

### Appendix 1: A summary of the features of selected studies

ID	Source (Year)	Design/Methods	Country	Scope/Setting	Aim of study
1	Hesam Seyedin, et al. (2024)	Qualitative	Iran	Hospital	Identify cost reduction strategies from the viewpoint of hospital managers
2	Samira Raofi, et al. (2024)	Qualitative (phenomenological)	Iran	Hospital	Explain hospitals' challenges in providing healthcare services to medical tourists
3	Raheleh Maleki, et al. (2023)	Scoping review	Iran	Hospital	Review the root causes of insurance deductions and propose solutions to reduce them in hospitals
4	Alessandra Lyrio Barbosa Giroti, et al. (2023)	Analytical descriptive cross-sectional	Brazil	Hospital	To evaluate the physical condition of mattresses in hospitals and long-term care facilities and to explore the association with management practices regarding procurement, handling, and maintenance
5	Ian Kirkpatrick, et al. (2023)	Routine clinical trial (RTC)	UK	Hospital	Examines the performance benefits of this involvement for quality and safety outcomes—specifically patient experience and hospital infection rates.
6	Justin Waring (2023)	Case study	UK	Governance of health and care systems	Greater involvement of healthcare professionals in the governance of care organizations is positively associated with increased care quality and safety
7	Waitzberg R, et al. (2022)	Qualitative	Germany, Israeli	Hospital	What Strategies Do Managers and Physicians Apply to Reconcile Dilemmas Between Clinical and Economic Considerations?

ID	Source (Year)	Design/Methods	Country	Scope/Setting	Aim of study
8	Peter Schubert, et al. (2020)	Qualitative (exploratory approach)	Belgium	Hospital	Nonprofit leaders' perceptions of stakeholder power and stakeholder representation
9	Nadeen Hilal, et al. (2019)	Cross-sectional	Lebanon	Hospital	The use of evidence in decision making by hospital managers
10	Yu Xie, et al. (2019)	Qualitative descriptive	China	Hospital	qualitatively compare the influence of different ownership in hospitals
11	Roshanghal b A, et al. (2018)	Systematic review	-	Healthcare	Narrow the main gaps in the kinds of managerial decisions/management practices that different groups of decision-makers put
12	Virsaviva vaseva, et al. (2016)	Retrospective study	Bulgaria	Hospital	Analyse the quality of healthcare services after the implementation of control over expenses
13	Cinaroglu S, (2016)	Case study	Turkey	Healthcare organization	Complexity in healthcare management: why does drucker describe healthcare organizations as a double-headed monster?
14	EW Barasa, et al. (2016)	Qualitative	Kenya	Hospital	The influence of power and actor relations on priority setting and resource allocation practices at the hospital level in kenya
15	Martin holzhacker, et al. (2015)	Cross-sectional	Germany	Hospital	The impact of changes in regulation on cost behavior
16	Doshmangi L, et al. (2015)	Systematic review	Iran	Health system	Perceptions and views of expert stakeholders as to why the board of trustees' policy did not achieve its perceived objectives.
17	Xie Y, et al. (2013)	Cross-sectional	China	Hospital	Center for health policy and management

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18	Ian Kirkpatrick, et al. (2013)	Mix Methods	European	Health systems	Develop a framework for comparing changes in the management of public hospitals across different national health systems
19	Kathleen a, et al. (2011)	Case study	USA	Hospital	Develops multiobjective models of hospital decision making
20	Crainich and Mauleon (2011)	Case study	France	Hospital	Examines the consequences of the introduction of an activity-based reimbursement system on the behavior of physicians and hospital's managers
21	Ford-Eickhoff, et al. (2011)	Descriptive, analytical	USA	Hospital	Investigated the relationship between broader expertise among hospital board members, board involvement in the stages of strategic decision making
22	Jafari, et al. (2011)	Qualitative	Iran	Hospital	Assessed the views of senior managers in selected hospitals on the amount of autonomy in various management decision areas granted to the hospitals
23	Ancarani, et al. (2009)	Case study	Italy	Hospital	Presents a model of the relations between the decision making process of a hospital ward and its technical efficiency
24	Boadway, et al. (2004)	Case study	Canada	Hospital	Develops a model in which managers and doctors are responsible for different decisions within the hospital
25	Crilly and Le Grand (2004)	Survey and empirical analysis	UK	Hospital	Explores the motivation and behaviour of hospitals
26	Eldenburg and Krishnan (2003)	Descriptive, analytical	USA	Hospital	Explore incentives and performance in organizations governed by publicly elected boards of directors
27	Jelovac and Macho-	Analytical	Netherlands	Hospital	Investigate the optimal contracts for a hospital and a physician

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	Stadler (2002)				
28	Salvadores (2001)	Descriptive, analytical	Spain	Hospital	Investigate if the legal changes had indeed produced a real change in the balance of power inside the hospitals
29	Rayburn JM and Rayburn LG (1996)	Case study	USA	Hospital	Traces the origins, development, and reasons for change in the power equation in U.S. hospitals between physicians, administrators and accountants
30	Jensen and Murphy (1990)	Case study	USA	Public	Estimates of the pay-performance relation for chief executive officers
31	Starkweath e (1988)	Case study	USA	Hospital	Explain the hospital board's power
32	Pauly (1987)	Case study	USA	Hospital	Test the hypothesis that medical staff physicians affect hospital behavior
33	Joskow (1980)	Case study	USA	Hospital	The effects of competition and regulation on hospital bed supply and the reservation quality of the hospital
34	Harris (1977)	Case study	USA	Hospital	Investigate the economic implications of the hospital's internal organizational structure
35	Lee (1971)	Case study	USA	Hospital	Propose an alternative theory of hospital behavior
36	Feldstein (1971)	Case study	USA	Hospital	Estimate hospital behavior model
37	Newhouse (1970)	Case study	USA	Hospital	Examine ways in which the nonprofit status of voluntary hospitals may cause misallocation of resources

## Appendix 2: Information stored in papers included in the literature review

No.	Title	Decision-Maker	Decision Area
1	The Hospital Cost Reduction Strategies from the Managers' Point of View: A Qualitative Study in Iran	Hospital Managers	Human resources, Management and organization, Equipment, facilities, and buildings
2	Hospital's Challenges in Providing Healthcare Services to Medical Tourists: A Phenomenological Study at the National Level	Executive manager, IPD expert hospital, Nursing manager, Chief manager-facilitator's company	Governance and Leadership, Financing, Human Resources, Technology, Medicine, and Equipment, Information Systems, service Delivery
3	A Scoping Review of Health Insurance Deductions in Hospitals: Root Causes and Solutions	Policymakers, health ministry's managers, universities, insurance organizations	Reduce insurance deductions
4	Improving Best Practices in Assessing the Usage Conditions of Hospital and Long-Term Care Mattresses	Nurses, Hospital Managers	Optimal care delivery, patient well-being (mattress selection, maintenance, and assessment),
5	Doctors in leadership roles: consequences for quality and safety	Hospital Managers, Physicians	Allocation of resources, staff development, communication and priority setting, strategic decision-making, quality and safety outcomes
6	New development: Clinicians in management—past, present, future?	Executives managers, Physicians	Increased care quality and safety, clinical involvement in healthcare management, governance responsibilities, volume and variety of clinical involvement
7	Dual Agency in Hospitals: What Strategies Do Managers and Physicians Apply to Reconcile Dilemmas Between Clinical and Economic Considerations?	Hospital Managers, Physicians	Selection of patients, quality of care or overtreatment, curbing unnecessary expenditures, efficiency
8	In the name of the stakeholder: An assessment of representation surpluses and deficits by nonprofit leaders	Board Members, Managers	Power and representation
9	The use of evidence in decision making by hospital managers in Lebanon: A cross-sectional study	Senior Managers, Middle Managers, Hospital Board	Managerial decisions and decisions related to nursing work. Designing of policies, protocols, and procedures, purchasing decisions

No.	Title	Decision-Maker	Decision Area
10	Hospital Ownership and Hospital Institutional Change: A Qualitative Study in Guizhou Province, China	Owners Of Hospitals (Public Hospital; Government), (Private Hospital; Managers And Investors)	Decision-making power allocation, residual ownership allocation, market entry level, accountability, and social functions
11	What evidence on evidence-based management in healthcare?	Health Professionals (Mainly Physicians And Nurses), Hospital Managers, Policy-Makers, Researchers	Organizational performance assessment, management/staff performance assessment, change management implementation, organizational knowledge translation, organizational strategic planning
12	Outcomes analysis of hospital management model in restricted budget conditions	Physicians, Hospital Managers	Controlling operating costs - maintaining the level of service quality - controlling the cost of medical care such as choosing treatment options, drugs, consumables, various tests and examinations
13	Complexity in healthcare management: Why does Drucker describe healthcare organizations as a double-headed monster?	Physicians, Hospital Managers And Nurses	Financial resources and financial performance - hospital performance - improving the quality of medical care
14	The influence of power and actor relations on priority setting and resource allocation practices at the hospital level in Kenya: a case study	Senior Managers And Middle Level Managers Non-Clinical Managers And Clinicians, Hospital Managers And The Community	Priority setting and resource allocation (psra): three psra activities: 1) the hospital budgeting and annual work planning process; 2) medicine selection decisions in the hospital; and 3) nursing allocation to hospital departments in the hospital.
15	The Impact of Changes in Regulation on Cost Behavior	Government, Board Of Directors, Academic Faculty, Church Members, Political Groups	Making laws, economic issues - price - quantity and quality of services - efficiency - budget - outsourcing - accounting costs - product mix - adjustment of capacities - dismissal of personnel
16	The experience of implementing the board of trustees' policy in teaching hospitals in Iran: an example of health system decentralization	Board Of Trustees, Government, Insurance Organizations	Number of staff, staff-to-bed ratio, hospitals' budget, payment of wages and salaries, financing, delayed payments to hospitals or inability to cover traffic accident claims
17	Center for Health Policy and Management; Chinese Academy of Medical Sciences. A study of unit system effects on public hospital in China	Government	Construction, infrastructure and direction of hospital development, hiring and firing of hospital staff, service delivery content
18	The Translation of Hospital Management Models in European	Board Of Directors, Clinical Managers (Physicians), Non-	Key decisions

No.	Title	Decision-Maker	Decision Area
	Health Systems: A Framework for Comparison	Clinical Managers (Managers). Chairs Of Departments	
19	Modeling internal decision making process: an explanation Of conflicting empirical results on behavior of non-profit And for-profit hospitals	Physicians, Hospital Managers	-----
20	Hospital's activity-based financing system and manager: physician interaction	Physicians, Hospital Managers	Production and the quality of medical or surgical acts, pre or post surgery consultations. Expenses and quality related to the operating rooms, beds, technical equipment, the size and the professional training of the nursing care, administrative and technical staff. Maximize profit - payment systems (transition from a fee-for-service to an activity based)
21	Hospital boards and hospital strategic focus: The impact of board involvement in strategic decision making	Board	Strategic decision making
22	Space or no space for managing public hospitals; a qualitative study of hospital autonomy in Iran	Physicians, Hospital Managers, Stakeholders (University, Insurance Organizations, Ministry), Medical Council, Government	Strategic management, human resources management, financial management, physical resources management, product market exposure, procurement market exposure, residual claimant, governance arrangement & accountability, hospital social functions
23	The impact of managerial and organizational aspects on hospital wards' efficiency: Evidence from a case study	Hospital Central Management, Manager Of Ward, Head Of Ward	Improvements in efficiency, production efficiency, assignment of resources, resource management and organization, negotiation of goals, pursue of prestige, re-organization processes, successful bargaining, conflicts
24	An optimal contract approach to hospital financing	Physicians, Hospital Managers, Government	Provide the financing, allocate resources within the hospital, specifying size of a high-tech equipment, mix of patients, specify remuneration, select patients, choosing the type of treatment
25	The motivation and behaviour of hospital Trusts	Managers, Consultants (Hospital Specialists, Physicians, Or Nurse)	Production or service (volume and quality), financial break-even

<b>No.</b>	<b>Title</b>	<b>Decision-Maker</b>	<b>Decision Area</b>
26	Public versus private governance:a study of incentives and operational performance	Boards Of Directors, Chief Executive Officers (Ceos), Governance, Legislatures, Municipalities, Political Groups	Pay increases, compensation decisions, health care cost containment, healthcare access, reducing administrative costs - financial resources - transfer of managers
27	Comparing Organizational Structures in Health Services	Physicians, Hospital Managers, Insurance Organizations	Contract with both the hospital and the physician, investment in medical equipment, diagnosis quality, allocation of resources - payment to doctor - hospital expenses
28	Theoretical and perceived balance of power inside Spanish public hospitals	Physicians, Hospital Managers	-----
29	The Changing Power Equation in Hospitals	Physicians, Hospital Managers, Accountants	Choosing which hospital to admit patients, order tests and procedures for their patients, prospective payment system, control of financial information, departments receive financial resources
30	Performance Pay and Top-Management Incentives	Managers, Boards Of Directors, Political Forces, Media	Contracting process, pay-performance, payoff distribution, compensation decisions
31	Hospital board power	Physicians, Hospital Managers, Board	Quality of medical care
32	Association Nonprofit Firms in Medical Markets	Physicians	Hospital costs, patients care, casemix, specialty composition of staff members
33	The Effects of Competition and Regulation on Hospital Bed Supply and the Reservation Quality of the Hospital	State And Local Planning Organizations (Federal Government)	Reservation quality, hospital bed supply decisions, regulate hospital budgets and rates, prospective reimbursement criteria, reduce total costs, uneconomic expansions of the quantity and quality of care, Hospital capacity additions - building a new facility or modifying an existing facility- efficient utilization of plant and equipment on the hospital sector - additional hospital beds - average occupancy rate
34	The Internal Organization of Hospitals: Some Economic Implications	Physicians, Hospital Managers	Hospital's inputs (beds and operating rooms), patient selection, choose the time of service, finance the equipment, purchase and stock of consumables, utilizing capacity, admit more patients
35	A Conspicuous Production Theory of Hospital Behavior	Physicians, Hospital Managers, Board	Use of inputs in hospitals, resource allocation, to contain costs in the hospital sector, pricing policy



No.	Title	Decision-Maker	Decision Area
36	Hospital Cost Inflation: A Study of Nonprofit Price Dynamics	Physicians, Hospital Managers, Board	-----
37	Toward a Theory of Nonprofit Institutions: An Economic Model of a Hospital	Physicians, Hospital Managers, Board	The quantity includes: the number of hospitalized patients, the cost (budget) of the hospital, the income of the hospital, the length of stay. The quality includes: the beauty of the physical structure of the hospital, the skill of the doctors, the skill of the nurses, prestige of the hospital (in terms of treatment), the non-clinical quality of services, the ratio of staff to patients, the ratio of doctor to patient, the availability of diagnostic and treatment facilities in the hospital