Iran J Public Health, Vol. 53, No.9, Sep 2024, pp.2006-2019

Review Article

Accreditation Modules According to Hospital Types: A Scoping Review

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(Received 10 Oct 2023; accepted 13 Jan 2024)

Abstract

Background: One of the upcoming challenges in hospital accreditation is using the same and similar standards for all types of hospitals in size and type of activity. We aimed to identify the accreditation modules for all types of hospitals in size (small hospitals) and type of activity (special hospitals).

Methods: This research was conducted as a scoping review from Mar to May 2023. "Arsky and O'Malley" six-step protocol was used to conduct this study. "Preferred Reporting Items for Systematic Reviews and Meta-Analyses" (PRISMA) was used to identify, evaluate, and select research articles. The "framework analysis" method was used to analyze the data.

Results: Of 14 articles, 64% have been published in peer-reviewed scientific journals. Moreover, 36% of them were accreditation organizations' standards at the national level. The accreditation modules of small hospitals are Responsibilities of Management, Care of Patients, Management of Medication, Patient Safety, Infection Control, Continuous Quality Improvement, Patient Rights and Education, Blood and Blood Products, and Partnering with Consumers. The accreditation modules of special hospitals are Governing Body and Administration, Clinical Management, Prevention and Health, Care and Treatment, Diagnostic Services, Patient Rights, and Quality Improvement.

Conclusion: Identifying the main modules of accreditation for small and special hospitals can help policymakers and hospital managers improve the quality and safety of their hospitals by using appropriate standards and help improve the services provided to patients and increase their satisfaction.

Keywords: Accreditation; Hospital bed capacity; Special hospital

Introduction

One of the ways to improve the quality and safety of patients and employees in healthcare organizations is accreditation (1). Accreditation is evaluating health care organizations by an external organization that compares the organization's performance with the established standards and

decides on the organization's credibility or discredit (2-4).

The history of using accreditation for external evaluation of healthcare organizations dates back to 1917. In the United States, the American College of Surgeons played a significant role in the development of hospital accreditation. Most healthcare organizations use accreditation standards today, especially in developed countries (5,6).

Hospital accreditation aims to ensure that patients receive safe and effective care and that the organization operates efficiently and effectively (2,3). The requirements for hospital accreditation include compliance with specific standards related to patient safety, quality improvement, infection control, and other aspects of healthcare delivery. The scope of hospital accreditation typically encompasses all aspects of the organization's operations, including clinical services, administrative processes, facilities management, and more (1). The hospital accreditation process usually involves a self-assessment by the organization and an external evaluation conducted by trained surveyors from the accrediting body (2,7,8).

In dividing the types of hospitals, multiple criteria are used. Among them are the "number of hospital beds" and "type of activity" of the hospital (9). One of the types of hospitals based on the number of beds is the small hospital. A small hospital has several global definitions: Less than 50, 100, and 400 beds (10-12).

Hospitals are divided into two categories, "general" and "special," based on "type of activity." (9). According to the definition of the WHO a single specialty hospital is a healthcare unit that is responsible for providing services to patients of a specific organ such as eye, ear, nose, and throat, orthopedics, neurology, etc., or patients with special conditions such as infectious diseases. Such as tuberculosis, accidents, etc., or a particular population group, such as children, is in charge (9).

Among the upcoming challenges in the field of hospital accreditation is the use of the same standards for all types of hospitals in terms of size and type of activity (13-15). Sometimes, small hospitals have to bear a lot of extra costs. Costs that, even if necessary for a large hospital, are not reasonable for a small hospital. For example, purchasing autoclave equipment in a small hospital is about as much as in a medium or large hospital. This cost cannot be easily justified (16).

Similarly, special hospitals have particular conditions in that their accurate and correct evaluation requires specific standards and issues. Some accreditation standards are not used in special hospitals. On the other hand, some specific standards of these types of hospitals are outside the generic accreditation standards (17).

During the past years, some organizations related to accreditation and some countries have developed specific accreditation standards for hospitals according to their size and type of activity, including accreditation standards for children's hospitals in the USA (18), accreditation standards for small hospitals in India (12) and Australia (11,19) and accreditation standards for psychiatric hospitals in Iran (20). This research aimed to identify the modules of accreditation standards for all types of hospitals in size (small hospitals) and type of activity (special hospitals).

Methods

This research was conducted as a scoping review from Mar to May 2023. Scoping review research is a secondary study combining original research studies' findings. The reasons for using a scoping review study include expressing the generality of the subject and identifying its key concepts such as definitions, conceptual models, and evaluation indicators, drawing a literature map of the relevant subject, etc. A scoping review is not limited to peer-reviewed original research articles and includes gray literature such as organizational reports, summaries of conference articles, dissertations, and review articles. As a result, it examines more sources in less time (21,22). The six-step protocol of "Arski and O'Malley" (23) was used, which includes identifying research questions, identifying related studies using reliable databases, reviewing gray texts theses, reviewing arti-

cles and reference studies in the field, selecting relevant studies for review from primary studies; data extraction in the form of graphs and tables; Collecting, summarizing, and reporting the findings and optional consultation with experts about the obtained findings.

Identifying the Question and Relevant Literature

The first step was to formulate the research questions by holding a meeting of the research team to identify potentially useful questions to focus on in hospital accreditation. The research team specified four questions. 1- Are there specific accreditation standards for small hospitals globally? 2- Are there specific accreditation standards for special hospitals globally? 3- What are the main modules of accreditation for small hospitals? 4- What are the main modules of accreditation for special hospitals? In the next step, the team sought to design a search strategy that would lead to the identification of relevant literature. First, the keywords were identified based on the relevant literature review, and finally, the team consensus. Then, we developed search strategies separately from 5 valid databases (PubMed, Scopus, Web of Science, ProQuest, Embase), with the cooperation of a librarian. In order to maximize the search range, we combined keywords using Boolean operators. In addition, in Google Scholar, using keywords in different combinations, including accreditation special hospital, we searched small hospitals. We also checked the Google search engine and accreditation body websites to find additional articles we may have overlooked.

Selecting the Literature

After searching, the titles and abstracts were retrieved, loaded, and duplicated in the bibliographic reference management software (EndNoteX8). The research team first reviewed the titles and abstracts of the identified sources to select the relevant literature to be included in the study. Two team members (AGh, ACh) independently reviewed each title and abstract. At each stage, disagreements between the two authors were resolved by consensus or arbitration by the third author (MF). Studies were assessed for eligibility using the PCC criteria (Table 1). Inclusion criteria were developed and applied by the research team at this stage. Formulating such standards is a central issue in the scoping study. Because it is unlikely that researchers will be able to identify the exclusion criteria at first, and this is, in fact, a turning point for distinguishing between the inclusion criteria in a scoping study compared to a systematic review (23). The inclusion criteria were English articles published until April 30, 2023 that mentioned the accreditation standards of small or special hospitals. Exclusion criteria included studies published in languages except English. We also excluded unpublished/unindexed studies or studies published in abstract form. After reviewing the title and abstract, the available sources were thoroughly checked. As with the title and abstract review stage, any disagreements were resolved after discussion through the consensus of all members. The "Preferred Reporting Items for Systematic Reviews and Meta-Analyses" (PRISMA) was used to identify, evaluate, and select research articles (Fig. 1).

Table 1: Population, Concept & Context Outline formulate

P (Population)	***Articles, Instructions, guides, and etc.***
C (*Concept*)	Accredit*; Special* hospital; hospital; Hospital Bed Capacity, under 100; small hospital; under 100 beds; under 60 beds; Pediatric, Maternity, Burn, ophthalmology, eye
C (*Context*)	Hospital

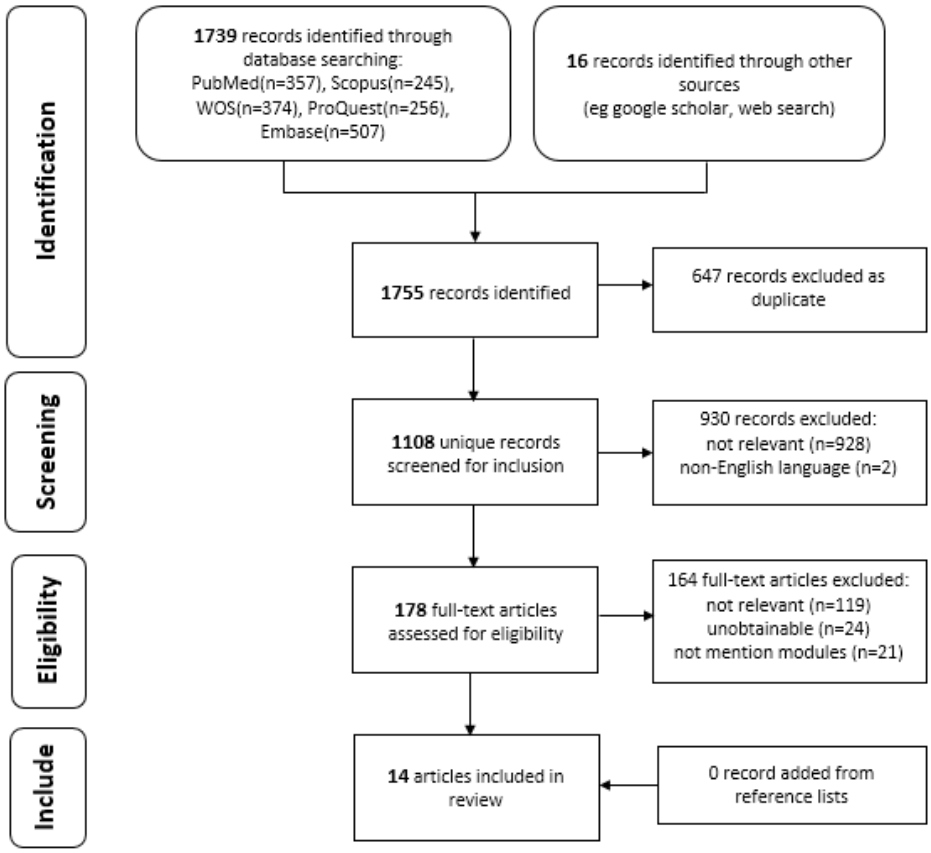

Fig. 1: PRISMA flowchart of the study selection process

Data extraction

Studies that met our inclusion criteria were independently reviewed by two authors (AGh, ACh) using a standard data extraction form, and their reference lists were also examined to identify potentially relevant studies. The 5-step framework analysis method "Ritchie and Spencer" (24) was used for data analysis, including familiarizing the data, recognizing a thematic framework, indexing, drawing tables, mapping, and interpretation. Studies that did not meet our inclusion criteria were summarized and retained for detailed evaluation and the reason for their exclusion. MAXQDA software ver. 20 was used to identify related themes and sub-themes.

This article results from a Ph.D. thesis titled Development of Modules of Accreditation Standards According to Different Types of Hospitals in Iran, approved at Isfahan University of Medical Sciences under the Code of Ethics IR.MUI.NUREMA.REC.1401.082.

Results

Of 14 articles, 64% have been published in peer-reviewed scientific journals. Moreover, 36% of them are accreditation organizations' standards at the national level. About, 50% of the sources were published until 2010, and 50% between 2010 and 2022. This trend shows more attention to the substantive difference of hospitals in the accreditation process in the last decade. Most sources were related to the USA (57.1%). Considering that the USA is a pioneer in hospital accreditation, this superiority in the number of articles was predictable (Table 2).

Table 2: Description of included studies

Variables	*N (%)*
Publication Type	
Journal article	9 (64)
Published standards	5 (36)
Publication date	
Until 2010	7 (50)
2010-2022	7 (50)
Country:	
USA	8(57.1)
Australia	2(14.3)
India	1(7.15)
Iran	1(7.15)
Republic Korea	1(7.15)
UK	1(7.15)

In the field of accreditation of small hospitals, accreditation organizations in India and Australia ("National Accreditation Board of Hospitals and Health Service Providers" and "Australian Health Service Quality and Safety Commission," respectively) have developed and published standards (11,12,19).

Accreditation standards (Themes) and issues (Subtheme) extracted from 14 articles were entered into the MAXQDA software ver. 20, and through the "Ritchie and Spencer" method, the final modules were determined as follows after the group discussion (Table 3): Responsibilities of Management, Care of Patients, Management of Medication, Patient Safety, Infection Control, Continuous Quality Improvement, Patient Rights and Education, Blood and Blood Products, Partnering with Consumers.

In the following, we will examine the main modules (main themes) and some of the essential submodules(themes) of accreditation of small hospitals.

Responsibilities of the Management module include facility management،information management, clinical governance, and risk management. Facility management in the hospital includes a wide range of activities, such as maintenance of tools and equipment and their repair, sending equipment out of the hospital for repair if necessary (25). A hospital information system is designed to automate hospital affairs such as reporting test results, entering doctor's orders, prescribing drugs, controlling pharmacy inventory, central warehouse, nutrition unit, etc. (26, 27).

The American Society for Health Care Risk Management defines healthcare risk management as the policies and practices intended to establish a safe healthcare facility that prioritizes patient safety by operating in compliance with financial, medical, and legal regulations (28, 29). Clinical governance is "a framework that obliges organizations providing health services to comply with the principles of excellence in clinical services and, in this way, makes them accountable for maintaining and improving the quality of the services they provide" (30,31).

Care of patients aimed to optimize health outcomes by providing comprehensive support that addresses physical, emotional, and social needs. It requires a collaborative approach involving healthcare professionals, patients, and their families to ensure the best possible care and recovery (32).

Medication management in hospitals states that medications are selected, procured, delivered, prescribed, appropriateness reviewed, administered, and monitored, which is effective for patient care outcomes (33,34).

Patient safety is the avoidance of unintended or unexpected harm to people during the provision

of health care. Patient safety has been given special attention to improving healthcare quality in the last decade and in the health systems of developing and developed countries (35-39).

Hospital-acquired infection is an infection the patient did not have during hospitalization and is not in its incubation period but after at least 48 h of hospitalization (40,41,42).

Correct implementation of continuous quality improvement programs in the hospital can lead to beneficial results such as organizational effectiveness, improvement of current functions and processes (43, 44).

WHO has described the issues and points related to the patient's rights in detail and, at the same time, has determined a minimum for it and encouraged different countries to develop these minimums based on their social and cultural conditions (45, 46).

Patient education is a dynamic and continuous process. The basis of adequate education is patients' participation and cooperation (47-49).

Blood transfusion is one of the most common hospital procedures in developed countries. However, inappropriate use of blood transfusion is every day, which is of considerable concern (50, 51).

Consumers need to be involved throughout the planning, design, delivery, and evaluation of any innovations in healthcare to achieve genuinely patient-centered care (52,53).

Table 3: Main themes, themes and subthemes of small hospitals

Main theme	*Theme*	*Subtheme*
Responsibilities of management	Facility management	Support service equipment management (11, 12)
		Safe water, electricity, medical gas and vacuum systems (11, 12)
		Fire and non-fire emergencies within the facilities (11, 12)
	Information management system	Medical record (19, 54)
		Documented policies and procedures (11, 19)
		Retention time of records, data and information (19, 54)
	Risk management	Risk identification (11, 19)
		Risk analysis (11, 19)
		Response planning (11, 19)
		Treat risk (11, 19)
	Clinical governance	Clinical leadership (19, 54)
		Complaints management (19, 54)
		Evidence-based care (19, 54)
		Safe environment (19, 54)
		Clinical performance (19, 54)
		Clinical guidelines (19, 54)
		Quality roles and responsibilities (19, 54)
Care of patients	Intensive care (11, 19, 54)	
	Surgery (11, 19, 54)	
	Emergency (11, 19, 54)	
	Anesthesia (11, 19, 54)	
	Obstetrics (11, 19, 54)	
	Pediatric (11, 19, 54)	
Management of medication	Documentation of patient information	Medication reconciliation (11, 19)
	Continuity of medication management	Adverse drug reactions (19, 54)
		Medicine allergies (11, 19, 54)
		Medication review (11, 19, 54)
Patient safety	Patient identification	Information for patients (11, 19)
		Associated policies, procedures and/or protocols (11, 12)
		Organization-wide patient identification system (11, 12)
		Patient identification matching system (11, 19, 54)

Table 3: Continued….

	Transfer care	Clinical handover (11, 19, 54) Transfer and discharge processes (11, 19, 54)
	Match patients and their care	Documented process to match patients (11, 54) Improve the effectiveness of the process for matching patient (11, 12)
	Medication safety	Maintenance of organization-wide medication safety systems (11, 19) Medication management system assessment (11, 19) Reduce risks identified in the medication management system (19, 54)
	Administration of anesthesia	Documented policy and procedure for the administration of anesthesia (11, 19, 54) Pre-anesthesia assessment (11, 12) Documented anesthesia plan (11, 19)
Infection control	Antimicrobial stewardship(ams)	Immediate preoperative re-evaluation (11, 12) Implement an ams policy (11, 19) Plan the ams program (19, 54) Access to current guidelines (11, 12)
	Hand hygiene	Products used for hand hygiene (11, 19) Workforce knowledge of hand Hygiene (11, 12)
	Aseptic technique (11, 19) Workforce immunization (11, 19, 54)	
Continuous quality improvement	Structured quality improvement	Coordinating and implementing the quality Improvement programme (11, 19) Adequate resources required (11, 19)
	Continuous monitoring programme (11, 19, 54) Key indicators (11, 19, 54)	
Patient rights and education	Support individual beliefs	Respect for personal dignity and privacy (11, 19, 54) Protection from physical abuse or neglect (11, 19, 54) Obtaining informed consent (19, 54)
	Information and education about patient healthcare needs	Plan of care (11, 12) Preventive aspects (11, 12) Possible complications (11, 12)
Blood and blood products	Blood products prescribing (11, 19) Blood product clinical use (11, 19) Transfusion practices (11, 19)	
Partnering with consumers	Partnering with patients in their own care (11, 19, 54)	
	Patient health literacy	Communication that supports effective partnerships (11, 12)
	Partnerships in healthcare governance planning, design, Measurement and evaluation (11, 19)	

At the global level, some hospital accreditation and scientific research organizations have developed specific standards for special hospitals. Specifically, the existing accreditation standards for hospitals in terms of type of activity include ambulatory surgery (3, 55), breast cancer (56), chest pain center (57, 58), infertility care (59), maxillofacial surgery center (60), nephrology hemodialysis (61), pediatric trauma (62) and psychiatry (20). According to the findings, the seven modules of accreditation of special hospitals are (Table 4): Governing body and administration, Clinical Governance, Prevention and health, Care and

Treatment, Diagnostic Services, Patient Rights, and Quality Improvement.

Considering the overlap between the accreditation modules of small and special hospitals, we will continue to examine some of the essential sub-modules of accreditation of special hospitals.

Among the hospital's operating expenses, the expenses related to human resources account for the largest share of the hospital's total costs (63). Since patients have the right to be cared for by professional staff with relevant and up-to-date skills and expertise, continuous staff training is one of the critical elements in the management of human resources in hospitals, especially in the clinical department (64).

Community outreach programs are essential to public health services, helping health professionals reach the weaker sections of society to deliver hospital care services. With a better understanding of why people use or do not use the services, the programs can be tailored to address the community's felt needs (65,66).

With greater emphasis on care transitions and readmission rates, primarily as facilities work to recover from COVID-19, inpatient rehabilitation units have incredible potential to become high-performing centers of excellence that create greater patient access and enhance the performance of the entire hospital (67, 68).

Table 4: Main themes, themes and subthemes of special hospitals

Main theme	*Theme*	*Subtheme*
Governing body & administration	Human resource management & education	Staffing (60, 61)
		Level of responsibility and accountability (56)
		Competence of employees (3)
		Organizational structure (3, 57)
		Orientation and training (57, 58, 60, 69)
		Providing educational videotapes, audiotapes, … (55)
	Risk management	All interior furnishings are flame resistant (55)
	Facility management	Maintaining copies of all safety inspections (55)
		Employees participation in quarterly fire and disaster drills (55)
		Regulate policies and procedures for the facility (3)
		Functional facility design (57, 61)
	Community outreach	Education, prevention, and early detection programs (56)
		Commitment toward community health (57)
		Twenty-four-hour telephone and on-site consultation (18)
	Financial management	Monitoring facility's financial health (55)
Clinical governance	Interdisciplinary patient management (56)	
	Patient navigation (56, 61)	
	Transfer agreement with another centers (18)	
	Trauma rehabilitation (18)	
	Medication management (60)	
	Medical records	Keeping a sample of each Patient form in a folder (3, 61)
		Physically isolate and protect patient Charts (3, 61)
		Charts professional audit (3, 61)
	Medical equipment	Writing procedure for installing and introducing new equipment (55, 58, 60)
Prevention & health	Infection control	Wearing scrubs in the surgery center (55)
		Testing the autoclave (55)
		Caring for Patients with infectious diseases (20, 55)
		Alternative devices for anti-embolic prophylaxis (70)
	Environmental health	Laundry service (55)

Table 4: Continued….

		Storing soiled linens in covered containers (55)
		Maintaining a clean, safe environment (3)
Care and treatment	Emergency services	Water treatment system (61) Emergency assessment of patients (57) Professional staff certification (18)
	Surgical services	Blood and blood replacement products (55) Professional staff certification (18) On-call surgery (18)
		Controlling or temperature between 68 and 72 degrees fahrenheit (70)
Diagnostic services	Pathology and clinical laboratory services	Laboratory protocols (59) Donor screening (59)
	Radiology services (58)	
Patient rights	Accommodation of patients with disabilities (55) Treating with dignity (3,20) Planning for resolving patient grievances (3,20)	
Quality improvement	Quality of care	Use of cost-effective patient care procedures and treatments Evaluation and management guidelines To establish the medical director and/or co-directors (56) Process improvement orientation (57) Nursing care evaluation (18, 60) Post discharge follow-up

Table 5: Overlapping modules of accreditation of Iranian hospitals with modules and sub-modules of accreditation of small and special hospitals

Iran hospital accreditation modules	***Small hospital accreditation modules and sub-modules***	***Special hospital accreditation modules and sub-modules***
Leadership and quality management	Responsibilities of Management	Governing body & Administration
	Continuous Quality Improvement	Quality Improvement
Risk management of accidents and disasters	Risk management	Risk management
Human resources management		Human resource management & education
Information management system	Health Information management	
Environmental Health		Environmental Health
Acute and emergency care	Emergency care Intensive care	Emergency services
Surgical care and anesthesia	Surgical care Anesthesia care	Surgical services
Obstetrics care	Obstetrics care	
Infection prevention and control	Infection Control	Infection control
Management of Medication	Management of Medication	
Diagnostic Services		Diagnosis services
Laboratory services	Blood and blood Products	Blood and blood Products
Blood transfusion medicine		
Outpatient services		
Patient facilities	Patient Rights and Education	Patient's rights
Patient's rights		
Management of nursing services		
Management of Medical Equipment		
General clinical care	Care of patients	

Discussion

Small and special hospitals usually face different problems and challenges during accreditation, paying attention to the main modules of accreditation for these types of hospitals is essential. The comprehensive guide to national accreditation standards for Iranian hospitals (the version cited in the fifth round of accreditation) (20), used for all hospitals in general, includes 17 main modules. In the following, we compare this guide with the research findings on the accreditation modules of small hospitals. Some of the main modules of this guide overlap with the current research findings (Table 5). The meaning of overlapping modules is the objective matching of their titles. They are defined in sub-modules and issues of national guides, such as risk management and information management systems. Most modules of the mentioned guide overlap with the main modules and sub-modules of accreditation of small hospitals identified in this research, except for the modules of partnering with consumers, patient safety, and sub-modules of clinical governance, which are not in the mentioned guide. Of course, about the patient safety module, as mentioned in the guidelines of the fourth period of national accreditation of hospitals (71), the standards and issues related to this module are included scattered in other modules due to their importance.

The four main modules in the comprehensive guide of national accreditation standards for Iranian hospitals, but outside the research findings, are human resource management, medical equipment management, diagnostic services, and outpatient services.

Of course, this inconsistency does not mean that these four modules do not exist at all in the accreditation of small hospitals. For example, outpatient services are considered a subset of the emergency services standard, and equipment management is regarded as an issue and not a module. Likewise, diagnostic services are also discussed in the subcategory of clinical performance measures. The clinical processes in a small hospital are similar to what is going on, for example, in medium or large hospitals, the main accreditation modules are identical. The only difference is that some modules may be provided in a standard or issue form in small hospitals. In the management field, there are more differences between the identified axes and Iran's accreditation axes. For example, due to the smaller number of employees working in a small hospital compared to other hospitals, human resource management includes fewer measures compared to different sub-sets of leadership and management. This also applies to diagnostic services. Many small hospitals use out-of-hospital imaging services due to insufficient resources and economic inefficiency.

National Accreditation Board of Hospitals and Health Service Providers published the first edition of the accreditation of small hospitals in 2014 (11). The accreditation modules of small hospitals are ten titles, categorized in the form of two headings: patient-centered ted and organization-centered. Australian Health Service Quality and Safety Commission published National Safety and Quality Health Service Standards Guide for Multi-Purpose Services and Small Hospitals in 2017(19). The eight axes developed in this guide are in accordance with the current research findings, plus the module of Recognizing and Responding to Acute Deterioration Standard.

There is an overlap between the seven identified main modules of accreditation of special hospitals with the comprehensive guide of national accreditation standards of Iranian hospitals (Table 5), except for the module on clinical governance and the sub-module on community outreach, which is outside the mentioned guide. Clinical governance, which includes seven sub-modules (30), can be added to the accreditation of special hospitals. In the management field, there are more differences between the identified modules and Iran's accreditation modules. For example, due to the smaller number of employees working in a small hospital compared to other hospitals, human resource management includes fewer measures compared to different sub-sets of leadership and management. This also applies to diagnostic services. Many small hospitals use out-of-hospital sophisticated imaging services like CT

scan due to insufficient resources and economic inefficiency.

Based on the findings of Bensenhaver research (56), the main modules of accreditation of single-specialty breast cancer centers are quality improvement, patient education, community outreach, research, clinical management and leadership. Based on Pennsylvania Trauma Systems Foundation (62), accreditation main modules for pediatric trauma centers are operating room standards, facilities management, quality assurance and rehabilitation.

Identifying the main modules of accreditation for small and special hospitals can help hospital managers improve the quality and safety of their hospitals by using appropriate standards and help improve the services provided to patients and increase their satisfaction. In addition, it helps policymakers in the healthcare field to develop the appropriate accreditation standards for each type of hospital, considering their specific characteristics. For example, one of the main points of accreditation for small hospitals is the ability to provide essential services to patients, which includes providing medical and nursing services, health services, and professional health of employees and improving the level of knowledge and expertise of hospital employees. In addition, other modules, such as facility and medical equipment management, and patient safety, should be considered in the accreditation standards for small hospitals. On the other hand, the main modules of accreditation for special hospitals include providing technical and advanced services to patients, quality of medical and specialized equipment, up-to-date knowledge and expertise of employees, patient safety and environmental health. For this reason, accreditation standards for special hospitals should be developed based on appropriate modules.

Conclusion

Identifying the main modules of accreditation for small and special hospitals can help policymakers and hospital managers improve the quality and safety of their hospitals by using appropriate standards and help improve the services provided to patients and increase their satisfaction.

Journalism Ethics considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

Acknowledgements

No financial support was received for this study.

Conflict of Interest

The authors declare no conflicts of interest.

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