Providing Accreditation Standards for Dental Clinics in Iran

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Abstract

Accreditation includes different dimensions of the health system across the world. The accreditation of healthcare facilities is adopted for more than a decade in Iran hospitals, yet it lacks the coverage of dental clinics. Then, it seems necessary to develop a framework for them. In this study, the accreditation structure of dental clinics in selected countries has been reviewed and a model for Iran has been presented**.** A comparative study of the accreditation patterns of outpatient or dental clinics in selected countries (USA, Scotland, Malaysia, India, and UAE) was done. Then the validity of the proposed model was confirmed by the Delphi technique.
According to the results, the main categories of dental clinics standards in selected countries included: access and continuity of service, rights of service givers, patient care, anesthesia and surgery, drug management and consumption, management and leadership, improving quality and patient safety, health and infection control, facility management, safety, and information management. Finally, the proposed model with 84 standards under 10 main categories was approved. The proposed accreditation model can fill the gap in existing accreditation standards of healthcare facilities and can improve the quality of dental clinic services in Iran.

Keywords: *Accreditation - Health system - Evaluation - Model- Dentistry – Dental clinics- Iran*

Introduction

In the modern world, the diversity and quality of health care services, as well as the tools and technology associated with them, are constantly improving (1). Accreditation seeks to ensure the provision of quality, safety, and up-to-date scientific care services (2) and is one of the most important areas in the evaluation of health services.

Accreditation is defined as the certification of a health care provider's achievement of predetermined standards by an independent external peer review team from the same organizational level (3).

The accreditation process is such that the reputation, credibility, and formality of a health care providing organization, for performing certain services according to the standard, is verified by an accreditation group or organization. This evaluation includes examining the quality of organizational processes. The performance of the organization will be in accordance with the written and approved standards that have been developed by experienced and specialized people (4,5) and will usually be accompanied by awarding to the organization that has complied with these principles (6). Health care providers in different countries of the world have used various methods to increase the quality and safety of health services and their optimal management, which is a general view can be examined in two main groups:

First, patterns that increase the organization's commitment to quality improvement through quality-based external evaluation. Second, methods that help quality management in the organization.

Accreditation of the first group and clinical governance of the second group have a special place in the health sector; Because they are designed by health experts and based on the specific needs of this department, and therefore pay special attention to safety and patient-centered along with improving the quality of services, and both rely on the organization's commitment to the implementation of high standards of service (2). The purpose of accreditation in health organizations is to improve the quality of health services, the integration in health service management, create a database of health service organizations, increase safety and reduce risks for patients and staff, training and counseling for health service organizations and reduce costs with a focus on increasing efficiency and effectiveness (3,7,8).

Accreditation should encourage responsiveness to opportunities rather than program compliance, and its costs should be cost-effective and commensurate with the value

received. It must also be autonomous and independent of the undue influence of any individual, organization, or group (9).

In different countries of the world, accreditation includes different dimensions and parts of the health system. These wards include hospitals, outpatient centers such as clinics, primary care, rehabilitation centers, nursing, and home care centers, as well as dental clinics. Because each of these wards is faced with a specific group of patients and a package of services for them. As a result, they differ in the standards required to improve quality and safety, and different screening tools must be considered for each. The accreditation system of Iran lacks the standards of dental clinics (3). As a result, it seems necessary to know the logical framework for how these centers are accredited should be most focused on accreditation. Therefore, the accreditation structure of dental clinics in the world has been studied and a model for Iran has been presented.

Research method

This research was a descriptive-practical study that was conducted in two phases. The research sample was conducted as a purposeful non-random sampling among developed countries in the field of accreditation of outpatient service centers, especially dentistry. Selection of the studied countries in order to be pioneers in the field of accreditation, historical background, and antiquity of using the category of accreditation in outpatient centers, especially dental, as well as countries whose health system is similar to Iran. The United States, Scotland, Malaysia, India, and the UAE were the countries selected for this study. Data collection was done by studying the scientific documents of libraries, databases of accreditation systems of selected countries, and Internet resources and publications of countries that have accreditation systems of outpatient (dental) service centers.

A questionnaire was used for determining the validity of the model by the Delphi method and data collection. Experts in the fields of health services management, dentistry, medicine, faculty members, and managers were questioned to survey the proposed model. According to studies, for a homogeneous Delphi study, 10 to 15 samples will be enough (10,11) .

Accordingly, in this study, 27 individuals were selected to maintain the validity of the research in case of a decrease in the number of respondents during the study.

To compile the study questionnaire, all the standards obtained from the second phase were tabulated, so that each standard was graded using a 1 (most inappropriate case) to 9 (most appropriate case) Likert scale. At the beginning of the questionnaire, there were explanations to introduce the purpose of the research and the personal characteristics of the respondents.

In implementing the Delphi method, most experts consider 70 to 80 percent consensus as a sign of reaching a general consensus (10,12–14) .

In this case, the study had three ranges: the range of disagreement from 1 to 3, the range of neutrality from 4 to 6, and the range of agreement from 7 to 9. Here, standards with a mean score of less than 4 are eliminated, standards with a mean score of more than 7 are accepted, and standards with an average score of 4 to 7 are entered in the next round of Delphi. The same principles were followed in this study.

Findings

Accreditation models of selected countries

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO)

JCAHO standards for outpatient organizations include 12 main categories: 1- International goals of patient safety, 2- Access and patient assessment (with subcategories of access, assessment, clinical laboratory services, radiology services) 3- Patient care and continuity of care (with subcategories of the care process, care of patients with high-risk and complex diseases, management of drug use, food and diet, care of incurable patients, coordination and continuity of care and referral and transfer levels) 4- Patient responsibility and rights 5- Registration and follow-up of patient information (with the subcategories of electronic health records, information management) 6- Commitment to serve patients, 7- Patient and family education, 8- Anesthesia and surgery, 9- Improving quality and safety, 10- Infection control and facility safety (with subcategories of infection prevention and control, facility safety), 11- Human resource management, 12- Governance and leadership (15).

Accreditation Association for Ambulatory Health Care (AAAHC)

The standards presented by the AAAHC are divided into two categories:

The first part of the main standards, which are the standards of categories 1 to 8, includes 1- Patients' responsibilities and rights, 2- Governance, 3- Administrative, 4- Quality of care delivery, 5- Improvement and quality management (with subcategories of quality improvement and risk management program), 6- Clinical records and health information, 7- Prevention and control of infection and safety, 8- Facilities and Environment.

The second part of the supplementary standards of categories 9 to 25 includes: 9-Anesthesia services, 10-Surgery, and related services, 11-Pharmaceutical services, 12-Medical and pathology laboratory services, 13-Diagnostic and imaging services, 14-Services Dentistry, 15-Other professional and technical services, 16-Health education and health promotion,

17-Mental health services, 18-Activities related to education and publication of articles, 19-Research activities, 20- Night care, 21-Occupational health services, 22-Urgent care, 23-Emergency services, 24- Radiation therapy services and 25-Home care services; These standards are in addition to the first category standards and will change depending on what services the organization provides (16).

American Association for Accreditation of Ambulatory Surgery Facilities (AAAASF)

Standards of the AAAASF, including 9 main categories: 1-General environment, 2- Policies and procedures of operating room (with subcategories, sterilization, disinfection, maintenance and cleaning of surfaces & equipment, Emergency power supply system, Hazardous medical waste) 3- Policy and procedures of recovery room (Discharge, long-term stay of the patient) 4- General safety in the facility (facility safety, emergency instructions, hazardous materials storage, fire control, exits) 5- Intravenous fluids and drugs (intravenous fluids and alternative drugs) 6- Dental records ((general - previous dental records), informed consent form, reports (medical treatments, counseling, X-rays, pathology and tests), Operating room records, general anesthesia)) 7- Quality evaluation and improvement, 8- Employee (professional employee, operating room employee, Employee records, in-service training, professional skills, employee safety), 9-Anesthesia (pre-anesthesia care, anesthesia monitoring, quality of patient transfers) (17).

Standards for assessing the quality of dental clinics in Scotland

Health service quality standards in Scotland include 15 main categories: 1- Choosing dental services, 2- Pre-treatment, 3-Patient visit, 4- Needs assessment, 5- Deciding and accepting care, 6- Receiving care, 7- Continuous care, 8- Quality care, 9-Patients' expectations, 10- Confidentiality of information, 11-Management of services and dental care team, 12- Other medical emergencies, 13- Infection control, 14- Care environment, 15- Children And teenagers care (18).

Accreditation in Malaysia

Model standards related to Malaysia for outpatient and dental care centers include 6 main categories: 1- Access to care, 2-Ethical considerations (patient confidentiality, patient rights, patient values, patient security, family rights, Complaints), 3-Quality improvement activities, 4- Human resources, 5- Safety (with subcategories of safe care of Patient, drug side effects, infection control, occupational safety, waste management), 6-Performance (with subcategories of physical structure, equipment, legal requirements, information including costs and services of records security, drugs, and vaccines, quality of care including clinical management - education - patient care - doctor-patient relationship- referral system- Feedback-Health Promotion and Prevention) (19).

Accreditation in the UAE

Accreditation standards of outpatient care centers in the UAE include 5 main categories: 1- Improving patient quality and safety (with the subcategories of International Patient Safety Objectives, Quality Improvement, Clinical and Management Process Design, Data Collection, Data Analysis, Sustainable Improvement), 2- Communication (with subcategories of access, continuous service delivery, transfer for ongoing care, informed consent, patient education, and their families) 3-High-risk care processes (with the subcategories of the evaluation process, providing care, caring for people with complex or high-risk diseases, sedation, anesthesia, and surgery, drug use, infection control, infection control program management), 4- Leadership (with subcategories of organization affairs, organization leaders, managers and senior managers, staff training and competencies, manpower, orientation training (staff socialization), medical staff, nursing staff, other professional staff), 5- Facility safety (with the subcategories of planning and leadership, physical environment, security, fire safety, participation, and social planning, hazardous materials, equipments, and tools for monitoring) (20).

Accreditation in India

Accreditation standards of dental clinics in India fall into two groups: patient-centered standards, including 1- access-assessment, and continuity of care, 2- patient care, 3- drug management, 4- patient education and rights, 5- infection control and organizational-oriented standards including 1-Continuous quality improvement, 2- Manager responsibilities, 3- Safety and facility management, 4- Human resource management, 5- Information management system (21).

The result of the above comparative study was presented to the specialized panel consisting of 9 dental specialists in the form of tables and they were asked to reach a consensus on the categories and subcategories of accreditation. Table 1 summarizes the above accreditation models.

Table 1. Comparison of accreditation standards of outpatient and dental care centers in selected countries

The present model	Scotland	India	Malaysia	UAE	AAAASFI	AAAHC	JCAHO	organization standards	
√	○	√	√	○	○	○	√	Access, assessment, and continuity of care	**1.**
√	○	√	√	○	○	√	√	Rights of service recipients	**2.**
√	○	√	○	○	○	√	○	Patient care	**3.**
○	×	×	×	○	√	√	√	Anesthesia and surgery	**4.**
○	×	√	○	○	○	√	○	Drug management and consumption	**5.**
√	√	√	×	√	×	○	√	Management and leadership	**6.**
√	√	√	○	√	√	√	√	Quality Improvement and patient safety	**7.**
√	√	√	○	○	○	√	√	Hygiene and infection control	**8.**
√	○	√	○	√	√	√	√	Facility and safety management	**9.**
√	√	√	○	×	√	√	√	Information Management	**10.**

√: The relevant standards are listed in a separate category under the same title or synonymous titles.
○: Relevant standards are mentioned in a different category.
×: There is no standard in this matter.

After determining the framework of the integrated model, the relevant standards were extracted from the main moels and placed in the relevant subcategories. From this combination, a total of 86 standard technical clauses were obtained. In the next stage, these clauses were provided to the experts using the Delphi technique to reach a consensus about their "importance" and "applicability". Table (2) shows the number and percentage of respondents to the Delphi questionnaire.

Table 2. The expertise of the participants in the study

participants	Frequency (person)	Percentage
Managers and experts of the Accreditation Office of the Ministry of Health	4	**20**
Designers and writers present hospital accreditation standards	2	**10**
Top managers of the Ministry of Health	3	**15**
Health services management specialists	6	**30**
Members of the specialized board of health economics and management	5	**25**
Total	**20**	**100**

In the Delphi method, a 9-degree scale was used, which had three ranges: the range of disagreement from 1 to 3, the range of neutral from 4 to 6, and the range of agreement from 7 to 9. In this case, scores with a median score of less than 4 were eliminated, scores with a median of more than 7 were accepted, and standards with a median of 4 to 7 were entered in the next Delphi round.

According to studies, in order to maintain the validity of the study, the response rate of experts in each Delphi round should not be less than 70% (12). If the rate of change of the points

given by the experts during two consecutive rounds is less than 15%, there is a consensus on the statement(10). In this study, the same principles were followed and 2 rounds of the Delphi technique were performed.

In the first round of Delphi, researchers referred to the Ministry of Health, universities, offices, or hospitals where selected experts served, introduced the research and distributed a questionnaire. After giving a 7-day period to the experts to answer the questionnaire and the continuous follow-up of the Delphi research team, the first round ended. During this period, 20 questionnaires (74% response rate) were collected. In the next step, all questionnaires were analyzed and based on the results of the analysis, a questionnaire was designed to enter the second round of Delphi. At this stage, according to common principles, standards with a score of less than 4 were excluded from the study, and standards with a score above 7 were directly accepted. Standards that scored between 4 and 7 were also selected for review in the second round of Delphi. Since none of the standards scored less than 4, none of the standards were eliminated at this stage. The 76 standards, which scored between 4 and 7, were accepted by experts in terms of both importance and applicability criteria. The results of the analysis of the questionnaires in the first and second rounds of Delphi are shown in Table 3.

For the second round of Delphi, 10 unapproved standards were designed in the form of a new questionnaire that contained the average scores of experts and the score of each expert in the first round. At this stage, the experts, considering these cases, proceeded to re-score the standards. To collect data in the second round of Delphi, the researchers again distributed the questionnaires among the previous respondents. Experts were given one week to answer the questionnaire, then the questionnaires were collected again. Out of 20 distributed questionnaires, 17 questionnaires were returned (85% response rate). At this stage, 8 standards were approved and 2 standards failed to enter the final model due to not obtaining an acceptable score in at least one of the aspects studied and reaching the saturation point (change in score was less than 15%). The mean and standard deviation of the scores obtained for the set of standards were 7.8 and 1.1±, respectively.

Table 3. Results of questionnaire analysis in the first and second rounds of Delphi

Number of standards	**All standards**	**Accepted**	**Not accepted**	**Enter the next round**
first round of Delphi	**86**	**76**	**-**	**10**
second round of Delphi	**10**	**8**	**2**	**-**

Based on the results of studies conducted in selected countries, it was found that the main categories in the accreditation of dental clinics should include rights of service recipients, management and leadership, facility and safety management and patient care, access, assessment, and continuity of care, continuous quality improvement, hygiene and infection control, and management of medical information and records. The complete and approved standards in the Delphi for each category are also listed in Table 4. In the category of patient care and access, assessment and continuity of care were not agreed upon by the two standards and were eliminated. In general, the approval of the majority of standards by experts indicates the approval of these accreditation standards. The standard "Clinic has developed and implements policies and procedures for prescribing drugs." It seems that due to the existence of similar policies and procedures for the review of prescription drugs, it was removed from the standards. Standard "Information about patient care provided in the clinic is shared between all clinic dentists and other providers." According to experts' opinion, it scored the highest score between 4-7, which seems to have been eliminated because its implementation requires a large national infrastructure and is not feasible in itself. Finally, 84 standards with 10 main categories for the accreditation of dental clinics were approved.

Table 4. Main categories and accreditation standards proposed for dental clinics in Iran

Category	**Clinical standard clauses**
Access, assessment, and continuity of care	The clinic has developed and runs the appropriate center line policies and procedures for appropriate pain management.
	During all stages of treatment, the clinic has identified a qualified person as responsible for providing and following up on the patient's treatment.
	The clinic has made comprehensible instructions for follow-up after the end of treatment available to patients and their families.
	The clinic designs and implements processes to ensure the continuity of patient care services in the clinic and to establish coordination among dental professionals.

	The clinic has developed a suitable process for referring patients to other centers for receiving medical and diagnostic services that are not provided in the clinic.
	The clinic shall inform patients and their families of any continuing rights or responsibilities regarding rejection or refusal to continue treatment.
	The clinic has established a guideline as a guide for timely and appropriate referral of the patient to another dental center and to meet the needs related to the continuation of care.
Rights of service recipients	line policies, procedures, and applicable laws and regulations provide a guideline for equal treatment of all patients.
	The clinic follows the guidelines and methods for admitting and registering patients.
	Upon admission, the patient and his / her family will receive information about the desired care, the desired result of the care, and any predictable costs.
	The clinic seeks to reduce any physical, linguistic, cultural, and other barriers for patients to access medical services and provide services to them.
	The clinic introduces its various dental services to patients appropriately.
Patient care	The clinic has developed, compiled, and run the centerline policies and procedures related to the care of patients with infectious disease or immunodeficiency.
	The clinic has developed and carried out the centerline policies and procedures to provide dental services to patients with heart diseases.
	line policies and procedures show how to care for and treat emergency patients.
	The clinic has developed and implemented the center line policy and procedures for patients under dental care.
	The clinic has developed and implemented policies and procedures to guide the provision of dental services to high-risk patients.
	The clinic follows regulations and guidelines in case of an emergency.
	line policies and procedures show how to use the resuscitation in the clinic.
	Clinic managers define indicators for monitoring the structure, process, and managerial and clinical outcomes of the organization and international patient safety goals.
Anesthesia and surgery	The clinic has provided local, general and moderate anesthesia services to meet the needs of patients and in all these services, applicable local and government standards have complied with laws, regulations, and professional standards.
	The clinic has developed and implemented guidelines and procedures for the care of patients under local anesthesia.
	The clinic has developed and implemented policies and procedures for the care of patients under general anesthesia.
	The clinic has developed and implemented policies and procedures for the care of patients under moderate sedation.
	Anesthesia and the technique used in anesthesia are recorded in the patient file.

	The clinic has provided surgical services to meet the needs of patients and in all these services, applicable local and government standards have complied with laws, regulations, and professional standards.
	The surgical program of each patient is planned and documented based on the evaluation results.
	The performed surgery is recorded in the patient's file.
	How to care for the patient after surgery is planned and documented.
Drug management and consumption	The use of medicine in the clinic is organized following the rules and regulations and in accordance with the needs of patients.
	Emergency medicines are available, controllable, and safe.
	The clinic has set up an alert system to identify expired medications.
	The clinic has developed and implemented policies and methods for storing, distributing, and using drugs.
	The clinic has developed and implemented guidelines and methods for the use of medical gases.
Management and leadership	The clinic has assigned the responsibility of data collection to experienced people with sufficient knowledge and appropriate skills.
	The clinic has developed and operates a process for analyzing data.
	The clinic has established and operates a process to identify and analyze events that are likely to occur.
Quality Improvement and patient safety	Clinic managers participate in planning and monitoring the quality improvement and patient safety program.
	Managers are responsible for prioritizing the processes that should be monitored and also the processes that are effective in improving the quality and safety of the patient.
	The clinic follows a structured program to ensure the quality and continuous monitoring of services.
	A mechanism has been developed to evaluate the care services provided to patients.
	The clinic designs new and modified systems and processes per the principles of quality improvement.
	The clinic has appointed qualified people for evaluation and re-evaluation.
	Diagnostic tests are performed to diagnose the patient's needs and their results are used to determine whether the patient can be treated at that center or transferred to another center or referred to higher levels.
	The clinic has provided comprehensive initial consultation and evaluation along with various treatment plans for all patients, which will enable the patient to make an informed decision.
	The clinic re-evaluates all patients during treatment.
	The clinic determines the limits and content of evaluations following the applicable rules and regulations and professional standards.
	The clinic performs the initial evaluation of each patient, including the evaluation of the patient's physical, psychological, social, and economic factors, which is based on the examination and obtaining his dental history.
	The clinic records the evaluation findings in the patient's file and it is available to the treating dentist.

	The clinic has provided radiology services to meet the needs of the patient conforming to the standards of the laws and regulations. In cases where this is not possible, it will easily provide these services to patients through agreements with out-of-clinic sources.
	The clinic implements the safety and radiation protection program and follows it in a documented way.
	The results of diagnostic imaging examinations will be available within the time frame determined by the clinic.
	X-Ray film and other consumables are available on a regular basis.
	The clinic regularly reviews the quality control results of all external sources of diagnostic services.
Hygiene and infection control	The clinic designs and operates a coordinated process to reduce the risk of infections between patients and healthcare professionals.
	The clinic provides training related to infection control to staff and patients.
	The clinic provides training related to infection control to staff and patients.
	The clinic operates accordant to the guidelines and instructions of regulatory authorities to reduce the risk of infection.
	Clinic managers, according to the mission of the clinic, support the infection control process.
	The clinic has assigned the responsibility of infection control to a qualified person with the necessary skills.
	The clinic has established a process that sterilizes correctly following the instructions of the Ministry of Health.
	The clinic reduces the risk of infection by performing proper cleaning and disinfection of equipment and clothing.
	The clinic has developed and acted per the supervisory guidelines for observing the issues related to the personal protection of the staff and the precautionary measures.
	The clinic follows the infection control instructions for reusing dental tools and equipment for future patients.
	The clinic supports the use of disposable utensils and equipment for patients through guidelines.
	The clinic has prepared an explanatory training booklet for the staff that explains the service or system of occupational safety and health.
	The clinic follows the instructions and policies for collecting, storing, and disposing of waste.
	The clinic follows the instructions and directives of the Ministry of Health regarding the spaces related to the disposal of waste and garbage.
	The clinic follows the instructions and directives of the Ministry of Health for the sanitary disposal of wastewater.
	The clinic follows the instructions of the Ministry of Health regarding the cleaning and hygiene of the floor and wall surfaces of the clinic.
	The clinic follows the instructions and directives of the Ministry of Health regarding the condition of the doors and windows and ventilation of the clinic.
	The clinic follows the instructions and directives of the Ministry of Health regarding the condition of the health service.
	The clinic follows the instructions and directives of the Ministry of Health regarding the status of the laundry.

	The clinic follows the instructions and directives of the Ministry of Health regarding the health status of the dental examination and treatment room.
	The clinic follows the instructions and directives of the Ministry of Health regarding the separation of medical and non-medical spaces.
	The clinic has developed and implemented a training program for waste disposal.
Facility and safety management	The clinic has developed and carried out the centerline policies and procedures to provide dental care to vulnerable patients (elderly, infants, children, pregnant women, and mentally and physically disabled).
	The clinic has informed the patient, his / her family, or anyone who decides on his / her behalf about the possible risks, benefits, and alternative methods.
	The clinic develops and acts on a comprehensive plan for the delivery, storage, and use of hazardous materials and the control and disposal of hazardous and waste materials.
	The clinic follows the instructions and policies for the hygienic disposal of contaminated waste.
Information Management	There is a process for planning for integration and coordination of care for all patients of all the services and relevant data are recorded.
	All dental practitioners and dental service providers have access to the patient's record by other dental practitioners and dental service providers based on the clinic's policy.
	The clinic follows the rules and regulations to maintain the timeframe to log in patient records based on the policy of the clinic.
	The clinic has assigned the responsibility of data collection to experienced people with sufficient knowledge and appropriate skills.

Discussion

We discuss some of the categories of this model below:

Rights of service recipients: Accreditation programs often include chapters on supporting and promoting patients' rights in the health care organization (22). This is due to the main role of the patient and the potential impact of health on human rights (23). In addition, paying attention to patients' rights and organizational ethics in health care institutions is an important issue in the quality of health care (24). Accreditation of patients' rights may also provide effective tools for policymakers and patient support groups to inform physicians, patients, and their families about such rights, promote them and implement them in the health care system (25). Confidentiality, patient values, patient safety, complaints mechanism, informed consent, deciding whether to accept treatment and care, meeting patients' expectations, and educating the patient and their family were among the items discussed in the selected accreditation models and included in the proposed model.

Management and leadership: The World Health Organization 2004 World Health Report named poor management as one of the most important challenges at all levels of the health system in most countries of the world (26). Yarmohammadian et al. 2013 concluded that hospital managers can play an important role in establishing accreditation standards by implementing the accreditation standards of the hospital management and leadership unit (4). The results of the study by Woo et al in 2018 also showed that the accreditation system has significant effects on professional culture and leadership in the organization and using appropriate management strategies improves the efficiency and performance of the hospital and the morale of employees (27). The standards of governance and leadership, administration, and responsibilities of the manager and management of the service and the dental team were among the issues considered in this category in the selected accreditation models and were considered in the proposed model.

Facility and safety management: Nowadays, safety has become more and more important in various sectors of work. Safety in healthcare organizations is a set of security measures to protect the physical assets of the organization and the people associated with it and the surrounding environment. Safety principles are used to reduce the likelihood of injury but do not eliminate all risks. Yamalik et al. 2012 in their study showed that by improving the quality and safety of oral health care and preventing further clinical and legal problems, the patient's safety path should be determined. It is naturally very important for all physicians and dental staff to be aware of patient safety

issues. Steps can be taken to improve patient safety and quality of oral health care and reduce the incidence of side effects and errors by providing accreditation standards (28). In the selected accreditation models, topics such as facility safety, structure and physical environment safety, equipment maintenance and cleaning, fire control, hazardous materials storage, and staff safety were used, which were also considered in the proposed model.

Patient care: Medical centers have several responsibilities, among which caring for patients is one of the important tasks medical centers. The mission of patient care is to provide individual care to meet the specific needs of patients. Mills et al. 2014 concluded in their study that patient-centered attention as a fundamental principle in the provision of dental services is often overlooked and that patient-centered standards in the provision of these services need to be pursued more seriously(29). In selected accreditation models, standards for the care process, care of patients with high-risk and complex diseases, safe care of patients, pre-anesthesia care, quality of care, surgical care, palliative care process, anesthesia care, anesthesia equipment, and supplies, anesthesia monitoring, management drugs, drug use, side effects of drugs, drug services, intravenous fluids, and alternatives were used, which were also considered in the proposed model.

Access, assessment, and continuity of care: This standard addresses the issues of which patient needs can be met in the health care organization, as well as the process of providing services to patients and the appropriate transfer or discharge of patients to their homes or another care unit. How to provide continuous services to patients by providing the possibility of coordination and continuity of services to patients. Promoting continuity of care is essential in improving the delivery of health services(30). Continuity of care is defined as a set of separate health care events provided by individuals in a coherent and interconnected manner over time and conforming with the patient's health needs and preferences (31). Standards for diagnostic and imaging services such as laboratory and radiographic services, standards for the evaluation process, first-time surveys, and patient needs assessments are among the topics covered in the selected models for access, assessment, and continuity of care. Which were also considered in the proposed model.

Quality Improvement and patient safety: Private health care providers compete fiercely to attract patients and, like any other competitive environment, want to differentiate themselves in the minds of their clients and make sure that their patients leave the treatment center satisfied. Highly competitive market conditions in the industry of private health care providers have put pressure on these health centers to provide high-quality services (32). Greenfield et al. 2009 After examining the features of accreditation, it was shown that accreditation continues to improve the quality and performance of the organization's services (33). Topics in this category under the headings of effective activities to improve performance quality, quality of care, clinical management, quality improvement program, design of clinical and managerial processes, data analysis, sustainable improvement, continuous quality improvement, and quality care in selected accreditation models were raised. They are also considered in the proposed model.

Hygiene and infection control: Infections are a problem for all health organizations today. An article by Laheij et al. In 2012 shows that the risk of transmission of infection by bacteria and viruses in the dental environment (such as hepatitis B, C, and D, HSV, VZV, and HIV) is particularly important. Hepatitis B virus transmission and infection pose the greatest risk to the dental team and patients (34). A 2008 study by Backman et al. Showed that there is a strong link between the implementation of accreditation policies and infection control (35). Because these standards cause the rate of infection to be accurately measured and programs are used to reduce them, and the implementation of these programs and their impact is closely monitored, the presence of this category in accreditation programs helps control infection in health care organizations (36). In the selected accreditation models, topics such as infection prevention and control, waste management, sterilization, disinfection, hazardous medical waste, and management of infection control programs addressed issues related to health and infection control and were considered in the proposed model.

Conclusion

The obtained model has a wide and comprehensive range of standards of continuous quality improvement, process-oriented promotion, safety enhancement, risk management, promotion of teamwork and cross-sectoral participation, patient rights, service continuity, suitable physical space and facilities management, and appropriate services. And it covers almost all the basic functions related to clinics and outpatient care. Given the importance of accreditation, the current model can fill the gap in the accreditation of dental clinics in Iran and be useful in promoting the efficiency and effectiveness of dental clinics in Iran. The research team proposes to implement a pilot of this model to shorten the gap between theory and practice (which is one of the management problems in Iran and the health system) and to see the improvement of the performance of dental clinics in Iran.

Limitations

One of the limitations of this study is the high workload of experts and lack of proper access to them, as well as the large distance between researchers and most experts and the high

number of questions in the first round of Delphi, which caused late answers or non-response of some experts to the study.

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Conflict of Interests

No conflict of interest regarding the approval or rejection of the proposed clauses or the model as a whole was acclaimed by the research team

Ethical statements

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