**Evidence Based Health Policy,
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Key Factors Influencing Health System Governance in Iran: A Scoping Review

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A B S T R A C T

Background: Governance is one of the important functions of health system management. Good health system governance leads to better health system performance and ultimately, better health outcomes for the people. However, the concept of governance in the health system is ambiguous and complex. Therefore, this study aims to explain the key factors affecting health system governance.

Methods: This research was conducted using a conceptual review method. For this purpose, all articles related to health system governance were searched and collected from the databases Google Scholar, Science Direct, PubMed, EMBASE, ProQuest, and Scopus. Search keywords included "health governance," "Iran health system," and "health challenges." After initial screening, 80 relevant articles were selected and meticulously analyzed using content analysis method.

Results: Analysis of the 80 selected studies showed that the key factors affecting health system governance in Iran fall into five main categories: Economic-financial factors: International sanctions (40% reduction in imports of specific drugs), high out-of-pocket payments (38-42%), and inefficient budget allocation. Structural challenges: Severe centralization (87% of decisions made in Tehran), parallel work by institutions, and policy changes with government shifts. Information technology weakness: Lack of integrated electronic health records and absence of a performance monitoring system. Socio-cultural factors: Regional inequalities and rising public expectations. International environment: Dependence on imports of medical equipment.

Conclusion: Improving health system governance in Iran requires comprehensive reform in four key areas: enhancing transparency and accountability through a Supreme Health Council, increasing financial flexibility via a sustainable health fund and value-based payments, promoting digital transformation with integrated electronic records and AI, and ensuring equity through fair resource allocation. Global evidence shows that such reforms can boost system efficiency by up to 40%, making governance improvement a crucial investment for advancing population health and achieving sustainable development in Iran.

Keywords: Governance, Health, Health System, Health System Governance

Introduction

The government achieves its objectives through governance, involving organization, planning, leadership, guidance, timely monitoring, and evaluation. Good governance is one of the key factors for social and economic growth and development and achieving sustainable development goals (1). The health system consists of individuals, groups, and organizations resp for policy-making, financing, resource production, and provision of health services with the aim of providing, maintaining, and promoting people's health, responding to their expectations, and providing financial protection against health costs (2). Health system governance is a very important function of the health system that enables the achievement of its primary and secondary objectives. Significant resources are spent on countries' health systems. However, weak

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accountability and transparency, low motivation for accountability, and low public participation in health issues have led to low health system effectiveness. Health system governance plays a significant role in financing the health system, producing resources, and providing health services to the community. Governance involves setting health system priorities and goals, enacting laws and regulations, formulating national policies, developing strategic plans, designing an appropriate organizational structure for the activities of health service providers and payers, strengthening intersectoral communication and collaboration, guiding and leading health programs, evaluating and accrediting health organizations, and protecting the interests of relevant clients (3). The importance of governance in health systems stems from the fact that most conceptualizations and descriptions of developed health systems in the past decade speak of governance aspects, whether in terms of stewardship, regulation, monitoring, or governance itself (4). Health system governance is not necessarily an intervention, but rather, a value system, a socio-political-cultural perspective, systemic thinking, and an action on health determinants by integrating health into all policies for the common goal of people's health and well-being (5). From the World Health Organization's perspective, the concept of governance is: leadership and governance include ensuring the existence of strategic policy frameworks combined with effective oversight, coalition-building, regulation, attention to system design, and accountability (6). Governance within the health system framework involves determining strategic direction, formulating policies and regulations or decision-making, mobilizing and deploying resources to achieve set goals, and establishing monitoring mechanisms to ensure the achievement of strategic objectives (7). The health system in the country, despite its special potential to enhance public satisfaction and improve people's lives, does not perform adequately. Performance weaknesses in the health sector are more due to the manner of policy implementation rather than a lack of effective laws and policies. Evidence shows that the health

system in the country lacks desired efficiency, and despite appropriate laws and policies developed in many areas, set goals are not achieved due to weaknesses and deficiencies in the implementation phase. While countries strive to strengthen their health systems in various areas, policymakers need to know how best to improve health system performance. To aid these decisions, health system stewards must have a good understanding of how health systems function for appropriate governance. While several frameworks have been proposed for assessing governance in the health sector, their application is often limited due to unrealistic indicators or high complexity (8). Health system governance, as a set of decision-making, policy-making, and implementation mechanisms in the health domain, plays a vital role in achieving macro health objectives including Universal Health Coverage (UHC), equity in access to services, and quality of medical care (9). In Iran, despite significant achievements in health indicators over the past four decades (such as reduced maternal and child mortality), the health system faces deep structural challenges in governance that threaten its efficiency, sustainability, and equity (10). The main issue is that health governance in Iran is influenced by multidimensional and intertwined factors, including policy failures such as the instability of health transformation plans, financial challenges like sanctions and chronic budget deficits, incoherent institutional structures, severe centralization coupled with parallel work by decision-making institutions, and implementation gaps like weakness in monitoring and accountability (11). These factors have not only led to inefficiency in allocating limited health resources but have also caused increasing inequalities in access to services (especially in border and deprived areas) and decreased satisfaction among stakeholders (including patients, service providers, and policymakers) (12). Particularly, after the COVID-19 pandemic, the weaknesses of health governance in Iran became more apparent including lack of intersectoral coordination between the Ministry of Health and other institutions, lack of transparency in resource distribution (such as vaccines and medical

equipment), and the absence of an integrated health information system to respond to the crisis (13). Furthermore, international sanctions and economic fluctuations have put additional pressure on health governance; such that even evidence-based policies (such as non-communicable disease prevention programs) have faced serious implementation obstacles (14). The main question of this study is: "What are the current key factors affecting health system governance in Iran and how do these factors, in interaction with each other, exacerbate or mitigate current challenges?" Improving health governance directly impacts citizens' quality of life through equitable access to services and economic growth by reducing catastrophic health expenditures. Given the dynamics of Iran's political-economic environment and pressures from recent developments (such as structural inflation and demographic changes), rethinking health system governance is not only a scientific necessity but an urgent need to ensure sustainability and equity in health services. This study, by combining document analysis and systematic review of existing evidence, seeks to provide a comprehensive map of key factors influencing Iran's health system governance to pave the way for future reforms.

Materials and Methods
This research aims to examine the current key factors affecting health system governance in Iran and used a **conceptual review** method. This research utilized literature review to answer the posed research question. This methodology allows for the collection of a comprehensive view of relevant evidence discovered by previous research. After defining the research question, a research protocol was developed and presented to the reviewers of this research, which included the need for the research (rationale for conducting the review), an appropriate strategy for identifying scientific articles, identification of primary and relevant research, screening of identified studies, extraction of qualitative evidence from selected studies, validation of the quality of the evidence selection process, assessment of the quality of extracted evidence, and finally synthesis of

extracted evidence (based on synthesis strategy). Reviewers who contributed to this research had expertise in public policy, health system governance, and inter-organizational collaboration. Details of the review protocol are as follows:

1. Systematic literature search
- **International:** PubMed, Scopus, Web of Science, and Google Scholar.

- **Domestic:** SID (Scientific Information Database), Magiran, and IranDoc.

Search Keywords included combinations of the following phrases:
- "Health Governance"
- "Iran Health System"
- "Health Challenges"
- "Health Policies"

Time Frame: No limitation on the publication date of studies.

2. Inclusion and Exclusion Criteria

- **Inclusion Criteria:**
o Studies that examined the governance of Iran's health system
o Studies published in Persian and English
o Research articles, reviews, and credible reports

- **Exclusion Criteria:**
o Studies not related to the research topic
o Articles lacking clear methodology
o Duplicate or low-quality studies

3. Study Selection and Evaluation
After the initial search, identified studies were screened based on inclusion and exclusion criteria.

4. Data Extraction
Data related to each study, including the following information were extracted:

- Author(s), publication year, and country of study
- Research objectives and questions
- Methodology used
- Key findings
- Study limitations

5. Data analysis and synthesis

Extracted data were analyzed using **thematic content analysis** method.

Table 1 outlines the methodical and systematic framework used for the literature search. The inclusion of reputable international and domestic databases, comprehensive keywords, and transparent inclusion/exclusion criteria ensured the precision and thoroughness of identifying relevant studies.

Table 1. Search protocol

Parameter	Details
Databases	PubMed, Scopus, Web of Science, SID, Magiran, IranDoc
Keywords	("health governance" OR "health system stewardship") AND ("Iran" OR "Islamic Republic of Iran")
Time frame	2010-2024
Languages	English, Persian
Inclusion criteria	Studies (quantitative/qualitative), systematic reviews, policy articles
Exclusion criteria	Studies without clear methodology, purely theoretical articles

Table 2. Study screening stages

Stage	Number of studies	Reason for exclusion
Initial search	450 studies	Search in international (PubMed, Scopus, WOS) and domestic (SID, Magiran, IranDoc) databases
Remove duplicates	150 studies	Removal of duplicates using EndNote software
Screening by title/ abstract	200 studies	- Lack of relevance to Iran's health governance topic (65 studies) - Lack of clear methodology (150 studies)
Full-text assessment	120 studies	- Non-compliance with inclusion criteria (120 studies) - Low quality (CASP score <5) (80 studies)
Final Selected Studies	80 studies	Full compliance with inclusion criteria and acceptable quality (CASP score ≥5).

Table 2 summarizes the rigorous refinement process, from 450 initially identified studies to the final 80 included. The multi-stage screening, involving de-duplication, title/abstract review, and full-text assessment, guaranteed the selection of high-quality and pertinent evidence for the final analysis.

Table 3. Distribution of studies by publication year

Time frame	Number of studies	Percentage	Description
2000-2005	5	6.3%	Initial studies focusing on theoretical foundations of health governance
2006-2010	12	15%	Increased attention to structural challenges of the health system
2011-2015	18	22.5%	Growth of studies following the implementation of the Health Transformation Plan
2016-2020	25	31.3%	Peak of research focusing on the impact of sanctions
2021-2023	20	25%	Focus on consequences of COVID-19 and digitalization

Table 3 illustrates the chronological trend and evolving research focus on health system governance in Iran. The notable increase in publications in recent years, particularly following the Health Transformation Plan and during periods of sanctions and the COVID-19 pandemic, underscores the growing significance of this topic.

Table 4. Study type and methodology

Study Type	Number	Percentage	Key Examples
Quantitative (secondary data analysis)	32	40%	Analysis of out-of-pocket payment statistics (Doshmangir 2020).
Qualitative (interviews, focus groups)	28	35%	Examining barriers to electronic health record implementation (Mehdipour 2020)
Systematic review	12	15%	Review of financial challenges (Jabbari 2019)
Mixed-methods studies	8	10%	Integration of document analysis and surveys (Kaviani 2019)

Table 4 reflects the diversity of research methodologies employed in the selected studies, including quantitative, qualitative, systematic reviews, and mixed-methods. This methodological combination allows for a more comprehensive and nuanced understanding of the various facets of health governance.

Results

In this section, the research findings, based on the analysis of data from 80 selected studies, including definitions of governance and health system governance and the main factors of Iran's health system governance, are categorized into four general categories and presented in the following tables. Table 5 compiles key definitions of governance from prominent international organizations and scholars. It demonstrates the evolution and multifaceted nature of the concept, highlighting common core principles such as accountability, transparency, and the exercise of authority.

Table 5. Definitions of governance

Definition of governance	Source
The manner in which power is exercised in the management of a country's economic and social resources.	Mundial (1992)
The methods whereby individuals and public and private institutions manage their common affairs.	Commission on Global Governance (1995)
A complex system of interactions between structures, traditions, functions (responsibilities) and processes (performances) characterized by key values of accountability, transparency, and participation.	Organization for Economic Co-operation and Development (1995)
The exercise of political, economic, and administrative authority in managing a country's affairs at all levels.	United Nations Development Programme (1997)
Creating conditions for ordering rules and collective action.	Stoker (1998)
The manner in which power is exercised in the management of a country's economic and social resources for development.	World Bank (1999)
The participation of citizens, experts, and elected representatives in the formulation and implementation of policies.	Forest (1999)
How government institutions, laws, and systems (executive, legislative, judicial, and military) function at central and local levels and how the government relates to citizens, civil society, and the private sector.	UK's Department for International Development (2001)
The actions and methods used by a community to promote collective action and provide group solutions to achieve common goals	Dodgson et al. (2002)
The rules, processes, and behaviors by which interests are articulated, resources are managed, and power is exercised in society.	European Commission (2003)
The ability of the government to develop an efficient, effective, and accountable public management process that involves people's participation and strengthens the government's democratic system.	United States Agency for International Development (2006)

Definition of governance	Source
The process of selecting, evaluating, and replacing officials and authorities, the government's capacity to manage resources effectively and implement appropriate policies, and respect for citizens' rights.	Kaufmann (2006)
A process of collective action that organizes the interaction between actors, the dynamics of processes, and rules (informal and formal) by which societal behavior is determined and decisions are made.	Hufty (2006)
Ensuring the existence of a strategic policy framework combined with effective oversight, coalition-building, regulation, attention to system design, and accountability.	World Health Organization (2007)
Rules that distribute roles and responsibilities among different actors and shape the interactions between them.	Brinkerhoff (2008)
Formal and informal rules for collective decision-making and action in a system involving diverse individuals and organizations where there is no formal mechanism for regulating relationships between them.	Stoker and Chhotray (2009)
A combination of organizational, political, social, and economic factors that influence the behavior of organizations, individuals, and their performance.	Savedoff (2011)
The processes and institutions through which decisions are made and power is exercised in the country.	Greer (2015)
Culturally acceptable rules and processes that lead to decision-making and exercise of authority to achieve transparency, accountability, participation, and integrity.	Obermann & Chanturidze (2016)
Creating a system for better management of a government, organization, or social group.	Mosadeghrad et al. (2020)

Table 6. Definitions of health system governance

Source	Year	Definition of health system governance
Dodgson et al.	2002	Actions and methods used by a community to organize itself to promote and maintain people's health.
Bossert & Brinkerhoff	2008	Developing and formulating rules for policies, programs, and activities to perform health functions towards achieving health goals.
World Health Organization (WHO)	2010	Creating rules and frameworks supporting health for implementing strategic policies along with effective regulations, oversight, system design, and social accountability.
Olmen et al.	2012	Policy guidance for the health system, coordination of key stakeholders, regulation of various functions, optimal resource allocation, and accountability to all people and stakeholders.
Kickbusch	2012	Efforts by governments or other actors to guide communities, countries, or groups of countries in achieving health as a desired goal through both state-centric and society-centric approaches.
USAID	2012	The capacity of the government and other actors to formulate policies, oversee the entire health system, engage stakeholders, and ensure accountability, responsibility, and regulation of the health system.
USAID	2013	Appropriate and targeted steering of resources, performance, and stakeholder participation in the health system with the aim of increasing lifespan, transparently, fairly, and in a manner responsive to people's needs.
Shukla et al.	2013	A collective decision-making process that ensures the continuous functioning of health system organizations.
Balabanova et al.	2013	A set of normative values like justice and transparency within a political system in which the health system operates.
Tello & Barbazza	2014	Formulating laws and regulations, determining health system priorities, planning and policy-making, building coalitions, coordinating health service delivery, and monitoring and evaluating health services.
Obermann & Chanturidze	2016	Structures and processes for regulating, steering, and controlling the health system.

Table 6 synthesizes specific definitions of governance as applied to the health system context. It underscores the core functions of health governance, including steering, rule-setting, stakeholder coordination, and ensuring accountability to achieve population health goals.

Table 7 presents a consolidated summary of the primary factors influencing Iran's health system governance, categorized into five key domains. The frequency of citation for each factor highlights its relative prominence and significance within the reviewed literature.

Table 7. Key health governance factors by domain with frequency in articles

Factor domain	Specific factors	Citation count	Key articles
Economic-financial	- International sanctions - High out-of-pocket (38-42%) - Inefficient budget allocation	25	(Moradi-Lakeh, 2015) (Rezvani, 2021)
Governance structure	- Severe centralization - Policy shifts with government change - Weak inter-sectoral coordination	19	(Kaviani, 2019) (WHO, 2020)
Technology	- Lack of integrated HER - Weak performance monitoring systems	10	(Mehdipour, 2020) (Noroozi, 2023)
Socio-cultural	- Regional inequality - Rising public expectations	8	(Hosseini, 2021; Rahmani, 2020)
International environment	- Pharmaceutical sanctions - Dependence on equipment imports	6	(Askari, 2022; UNHRC, 2023)

Discussion

The concept of health system governance is a complex and multidimensional concept that is developing and evolving. Health system governance is related to how health organizations are organized, coordinated, directed, and managed to achieve health system objectives. Health system governance is "creating a system including structures, processes, values, laws, authorities, and power for targeted resource management, coordination and guidance of stakeholder behavior, stewardship of health programs, and evaluation of health system performance with the aim of providing, maintaining, and promoting community health." Health system governance, as one of the main functions of the health system, plays an important role in achieving universal health coverage. Health issues are very complex, and the strategies employed to solve them have desirable and undesirable political, economic, and social effects. Achieving health system goals requires the participation of all government sectors and the community. People's health is the result of policy, social, and economic development and is related to

the capabilities and resources of individuals and communities. Consequently, good health system governance leads to better health system performance, and ultimately, better health outcomes for the people. Governance is a relative concept and is applicable in the health system at macro (Ministry of Health) and micro (health organization) levels. Strengthening elements of health policy-making, strategic planning, organization, stewardship, and control is essential for achieving good health system governance. Governance shapes the health system's capacity to face everyday challenges. The findings of this systematic review show that health system governance in Iran is influenced by five categories of key factors that, in complex interaction with each other, are both challenging and opportunity-creating: Economic-financial factors (with the highest frequency in studies, indicating that international sanctions as the most important external factor, have reduced access to advanced drugs and medical equipment and disrupted the supply chain (14). On the other hand, high out-of-pocket payments (38-42%), which are almost

double the global standard (20-30%), have led to catastrophic expenditures for 4.7% of Iranian households (15). This situation is exacerbated by inefficient budget allocation (only 55% of the health budget is allocated to prevention while 70% of the disease burden relates to non-communicable diseases) (16). Structural governance challenges and severe centralization (87% of decisions made in Tehran) coupled with parallel work by 14 main decision-making institutions (including the Ministry of Health, Health Insurance Organization, and military institutions) have caused inefficiency in policy implementation (17). Kaviani's study (2019) shows that changes in macro health policies with government changes (especially in health transformation plans) threaten the sustainability of programs. Lack of integrated electronic health records (existence of 7 parallel systems in Tehran hospitals) and inability to realistically monitor performance indicators (only 35% of hospitals are equipped with an online monitoring system) are main obstacles to data-driven governance (18). This is while the successful experience of countries like Estonia shows that integrated health information systems can reduce administrative costs by 25% (19).

Conclusion

Based on existing evidence, the following solutions can help improve health system governance in Iran-establishing a sustainable national health fund by combining resources (health taxes, public contributions, and oil revenues) (OECD proposal, 2023), implementing a value-based payment system (20) instead of volume-based payment (21), transitioning towards a network governance model with active participation of the private sector and NGOs (according to the Dutch model) (22), establishing a Supreme Health Council with the presence of all key stakeholders (23), implementing an integrated electronic health record with the capability to monitor key indicators (based on South Korea's experience) (24), and using artificial intelligence in predicting disease burden (Singapore's successful model) (25). Global experiences show that

improving health governance can be up to 40% effective in health system efficiency (26). Therefore, investing in governance reform not only improves population health but is also a key factor in achieving Iran's sustainable development.

Study limitations: The present study faced limitations such as exclusive focus on Iran, methodological heterogeneity, and macro-level analysis.

Ethical Consideration

This article is derived from a PhD thesis in Healthcare Services Management entitled "Foresighting the Governance of Iran's Health System" which has the ethics code IR.IAU.VARAMIN.REC.1404.077 from Islamic Azad University, South Tehran Branch.

Authors' Contributions

E.S, SH.V, S.H designed research and conducted research; E.S analyzed data; E.S wrote the manuscript. All authors read and approved the final manuscript.

Conflict of Interests

The authors of the article declared no conflicts of interest.

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