, implementing regulations, standards, and guidelines),
- reports of national and international institutions such as the WHO, OECD, CMJ, the National Health Fund (NFZ), and the National Health Service of Ukraine (NHSU),
- strategic and analytical documents (e.g., digitalization strategies, e-health reports, and accreditation-related documents),
- findings from the author's previous research on patient safety culture, internal communication, and institutional determinants in the health care systems of Poland and Ukraine (Maczuga, 2012, 2013a, 2015, 2018, 2021, 2025).

Such an approach made it possible to capture both the formal institutional frameworks and the practical mechanisms underlying the functioning of the health care systems.

3.5. Operationalization of the IQMM dimensions

Based on the Institutional Quality Maturity Model (IQMM), five analytical categories corresponding to the key systemic dimensions were developed:

- regulatory stability,
- oversight institutions and accreditation systems,
- quality-linked financing,
- patient safety culture and communication,
- interoperability of quality-related data.

For each category, a definition, assessment criteria, and exemplary indicators were specified, as presented in Table 1. This structure enabled a systematic analysis of the documents and a comparison of Poland and Ukraine across the five institutional dimensions.

Table 1.
Operationalization of the dimensions of the Institutional Quality Maturity Model (IQMM)

Institutional dimension	Definition	Assessment criteria	Exemplary indicators	Data sources
Regulatory stability and legal frameworks	The degree of coherence, continuity, and enforceability of regulations related to quality and patient safety	– the presence of national quality-related regulations, – the mandatory or voluntary nature of the requirements, – clarity of institutional responsibilities, – the degree of harmonization of legal frameworks	– Is there a legal act regulating the quality system? – Is the reporting of adverse events mandatory? – What central quality standards are in place?	Legal acts, regulations, WHO (2020), OECD (2019), and ministerial regulatory documents
Oversight institutions and accreditation systems	The scope of operation of central institutions responsible for quality assessment,	– the existence of oversight institutions, – the degree of formalization of their competencies,	– Is there a central accreditation institution in operation? – Does accreditation have a legal basis?	Reports of the CMJ and the NHSU, WHO and OECD publications, and accreditation-related documents

	oversight, and standardization	– the functioning of the accreditation system, – the role of oversight in quality monitoring	– What quality control mechanisms are in place?	
Quality-linked financing (Pay for Quality, P4Q)	Mechanisms through which the financing of health care services is linked to quality outcomes or patient safety standards	– incentives linked to accreditation, – the use of quality indicators in contracting, – transparency of financing rules, – linkage between financing and outcomes	– Does the contracting system incorporate quality indicators? – Are Pay for Quality (P4Q) components in place? – How is quality improvement financially incentivized?	Reports of the National Health Fund (NFZ) and the National Health Service of Ukraine (NHSU), OECD (2019), and HQIP (2020)
Patient safety culture and communication	The integration of information systems and the capacity to collect, process, and analyze quality-related data at the system level	– openness to reporting, – the existence of quality-related structures, – the level of internal communication, – practices of interdisciplinary collaboration	– Are formal quality-related structures in place? – Do staff members report adverse events? – Are internal communication channels in operation?	The author's own research (Maczuga, 2012; 2013a; 2015; 2018; 2021; 2025), literature on patient safety culture, and WHO (2020)
Interoperability and architecture of quality-related data	The integration of information systems and the capacity to collect, process, and analyze quality-related data at the system level	– data integration, – the existence of national registries, – interoperability of ICT systems, – availability of quality indicators	– Does the e-health system support quality reporting? – Which indicators are centrally available? – Are national registries in place?	CEZ, P1, the National Health Service of Ukraine (NHSU), e-health reports, OECD, and WHO

Note. IQMM – Institutional Quality Maturity Model; CMJ – Centre for Monitoring Quality in Health Care; NFZ – National Health Fund (Poland); NHSU – National Health Service of Ukraine; P4Q – Pay for Quality; ICT – Information and Communication Technologies; WHO – World Health Organization; OECD – Organisation for Economic Co-operation and Development. The table presents an analytical operationalization of the IQMM dimensions used for the comparative assessment of the health care systems of Poland and Ukraine. The data are based on secondary sources, including legal acts, institutional reports, strategic documents, and the author's previous research (desk research approach). Symbols and qualitative descriptors are used for comparative purposes and do not represent quantitative measurements.

Source: Author's own elaboration based on WHO (2020), OECD (2019), CMJ, NFZ, NHSU, and national regulatory documents.

The presented operationalization of the five dimensions of the Institutional Quality Maturity Model (IQMM) provides the foundation for the subsequent analytical procedure. The following section outlines the stages of the comparative analysis, including thematic coding of the source material, profiling of the health care systems of Poland and Ukraine, and the synthesis of results in the form of a comparative matrix.

3.6. Analytical procedure

The analysis was conducted in three stages:

Stage 1. Thematic coding

Documents were coded according to the five IQMM dimensions presented in Table 1. Each legal act, institutional report, and analytical document was assigned to one or more categories, depending on its substantive scope. This made it possible to identify both dominant and missing institutional elements.

Stage 2. Profiling of the PL–UA systems

Based on the coded data, institutional profiles of Poland and Ukraine were developed for each dimension. The analysis accounted for strengths and weaknesses of the respective solutions, the level of formalization, the degree of implementation, and the scope of available data.

Stage 3. Comparative synthesis

To consolidate the results, a comparative matrix was developed (Table 2), reflecting similarities and differences in the institutional quality maturity of the two systems. The matrix provides the basis for the interpretation presented in the results section.

Table 2.
Comparative matrix of institutional quality maturity (IQMM) in Poland and Ukraine

Dimension	Poland	Ukraine	Comparative commentary (synthetic interpretation)
Regulatory stability	Developed quality-related regulations; quality act in place; mandatory reporting requirements	Partial regulations; lack of central coordination; regional variation	Poland has a coherent regulatory architecture, which supports the stability of reform implementation. Ukraine remains at the stage of developing legal frameworks, which limits the uniform application of quality standards.
Oversight institutions and accreditation systems	CMJ – accreditation system in place; oversight exercised by the National Health Fund (NFZ)	Lack of a unified accreditation institution; the NHSU is primarily responsible for financing	Poland has a stable oversight infrastructure that supports the implementation of standards. Ukraine requires consolidation of institutions responsible for quality.
Quality-linked financing	Partial Pay for Quality (P4Q) mechanisms; incentives linked to accreditation	Predominantly volume-based financing; lack of linkage to quality	Poland is undergoing a transition toward Pay for Quality (P4Q) mechanisms. Ukraine remains within a volume-based financing model, which limits quality-oriented incentives.
Patient safety culture and communication	Development of patient safety systems; higher readiness for reporting	Low level of patient safety culture; irregular reporting	Patient safety culture is more firmly established in Poland, whereas Ukraine requires further development of transparency practices and communication competencies.
Data interoperability	Progressing digitalization; integration of NFZ/CEZ data	Limited interoperability; lack of comprehensive quality registries	Poland has achieved a higher level of data integration, enabling system-level monitoring. Ukraine requires further investment in data architecture and the standardization of reporting processes.

Note. IQMM – Institutional Quality Maturity Model; CMJ – Centre for Monitoring Quality in Health Care (Poland); NFZ – National Health Fund (Poland); NHSU – National Health Service of Ukraine; P4Q – Pay for Quality; CEZ – Central e-Health System (Poland). The table presents a qualitative, comparative assessment of institutional quality maturity in the health care systems of Poland and Ukraine. Descriptive categories are used to indicate the relative level of development of each dimension and do not represent quantitative measurements. The analysis is based on secondary data and expert interpretation within a desk research framework.

Source: Author's own elaboration based on legal acts, institutional reports, and analytical documents of WHO (2020), OECD (2019), CMJ, NFZ, NHSU, and national regulatory sources.

The presented comparative matrix synthesizes the key differences and similarities in the institutional quality maturity of Poland and Ukraine. This approach organizes the collected data within the five dimensions of the IQMM and provides a direct basis for the interpretation of results presented in the subsequent section of the article.

4. Results

The results of the comparative analysis based on the IQMM reveal clear differences in the level of institutional quality maturity between Poland and Ukraine. The comparison of data across the five institutional dimensions makes it possible to identify both well-developed areas and those requiring further strengthening. The comparative profile is presented in a synthetic form in Table 2.

4.1. Regulatory stability

In Poland, a high level of formalization of quality-related regulations can be observed, encompassing the quality act, implementing regulations, standards of practice, and a well-developed system of requirements for reporting adverse events. These regulations form a coherent legal structure and establish clear institutional frameworks.

In Ukraine, regulations are less standardized and more fragmented. There is no unified system of quality norms or centralized legislative oversight, which results in regional variation in the application of quality and safety principles. Regulatory reforms are being implemented gradually, primarily in the area of health care financing.

4.2. Oversight institutions and accreditation systems

In the Polish system, a distinguishing feature is the operation of the Centre for Monitoring Quality in Health Care (CMJ), which administers the national hospital accreditation system. Accreditation is embedded in the regulatory framework, and its role in quality oversight is confirmed by institutional reports and the literature. In addition, the National Health Fund (NFZ) performs a supervisory function through monitoring the provision of services and by partially linking contracting mechanisms to quality.

In Ukraine, there is no central institution responsible for quality accreditation. The National Health Service of Ukraine (NHSU) primarily acts as a payer and does not operate a unified accreditation system. Oversight functions remain fragmented and largely dependent on the regional level. As a consequence, this hampers the implementation of uniform standards and the monitoring of quality at the national level.

4.3. Quality-linked financing

In Poland, a gradual implementation of quality components in the contracting of health care services can be observed. Pay-for-quality (P4Q) mechanisms remain partial; however, they include, among others, incentives linked to accreditation and selected outcome indicators.

In Ukraine, the financing of health care services is primarily based on service volume, and quality elements do not directly affect the level of contracts. The absence of a linkage between financing and quality outcomes limits the ability to create system-level quality-oriented incentives.

4.4. Patient safety culture and communication

In Poland, the development of patient safety culture is supported by regulations on adverse event reporting, initiatives undertaken by public institutions, and the implementation of quality management systems in medical facilities. Research indicates that accredited organizations more frequently have formal structures responsible for quality and engage in regular reporting (Maczuga, 2021, 2025).

In Ukraine, patient safety culture remains one of the least developed areas. The reporting of adverse events is inconsistent, and cultural barriers—such as fear of sanctions and hierarchical management styles—hinder the creation of an environment conducive to transparency and shared responsibility. These differences are reflected in the literature and in WHO reports.

4.5. Interoperability of quality-related data

Poland is developing central health data systems (NFZ, CEZ, the P1 platform), which enable the integration of information on health care services, quality indicators, and clinical events. These systems support quality reporting and monitoring at the national level.

In Ukraine, data infrastructure is fragmented, and the interoperability of information systems remains limited. The absence of a unified data architecture hampers quality analyses, outcome monitoring, and the development of clinical registries.

4.6. Summary of results

The analysis indicates that Poland is characterized by a higher level of institutional quality maturity, particularly in the areas of regulatory stability, accreditation oversight, the linkage between financing and quality, and data digitalization. Ukraine, by contrast, remains at an early

stage of institutionalization, with fragmented oversight structures and a partially developed system of financing and quality monitoring.

The identified differences, presented in Table 2, provide the basis for the interpretation of the results and for the discussion of systemic determinants of the effectiveness of quality reforms, which is addressed in the subsequent section of the article.

5. Discussion

The findings indicate that the level of institutional quality maturity constitutes a key mechanism differentiating the capacity of health care systems to implement quality-oriented reforms. In particular, the analysis confirms that regulatory stability, centralized quality oversight, the integration of financing with outcomes, and a well-developed data infrastructure have a direct impact on the sustainability and effectiveness of quality improvement initiatives. These results are consistent with the WHO's findings on the development of governance-based quality systems (WHO, 2020) and with OECD analyses demonstrating that the effectiveness of reforms depends on the interaction between regulations, financing, and data availability (OECD, 2019).

At the same time, the comparative analysis shows that the differences between Poland and Ukraine do not stem solely from the level of development of individual tools (e.g., accreditation, standards, or digitalization), but primarily from differences in the configuration of institutional conditions for implementation. This finding extends previous research that has focused mainly on organizational-level analyses, while overlooking the influence of systemic determinants on the effectiveness of quality reforms in countries undergoing systemic transformation.

5.1. The role of the regulatory dimension

The results indicate that regulatory stability constitutes the foundation of a well-functioning quality system. Poland, with its extensive regulations concerning quality and patient safety, creates conditions conducive to the standardization of practices and increased transparency of activities. The literature emphasizes that coherent regulatory frameworks play a stabilizing and guiding role in system development (Berwick, Fox, 2016).

The situation in Ukraine, where regulations are less integrated, confirms the WHO's (2020) argument that the absence of strong legal foundations leads to the fragmentation of implemented solutions. The findings of this analysis indicate that regulatory stability is one of the most significant factors differentiating the two systems.

5.2. The role of oversight institutions and accreditation systems

The Polish CMJ accreditation system, as an institutionally embedded instrument of quality oversight, is strongly supported by the literature on quality governance (OECD, 2019). The results confirm that the existence of a central oversight structure promotes the uniform application of standards, enhances patient safety, and enables the monitoring of outcomes at the national level.

The absence of an analogous institution in Ukraine results in fragmented oversight mechanisms and limits the application of uniform quality practices. This finding is consistent with the author's previous research and with WHO reports, which indicate that systems lacking centralized oversight require a longer time to build a quality culture and to implement quality reforms effectively.

5.3. Quality-linked financing as a determinant of institutional behavior

International literature emphasizes that financing based on quality outcomes (Pay for Quality, P4Q) can stimulate the development of quality-oriented practices (OECD, 2019; HQIP, 2020). The findings of this study indicate that in Poland, although such mechanisms remain partial, they support the development of quality systems by incentivizing accreditation and selected outcome indicators.

In Ukraine, the absence of these mechanisms constitutes one of the main barriers to the implementation of quality-oriented initiatives. The analysis therefore confirms the thesis that a system-level linkage between financing and quality is essential for enhancing the effectiveness of reforms, which is consistent with the conclusions of Berwick and the OECD.

5.4. Patient safety culture and communication as conditions for the sustainability of reforms

The results of the analysis indicate that patient safety culture and internal communication are factors that strongly differentiate the health care systems of Poland and Ukraine. By developing regulations on reporting and supporting open communication practices, Poland creates an environment conducive to engaging staff in quality improvement activities.

In Ukraine, by contrast, cultural barriers—described in the WHO literature and in the author's research—limit the development of mature quality structures. The findings of this analysis confirm that without cultural change, regulatory and organizational mechanisms have limited sustainability.

5.5. The importance of interoperability of quality-related data

According to the WHO and OECD literature, data interoperability constitutes a key prerequisite for the development of quality systems in health care. The results of the analysis show that Poland has a more advanced data architecture, enabling quality monitoring at the

national level. Ukraine, although developing digital solutions, continues to face challenges related to fragmented infrastructure.

Limited availability of integrated data hinders the implementation of outcome-based practices and constrains the system-level assessment of quality— a conclusion consistent with WHO reports (2020).

5.6. The significance of the IQMM for system-level analysis

The findings confirm the usefulness of the IQMM as an analytical tool enabling a synthetic assessment of quality maturity at the institutional level. The model made it possible to identify elements that facilitate the implementation of reforms (in Poland) as well as those that constrain them (in Ukraine).

The application of the IQMM in a comparative context adds new value to the literature, as there has previously been a lack of models capable of capturing the complex relationships between regulations, oversight, financing, organizational culture, and quality-related data in countries undergoing systemic transformation.

These findings indicate that institutional analysis provides a more comprehensive understanding of the determinants of quality reforms than approaches focused exclusively on the organizational level.

5.7. Comparative reflections

The comparison between Poland and Ukraine reveals that differences in quality management do not stem solely from the level of implementation of individual quality improvement tools, but rather from distinct institutional configurations that shape their effectiveness and sustainability. Poland represents a model of gradual quality institutionalization, in which regulations, accreditation oversight, elements of outcome-based financing, and developing data systems form a coherent architecture conducive to the implementation of reforms. Ukraine, by contrast, remains at an early stage of systemic consolidation, where regulatory, organizational, financial, and digital components are developing in parallel but without a shared governance framework.

The results of the analysis confirm the observations of the WHO and the OECD, according to which the effectiveness of quality reforms depends on the level of institutional readiness, that is, the extent to which a health care system is prepared to absorb new solutions. Poland, with a stable regulatory base and central oversight institutions, creates favorable conditions for scaling quality improvement tools. In Ukraine, the absence of a unified accreditation system, limited data interoperability, and the uneven development of patient safety culture hinder the full implementation and monitoring of reforms.

The application of the IQMM makes it possible to demonstrate that quality in health care is not the result of individual tools operating in isolation, but rather the outcome of interactions among multiple institutional dimensions. The differences between Poland and Ukraine illustrate

that reforming systems require the parallel strengthening of regulations, oversight, financing, organizational culture, and data infrastructure in order to achieve sustainable outcomes. While the analysis focuses on institutional configurations, it should be noted that the effectiveness of quality reforms may be influenced by implementation-related risks at the organizational level, such as reporting practices, administrative burden, and enforcement capacity, which were beyond the scope of this study.

6. Summary

This summary synthesizes the key findings of the study, highlights its limitations, and outlines the contribution of the proposed Institutional Quality Maturity Model (IQMM) to research on quality governance in health care systems.

The aim of the article was to conduct a comparative analysis of the institutional determinants of quality management in the health care systems of Poland and Ukraine using the Institutional Quality Maturity Model (IQMM). The analysis made it possible to identify key differences in the areas of regulation, oversight, financing, patient safety culture, and data infrastructure, which shape the capacity to implement quality-oriented reforms.

6.1. Limitations of the study

The study is based on a desk research approach, which means that it relies on available documents, institutional reports, and the relevant literature. This approach allows for the identification and comparison of institutional determinants of quality; however, it does not capture the organizational perspective or the behaviors of health care providers. The analysis also does not account for regional differences in the implementation of reforms or for the perceptions of system stakeholders. Consequently, the findings reflect configurations of regulations, institutions, and financing mechanisms rather than the experiences of practitioners or patients. Future research should extend the analysis to primary data, including interviews and survey-based studies, which would enable a deeper interpretation of the results and support the validation of the IQMM at the organizational level. In particular, the study does not assess implementation-related risks at the organizational level, including underreporting incentives, administrative burden, or enforcement capacity.

6.2. Summary of results

The analysis indicates that Poland is characterized by a higher level of institutional quality maturity, particularly in the areas of regulatory stability, accreditation oversight, the linkage between financing and quality, and data digitalization. Ukraine, by contrast, remains at an early

stage of institutionalization, with fragmented oversight structures and a partially developed system of financing and quality monitoring.

The identified differences, presented in Table 2, provide the basis for the interpretation of the results and for the discussion of systemic determinants of the effectiveness of quality reforms, which is addressed in the subsequent section of the article.

6.3. Implications for policy and future research

For this reason, an institutional approach may serve as a useful reference point for other countries in Central and Eastern Europe facing similar transformational challenges. First, the results indicate that regulatory stability constitutes the foundation of quality development. Poland operates within coherent legal frameworks, whereas Ukraine implements reforms under conditions of regulatory fragmentation, which affects the uneven adoption of quality-oriented solutions.

Second, the existence of central oversight institutions and accreditation systems—such as the CMJ—facilitates the standardization of practices and the monitoring of quality at the national level. The absence of analogous structures in Ukraine confirms the thesis that the institutionalization of oversight is a key element in building quality systems.

Third, the linkage between financing and quality constitutes one of the main factors differentiating the two countries. The Pay for Quality (P4Q) mechanisms implemented in Poland strengthen quality-oriented incentives, whereas their absence in Ukraine limits the sustainability of implemented solutions.

Fourth, patient safety culture and internal communication function as reinforcing mechanisms that condition the effectiveness of reform implementation. The findings confirm that institutional actions must support the development of an organizational culture conducive to reporting and shared responsibility.

Fifth, data interoperability proved to be one of the key factors determining the capacity of health care systems to conduct quality monitoring. Poland has reached a higher level of data integration, whereas Ukraine requires substantial investment in information architecture.

6.4. Theoretical implications

The findings indicate the need to develop systemic quality models that account for interactions among regulations, oversight, financing, culture, and data. The application of the IQMM confirmed its usefulness as an analytical tool that can be applied in comparative studies of countries undergoing systemic transformation. The article contributes to the development of the quality governance literature by emphasizing the importance of institutional quality maturity as a factor conditioning the effectiveness of reforms.

6.5. Practical implications

The findings of the study may serve as guidance for policymakers in Poland and Ukraine. In Poland, the further development of the quality system should include:

- strengthening the role of quality-related data in decision-making processes,
- expanding the linkage between financing and quality outcomes,
- deepening the integration of information systems.

In Ukraine, the key priorities include:

- strengthening quality-related regulations,
- establishing a central institution responsible for quality oversight,
- integrating health data and developing uniform monitoring standards,
- building a patient safety culture that supports openness and reporting.

6.6. Directions for future research

The article is based on the analysis of secondary data, which creates opportunities for further empirical research. In particular, the following areas require further development:

- quantitative analyses covering quality indicators in medical institutions,
- studies on organizational culture and internal communication across different types of health care providers,
- comparative research including a broader range of countries in the Central and Eastern European region,
- longitudinal testing of the IQMM to assess the dynamics of institutional change over time.

References

1. Anufriyeva, V., Pavlova, M., Stepurko, T., Groot, W. (2022). The perception of health care quality by primary health care managers in Ukraine. *BMC Health Services Research*, *Vol. 22, Iss. 1*, p. 895, doi: 10.1186/s12913-022-08300-y
2. Artemenko, O., Krupnova, L., Kurylo, L., Kovalova, S., Kniazka, L. (2020). The role and significance of tools of decentralization of the healthcare system in Ukraine and the Republic of Poland: Medical and legal analysis. *Systematic Reviews in Pharmacy*, *11(11),* 1925-1929.
3. Berwick, D.M. (2002). A user's manual for the IOM's "Crossing the Quality Chasm" report. *Health Affairs, 21(3),* 80-90.

4. Berwick, D.M., Fox, D.M. (2016). "Evaluating the Quality of Medical Care": Donabedian's classic article 50 years later. *The Milbank Quarterly*, *94(2),* 237-241. https://doi.org/10.1111/1468-0009.12189
5. Black, N. (2013). Patient reported outcome measures could help transform healthcare. *BMJ, 346*, f167. https://doi.org/10.1136/bmj.f167
6. Braithwaite, J., Mannion, R., Matsuyama, Y., Shekelle, P.G., Whittaker, S., Al-Adawi, S. (Eds.) (2017). *Health systems improvement across the globe: Success stories from 60 countries.* Taylor & Francis/CRC Press. https://www.taylorfrancis.com/books/edit/10.1201/9781315586359
7. Braithwaite, J., Mannion, R., Matsuyama, Y., Shekelle, P., Whittaker, S., Al-Adawi, S. (2017). Accomplishing reform: Successful case studies drawn from the health systems of 60 countries. *International Journal for Quality in Health Care*, *29(6),* 880-886. https://doi.org/10.1093/intqhc/mzx122
8. Chojnacka, M. (2023). The maturity level of quality management and medical service processes in Polish hospitals. A*nnales Universitatis Mariae Curie-Skłodowska, Sectio H – Oeconomia, 57(1),* 119-133. https://journals.umcs.pl/h/article/view/14604
9. D'Andreamatteo, A., Ianni, L., Lega, F., Sargiacomo, M. (2015). Lean in healthcare: A comprehensive review. *Health Policy*, *119(9),* 1197-1209. https://doi.org/10.1016/j.healthpol.2015.02.002
10. Dale, E., Bredenkamp, C., Doroshenko, O., Dzhygyr, Y., Habicht, J., Hawkins, L., Katsaga, A., Maynzyuk, K., Pak, K., Zeus, O. (2022). *Health Financing Reform in Ukraine: Progress and Future Directions.* Washington, DC: World Bank. https://hdl.handle.net/10986/37585
11. Donabedian, A. (1988). The quality of care: How can it be assessed? *JAMA*, *260(12),* 1743-1748. https://doi.org/10.1001/jama.260.12.1743
12. Goncharuk, A., Lewandowski, R.A. (2020). Motivators for medical staff with a high gap in healthcare efficiency: Comparative research from Poland and Ukraine. *The International Journal of Health Planning and Management*, *35(6),* 1324-1342. https://doi.org/10.1002/hpm.3037
13. Healthcare Quality Improvement Partnership (2020). *Best practice in clinical audit.* London: HQIP. Retrieved from: https://www.hqip.org.uk/wp-content/uploads/2020/05/FINAL-Best-Practice-in-Clinical-Audit-2020.pdf
14. Hu, Z. (2024). The global research landscape and future trends in healthcare Total Quality Management. *Archives of Public Health*, *82, Article 14*. https://doi.org/10.1186/s13690-024-01420-3
15. Hughes, R.G. (Ed.) (2008). *Patient safety and quality: An evidence-based handbook for nurses*. Agency for Healthcare Research and Quality.
16. Kamal, E. (2023). Implementation of business excellence models in healthcare for quality assessment: A systematic review. *Global Journal on Quality and Safety in Healthcare*, *6(1),* 15-23. https://doi.org/10.36401/JQSH-22-10

17. Kruk, M.E., Gage, A.D., Arsenault, C. et al. (2018). High-quality health systems in the Sustainable Development Goals era: Time for a revolution. *The Lancet Global Health*, *6(11),* e1196-e1252.
18. Leape, L.L., Berwick, D.M. (2005). Five years after "To Err Is Human": What have we learned? *JAMA*, *293(19),* 2384-2390.
19. Maczuga, N. (2012). *Aspekty metodologiczne stworzenia oraz świadczenia systemu jakości usług zdrowotnych na Ukrainie*. Tarnopol: Wydawnictwo Tajp. https://library.wunu.edu.ua/images/stories/praci_vukladachiv/%D0%A4%D0%B0%D0%BA%D1%83%D0%BB%D1%8C%D1%82%D0%B5%D1%82%20%D0%95%D0%A3/%D0%9A%D0%B0%D1%84%D0%95%D0%9F%D1%96%D0%9A/%D0%9C%D0%B0%D1%87%D1%83%D0%B3%D0%B0%20%D0%9D.%20%D0%97/book/%D0%9C%D0%95%D0%A2%D0%9E%D0%94%D0%9E%D0%9B%D0%9E%D0%93I%D0%A7%D0%9DI_%D0%90%D0%A1%D0%9F%D0%95%D0%9A%D0%A2%D0%98_%D0%A4%D0%9E%D0%A0%D0%9C%D0%A3%D0%92%D0%90%D0%9D%D0%9D%D0%AF_%D0%A2%D0%90_%D0%A4.pdf
20. Maczuga, N. (2013a). Model matematyczny jakości usług medycznych. *Problemy Jakości*, *5*, 15-18.
21. Maczuga, N. (2013b). Economic issues of quality management in medical services. *Economics and Management*, *2*, 25-28.
22. Maczuga, N. (2015). *Dźwignie ekonomiczne wpływu na tworzenie projakościowego modelu zdrowia Ukrainy: Konceptualizacja i metodologia*. Tarnopol: Wydawnictwo KROK.
23. Maczuga, N. (2018). Quality and satisfaction of the stakeholders in the health care system of Poland. *Problemy Społeczno-Ekonomiczne i Państwo*, *1(18),* 88-101. https://doi.org/10.33108/sepd2018.01.088
24. Maczuga, N. (2021). Creating an attractive workplace for current and potential hospital employees. *Problems and Perspectives in Management*, *19(3),* 56-69. https://doi.org/10.21511/ppm.19(3).2021.06
25. Maczuga, N. (2025). Internal communication management as a tool for employee engagement and enterprise quality policy enhancement. *Zeszyty Naukowe Politechniki Śląskiej. Organizacja i Zarządzanie*, *218*, 467-488. https://doi.org/10.29119/1641-3466.2025.218.26
26. Manulik, S., Rosińczuk, J., Karniej, P. (2016). Evaluation of health care service quality in Poland with the use of the SERVQUAL method at the specialist ambulatory health care center. *Patient Preference and Adherence*, *10*, 1435-1442. https://doi.org/10.2147/PPA.S108252
27. Ministerstwo Zdrowia (2021). *Narodowy Program Zdrowia na lata 2021-2025*. Ministerstwo Zdrowia.

28. Ministry of Health of Ukraine (2022). *Achievements and victories of the medical system of Ukraine in 2022.* Retrieved from: https://moz.gov.ua/en/achievements-and-victories-of-the-medical-system-of-ukraine-in-2022
29. Ministry of Health of Ukraine (2023). *The Ministry of Health together with the World Bank identified priorities for the restoration of the health care system*. Retrieved from: https://moz.gov.ua/en/the-ministry-of-health-together-with-the-world-bank-identified-priorities-for-the-restoration-of-healthcare-system
30. Minkman, M. (2017). Longing for integrated care: The importance of effective governance. *International Journal of Integrated Care*, *17(4),* 9-10. https://ijic.org/articles/3510/
31. OECD (2019). *Health at a glance 2019: OECD indicators*. https://doi.org/10.1787/4dd50c09-en
32. Pellense, M.C. da S., Saturno Hernández, P.J., Caldas, A.C.S.G., Gama, Z.A. da S. (2025). Evaluation of quality policies and strategies in health systems: a scoping review. *BMJ Open, 15(2),* e092654. https://doi.org/10.1136/bmjopen-2024-092654
33. Shaw, C.D., Groene, O., Mora, N., Sunol, R. (2010). Accreditation and ISO certification: Do they explain differences in quality management in European hospitals? *International Journal for Quality in Health Care*, *22(6),* 445-451. https://doi.org/10.1093/intqhc/mzq054
34. Slobodian, O. (2025). *Strengthening Ukraine's healthcare for a resilient future.* Foundation for European Progressive Studies. https://feps-europe.eu/wp-content/uploads/2025/02/Strengthening-Ukraines-healthcare-for-aresilient-future.pdf
35. World Health Organization Regional Office for Europe (2021). *Pathways to quality: A strategy for quality of care in the WHO European Region*.
36. World Health Organization (2020). *Quality of care: A process for making strategic choices in health systems*.
37. Верховна Рада України (2017). *Закон України "Про державні фінансові гарантії медичного обслуговування населення" № 2168-VIII.* https://zakon.rada.gov.ua/laws/show/2168-19
38. Кабінет Міністрів України (2017). *Постанова № 1101 "Про утворення Національної служби здоров'я України"*. https://zakon.rada.gov.ua/laws/show/1101-2017-п
39. Кабінет Міністрів України (2018). *Постанова № 410 "Про затвердження Порядку надання первинної медичної допомоги"*. https://zakon.rada.gov.ua/laws/show/z0348-18#Text