



2528-9705



PROPOSING A FRAMEWORK FOR ACCREDITATION OF DENTAL CLINICS IN IRAN

Hamed ALAGHEMANDAN¹, Masoud FERDOSI², Omid SAVABI^{3*}, Mohammad Hossein YARMOHAMMADIAN⁴

¹ Postgraduate Research Committee, School of Dentistry, Isfahan University of Medical Sciences, Isfahan, Iran.

² Health Services Management, Health Management and Economics Research Center, Isfahan University of Medical Sciences, Isfahan, Iran.

^{3*} Dental Research Center, Dental Research Institute, School of Dentistry, Isfahan University of Medical Sciences, Isfahan, Iran.

⁴ Health in Disasters, Health Management and Economics Research Center, Isfahan University of Medical Sciences, Isfahan, Iran.

***Corresponding Author**

E-mail: Savabi@hotmail.com

ABSTRACT

Accreditation is one of the important areas in evaluating health services. Some healthcare facilities have been accrediting including hospitals, outpatient centers like clinics, and rehabilitation centers. Therefore, considering the gap in the health system regarding the lack of a complete and comprehensive model for accreditation of dental clinics in Iran, the present study seeks to provide a model for accreditation of dental clinics in Iran. In this study, three accreditation structures were combined to develop a framework for the accreditation of dental clinics. They included the national accreditation model of Iran hospitals, the proposed model of accreditation of Iran outpatient clinics, and proposed standards for dental clinics in previous studies. Using a focus group discussion (FGD) method, the proposed model for accreditation of dental clinics in Iran was extracted. During four sessions of the FGD, experts presented the four main standard categories including leadership and management, care and treatment, rights of service givers, and special standards for dental clinics as the accreditation framework of dental clinics in Iran. It is crucial for different parts of the accreditation system to be consistent and even paired across the country. Then, in this study by combining three models of inpatient and outpatient accreditation in Iran and outpatient accreditation models in the top countries, a consistent model for accreditation of dental clinics in Iran is developed. One of the features of this model is the compatibility of the model with other accreditation models in Iran, which tends to decrease challenges in implementing this model.

Keywords: Accreditation, Health care quality, Framework, Standard, Health system, Dental clinics.

INTRODUCTION

Accreditation seeks to ensure the provision of quality, safe and up-to-date scientific care services (Al-Jazairi *et al.*, 2021) 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 (Tabrizi *et al.*, 2012)". The accreditation process is such that the reputation, credibility, and formality of a health care provider 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

Geliş tarihi/Received: 27.04.2022 – Kabul tarihi/Accepted: 04.09.2022 – Yayın tarihi/Published: 30.09.2022

© 2022 Journal of Organizational Behavior Research. **Open Access** - This article is under the CC BY NC SA license

<https://creativecommons.org/licenses/by-nc-sa/4.0/>



will be in accordance with the written and approved standards that have been developed by experienced and specialized people (Raeisi *et al.*, 2008; Yarmohammadian *et al.*, 2013) and will usually be accompanied by awarding to the organization that has complied with these principles (Toplis, 2002).

The purpose of accreditation in health organizations is to improve the quality of health services, improve 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 (Jafar & Farid, 2012; Tabrizi *et al.*, 2012; Al-Alawy *et al.*, 2021; Badaud *et al.*, 2021). 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 (ADEA, 2012).

Jean 2019 concluded in its study that accreditation is an important part of the legislative framework because it is the only legal instrument that can identify invalid standards without the need for a complainant. Patient safety is at the forefront of oral care, and the dentist strives to minimize errors and facilitate quality improvement. Accreditation can help achieve these goals and reassure consumers that the treatments offered at dental clinics are safe and good quality (Jean, 2017). Dentistry is an important part of the health care landscape and cannot be exempted from a commitment to provide quality care. Limited research has been conducted on accreditation programs for dental clinics (Mills & Batchelor, 2011; Ramoni *et al.*, 2012; Al-Jameel, 2021) and there is no conclusive evidence that accreditation across the healthcare sector has a significant impact on improving safety and quality in healthcare (Braithwaite *et al.*, 2010; Hussein *et al.*, 2021).

Accreditation standards have been developed in hospitals, and clinics, but the important thing in an outpatient dental clinic is to coordinate and conform to these standards, as well as to see all the technical or medical, managerial, and logistics aspects. The present article discusses how to combine these three standards and provide a structure for the accreditation of dental clinics in Iran.

MATERIALS AND METHODS

This study was performed in a qualitative method. Comparing the dimensions of the models and developing an initial model using three separate models and combining them, a model was designed for Iranian dental clinics. These three models are:

1. National accreditation model of Iranian hospitals (to set the general framework and the pair of accreditation standards)
2. Proposed model of accreditation of Iranian boarding clinics (to set the general principles of accreditation of outpatient clinics)
3. Proposed standards in previous studies for dental clinics (to regulate dental technical issues)

After collecting and analyzing the necessary information, the framework of the accreditation model was designed. It was then polled through an FGD. According to the experts' opinions, the final model was presented. All group discussions were conducted using a semi-structured guide.



In addition to the researchers, there was a coordinator, an observer, and a note-taker in the FGD interview. It should be noted that the criteria for familiarity with the principles of accreditation, familiarity with dental processes, the experience of executive activities, and expertise in the fields of dentistry, management, and health were used to select experts. In this study, four group discussion sessions were held with the presence of key informants. The duration of these sessions was about 45 to 60 minutes. The FGD questionnaire was designed with three specific objectives, which included the following three objectives.

1. Study and comparison of hospital and outpatient accreditation standards in Iran and accreditation standards in dental clinics of other countries
2. Determining the main categories of accreditation of dental clinics in Iran and
3. Determining the subcategories of accreditation of dental clinics in Iran

The information related to the structure of the accreditation system of Iran and the selected countries was summarized and analyzed as much as possible in the form of tables. During the FGD sessions, the note-taker recorded the speech and at the same time, all the steps were recorded with the permission of all participants. Finally, all the notes of each session were reviewed and completed by the team members, then analyzed and categorized based on the objectives of the research.

RESULTS AND DISCUSSION

A total of 11 participants in FGD, two managers of dental centers (18%), one dental specialist (9%), two health care management specialists (18%), one health engineer (9%), 5 supervisory managers of the University of Medical Sciences (46%). In this study, the categories of hospital and outpatient accreditation models were first examined.

To achieve the first objective of the study, first, the categories of hospital and outpatient accreditation models were examined, and also using the results of the study conducted by Alaghmandan *et al.* 2021, the main categories and subcategories of accreditation of dental clinics were extracted.

General Framework and Compliance with Accreditation Models

In this section, attention has been paid to the compliance of the framework with the previous ones, and the proposed framework has been paired with other accreditation models. Standards-producing organizations try to conform to previously established standards so the body of the organization is more familiar with them and can better implement this standard at the same time. Like the ISO 9000 and ISO 14000 standards, where ISO 14000 was paired with ISO 9000 so all organizations that want to run both organizations can easily use both. We also used this idea in our study and wanted the framework of dental accreditation clinics to be compatible with other accreditation models, i.e. their overall structure is similar. Because our health system is familiar with this structure and we prefer the accreditation framework of dental clinics to be the same.

The accreditation model of Iranian hospitals, including 37 categories and 8104 standards, was developed by the Ministry of Health in 2010 and notified to hospitals for implementation. The first accreditation evaluation of the country's hospitals was conducted in 2012 by a team of 20 to 25 accreditation evaluators of medical sciences universities. A large number of standards, the



lack of transparency of the standards, and their equal weight created challenges for hospital managers and staff during implementation. As a result, the second edition of the country's hospital accreditation, including 36 categories and 2157 standards, was notified to hospitals in 2015 (Mosadeghrad & Nabizade, 2018). Hospital accreditation in Iran has reached the fourth generation so far. Because it is important to coordinate any new standard in the field of accreditation with this basic model in the country, we tried to harmonize the general framework of the dental accreditation standard with this model. The main categories in the fourth generation of hospital accreditation in Iran are presented in **Table 1**.

Table 1. The main categories and subcategories of the hospital accreditation model in Iran

No.	Main category	
1	Management and leadership	Leadership and quality management
		Disaster risk management
		Human resource management and occupational health
		Nursing service management
		Technology and health information management
		Environmental Health
2	Care and treatment	Medical equipment management
		General clinical care
		Acute and emergency care
		Surgical and anesthesia care
		Maternal and infant care
		infection control
		Drug management
		Imaging services
		Laboratory services
		Blood transfusion medicine
		Outpatient services
3	Rights of service recipients	Providing facilities for patients
		Respect for the rights of patients

Setting the Logistics Categories of Outpatient Clinics Accreditation

These standards were developed at the request of the Ministry of Health in 2016 and were provided to the Ministry, which, of course, has not yet been officially announced. Because a dental clinic, like any other outpatient clinic, has logistics departments, we tried to use the logistics categories in our framework. **Table 2** presents the categories model of accreditation of outpatient clinics in Iran.

Table 2. Logistics categories in the accreditation model of outpatient clinics

No.	Main category	Subcategory
1	Management and leadership	Executive management team
		Human resource management
		Quality improvement
		Disaster risk management
		Error management

		Improving the performance and position of the clinic
2	resource management	Medical equipment management
		Management of non-medical equipment
		Facility management
3	Prevention and health	Infection prevention and control
		Sterilization management
		occupational health
		Waste management
		Environmental health management

Technical Issues of Accreditation of Dental Clinics

To develop the technical and medical categories of dental clinics accreditation, the integrated model obtained by the same team was used in a comparative study that was confirmed by the Delphi method. This model has 84 standards for accreditation of dental clinics, which are classified under 10 main categories, which are presented in **Table 3**.

Table 3. Main categories of the proposed accreditation model

No.	Categories
1	Access, assessment, and continuity of care
2	Rights of service recipients
3	Patient care
4	Anesthesia and surgery
5	Drug management and consumption
6	Management and leadership
7	Quality Improvement and patient safety
8	Hygiene and infection control
9	Facility and safety management
10	Information Management



Finally, after reviewing the above models and to achieve the second and third objectives of the study in 4 sessions of FGD members, 4 main categories include leadership and management, care and treatment, rights of service recipients, and quality specialized services presented as the accreditation framework of dental clinics in Iran, because these categories are part of the main pillars in almost all accreditation models. And other related categories were placed as subcategories. In this study, the FGD decided to create a special category called the quality specialized services of dental clinics and to examine access to care, access, and continuity of dental care. In **Table 4**, all the categories and subcategories of the proposed framework are presented.

Table 4. The final framework of accreditation of dental clinics

No.	Main category	Subcategory	Description
1	Management and leadership	Management structure (governance)	Executive management team administrator
			Improving the performance and position of the
		Quality management	Quality improvement
			International patient safety goals Collecting data

		Monitoring and data analysis
		Disaster Risk Management plan
	Disaster risk management	fire management plan
		Energy Management plan
		Job description
		Recruitment
	Human resource management and occupational health	Training new employees
		The harmony of jobs and employed
		Empowering employees
		employee satisfaction
		Personnel records
		performance evaluation
		Information privacy
	Technology and health information management	Medical records and documents
		Complete, store and retrieve patient information
		Communication and Information Management
		Waste disposal
	Environmental Health	Hazardous material management
		Sterilization management
		Medical equipment management
	resource management	Management of non-medical equipment
		Facility management
		Physical environment management
		General clinical care
		General care
2	Care and treatment	Acute and emergency care
		High-risk and emergency patient care
		Surgical and anesthesia
		Recipient care under surgery and anesthesia
		infection control
		control of nosocomial infections
		Drug management
		Drug use and management
		Notices
		Informed consent
		Patient training
		Responding to spiritual needs
4	Rights of service recipients	The right to access desirable services and respect
		Patient privacy and confidentiality
		complaints management and patient satisfaction
		Access to dental care
	Quality specialized services	Access, assessment, and continuity of care
		assessment and improvement of care
		Ensuring the continuity of care

Studies on the effectiveness of quality management programs for dental care practices can make an important contribution to the evidence-based quality of oral services as well as improving patient outcomes. Oral health services must be equal to other health services in terms of quality management (Bader, 2009; Crisan *et al.*, 2021). Limited research has been conducted on accreditation programs for dental clinics (Mills & Batchelor, 2011; Ramoni *et al.*, 2012). The United Kingdom and Denmark have now recognized that the accreditation of dental programs should not be based on the same standards for hospital accreditation, and a separate set of standards should be developed accordingly (Care Quality Commission, 2015; IKAS, 2017). In

Australia, the Royal Australian College of General Practitioners (RACGP) has taken a similar approach to accrediting dental services (RACGP, 2014). Jean's study 2019 showed that the accreditation standards of dental clinics should be as concise as possible and easy to implement (Jean, 2017). Therefore, in this study, we tried to simplify the proposed framework by integrating important categories as much as possible.

Management and Leadership

Good leadership and management are important for the success of any organization. In a health care organization, good leadership and management are more important (Manojlovich, 2005; Reeleder *et al.*, 2006). This is very important for the success of the organization. The accreditation system has significant effects on professional culture and leadership in the organization and improves the efficiency and performance of the hospital and staff morale by using appropriate management strategies (Woo *et al.*, 2018). Accreditation continues to improve the quality and performance of the organization's services (Saremi, 2018). Extensive use of information and communication systems by health organizations has necessitated the evaluation of such systems. Understanding the successful implementation of hospital information and communication systems is critical to improving health care services (Bürkle *et al.*, 2001; Palm *et al.*, 2006). The 2017 study by Vahdati *et al.* Showed that empowerment of human resource management based on accreditation standards significantly affects the quality of health services (Vahdati *et al.*, 2017). In the proposed accreditation structure of dental clinics, according to key informants opinions, it was decided that all the logistics unit categories considered in the accreditation models should be provided under this category, which includes subcategories (quality management, accident, and disaster risk management, human resources management and occupational health, technology and health information management, environmental health and resource management).



Patient Care

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 (Mills *et al.*, 2014). Therefore, this category was added to the proposed model, which included subcategories (general clinical care, acute, and emergency care, surgical and anesthesia care, and drug management). A global problem in all health organizations around the world is infection control. A 2012 study by Laheij *et al.* Shows that the risk of transmission of infection by bacteria and viruses in the dental environment is of particular importance. This article concludes that transmission and infection with hepatitis B virus pose the greatest risk to the dental team and patient (Laheij *et al.*, 2012). Therefore, the infection control subcategory was added to this main category.

Rights of Service Recipients

One of the main categories in all accreditation programs is paying attention to patients' rights. Patients' rights are taken into account in accreditation; It may also provide effective tools for policymakers and patient support groups to inform physicians, patients, and their families about such rights and to promote and enforce them in the health care system (Sperling & Pikkell, 2020).

Therefore, in the proposed framework, this category was divided into two subcategories: providing facilities for the service recipient and respecting the service recipient's rights, in which all patients' rights are considered.

Quality specialized services

Promoting continuity of care is essential in improving the delivery of health services (Amelung *et al.*, 2017). 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 in accordance with the patient's health needs and preferences (World Health Organization, 2018). This category, which included the subcategories of access to care, evaluation, and improvement, and continuity of care, has been created to meet the needs of the patient in the health care organization. It also created the process of providing continuous services to patients by providing the possibility of coordination and continuity of services to patients.

CONCLUSION

This study showed that by combining three models of outpatient and inpatient accreditation in Iran and outpatient accreditation models in the top countries, a comprehensive model for accreditation of dental clinics in Iran can be achieved. One of the features of this model is the compatibility of the model with other accreditation models in Iran, which causes us to see a few challenges in implementing this model. In developing this model was tried as much as the possible concise but comprehensive model.

ACKNOWLEDGMENTS: The research team would like to thank all the people who participated in the FGD sessions and provided valuable feedback.

CONFLICT OF INTEREST: None

FINANCIAL SUPPORT: None

ETHICS STATEMENT: None

References

- ADEA. (2012). Principles for Accreditation in Dental Education. *Journal of Dental Education*, 76(7), 913-914.
- Al-Alawy, K., Azaad Moonesar, I., Ali Mubarak Obaid, H., Gaafar, R., & Ismail Al-Abed Bawadi, E. (2021). A Mixed-Methods Study to Explore the Impact of Hospital Accreditation. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 58, 0046958020981463. doi:10.1177/0046958020981463
- Al-Jameel, S. S. (2021). The activity of curcumin combined with ZnCl₂ on streptozotocin-induced diabetic rats: An anti-diabetic, anti-hyperlipidemic study. *Journal of Advanced Pharmacy Education and Research*, 11(1), 189-198. doi:10.51847/O1gQKvmDou

- Al-Jazairi, A., Balhareth, S., Alkortas, D., Muawad, H., Gain, R. Al, Maughan, M., & Hamasni, I. (2021). Accreditation seeks to ensure the provision of quality, safe and up-to-date scientific care services. *Journal of the American Pharmacists Association*, 61(6). doi:10.1016/j.japh.2021.06.007
- Amelung, V., Stein, V., Goodwin, N., Balicer, R., Nolte, E., & Suter, E. (Eds.). (2017). *Handbook integrated care*. Switzerland: Springer International Publishing AG. 2017.
- Badauod, A. A., Sufta, A. A., Alabbadi, A. M., Alzahrani, A. A., Allahiani, W. K., Alzahrani, Y. M., Alsahafi, W. M., Alajrafi, A. F., Almutairi, M. A., & Dabroom, M. A. (2021). An Overview on the Role of Family Physician in Diagnosis and Management of Back Pain. *World Journal of Environmental Biosciences*, 10(4), 20-22. doi:10.51847/TotWQ27k5x
- Bader, J. D. (2009). Challenges in quality assessment of dental care. *The Journal of the American Dental Association*, 140(12), 1456-1464.
- Braithwaite, J., Greenfield, D., Westbrook, J., Pawsey, M., Westbrook, M., Gibberd, R., Naylor, J., Nathan, S., Robinson, M., Runciman, B., et al. (2010). Health service accreditation as a predictor of clinical and organisational performance: a blinded, random, stratified study. *BMJ Quality & Safety*, 19(1), 14-21. doi:10.1136/qshc.2009.033928
- Bürkle, T., Ammenwerth, E., Prokosch, H. U., & Dudeck, J. (2001). Evaluation of clinical information systems. What can be evaluated and what cannot? *Journal of Evaluation in Clinical Practice*, 7(4), 373-385.
- Care Quality Commission. (2015). How CQC Regulates Primary Dental Services: Provider Handbook. 2015. Available from: http://www.cqc.org.uk/sites/default/files/20150611_dental_care_provider_handbook.pdf [verified 22 August 2017].
- Crisan, E. L., Covaliu, B. F., & Chis, D. M. (2021). A Systematic Literature Review of Quality Management Initiatives in Dental Clinics. *International Journal of Environmental Research and Public Health*, 18(11084), 1-16. doi:10.3390/ijerph182111084
- Hussein, M., Pavlova, M., Ghalwash, M., & Groot, W. (2021). The impact of hospital accreditation on the quality of healthcare: a systematic literature review. *BMC Health Services Research*, 21(1), 1057. doi:10.1186/s12913-021-07097-6
- IKAS. (2017). DDKM (Danish Quality Model), Accreditation Standards for Dental Practices. Available from: <http://www.ikas.dk/deltagere-i-ddkm/privatpraktiserende-tandlaeger/ddkm-forprivatpraktiserende-tandlaeger/> [verified 22 August 2017].
- Jafar, S. T., & Farid, G. (2012). Developing a national accreditation model via Delphi Technique. *Hospital Journal*, 11(2), 9-18.
- Jean, G. (2017). Does the accreditation of private dental practices work? Time to rethink how accreditation can improve patient safety. *Australian Health Review*, 43(1), 10-14.
- Laheij, A. M. G. A., Kistler, J. O., Belibasakis, G. N., Välimaa, H., De Soet, J. J., & European Oral Microbiology Workshop (EOMW) 2011. (2012). Healthcare-associated viral and bacterial infections in dentistry. *Journal of Oral Microbiology*, 4(1), 17659.
- Manojlovich, M. (2005). The effect of nursing leadership on hospital nurses' professional practice behaviors. *JONA: The Journal of Nursing Administration*, 35(7), 366-374.



- Mills, I., & Batchelor, P. (2011). Quality indicators: the rationale behind their use in NHS dentistry. *British Dental Journal*, 211(1), 11-15.
- Mills, I., Frost, J., Cooper, C., Moles, D. R., & Kay, E. (2014). Patient-centred care in general dental practice-a systematic review of the literature. *BMC Oral Health*, 14(64).
- Mosadeghrad, A. M., & Nabizade, Z. (2018). Evaluation of Iranian hospital accreditation system. *Journal of the Iranian Institute for Health Sciences Research*, 17(6), 617-629.
- Palm, J. M., Colombet, I., Sicotte, C., & Degoulet, P. (2006). Determinants of user satisfaction with a clinical information system. In *AMIA Annual Symposium Proceedings*, 614-618.
- RACGP. (2014). RACGP, Australian Commission on Safety and Quality in Health Care. General practice accreditation to benefit from collaborative approach. Media Release. Available from: <https://www.safetyandquality.gov.au/wp-content/uploads/2014/04/Joint-com>.
- Raeisi, R., Asefzadeh, S., & Yarmohammadian, M. (2008). Comparative study of accreditation information models in Europe and America. *Health Information Management*, 3(2), 1-9.
- Ramoni, R. B., Walji, M. F., White, J., Stewart, D., Vaderhobli, R., Simmons, D., & Kalenderian, E. (2012). From good to better: toward a patient safety initiative in dentistry. *The Journal of the American Dental Association*, 143(9), 956-960.
- Reeleder, D., Goel, V., Singer, P. A., & Martin, D. K. (2006). Leadership and priority setting: the perspective of hospital CEOs. *Health Policy*, 79(1), 24-34.
- Saremi, A. T. (2018). Importance of hospitals accreditation System and its executive standards. *Sarem Journal of Reproductive Medicine*, 3(3), 139. doi:10.29252/sjrm.2.4.139
- Sperling, D., & Pikkell, R. B. (2020). Promoting patients' rights through hospital accreditation. *Israel Journal of Health Policy Research*, 9(1), 1-14. doi:10.1186/s13584-020-00405-1
- Tabrizi, J. S., Gharibi, F., & Ramezani, M. (2012). Development of a national accreditation model in specialized clinics of hospitals. *Hakim Research Journal*, 15(3), 229-237.
- Toplis, J. W. (2002). The accreditation process of an Australian health fund's dental centre. *British Dental Journal*, 192(2), 71-73.
- Vahdati, H., Hozni, A., & Tohidi Moghaddam, M. (2017). Effect of Human Resources Management on the Quality of Services Based on Hospital Accreditation. *Evidence Based Health Policy, Management and Economics*, 1(4), 211-221.
- Woo, J., Kim, Y., Kim, H., & Kim, H. (2018). Effects of Accreditation Program on Leadership, Organizational Culture, Activity, and Performance of Hospital Management. *International Journal of Engineering & Technology*, 7(3.33), 233-237.
- World Health Organization. (2018). Continuity and coordination of care: a practice brief to support implementation of the WHO Framework on integrated people-centred health services. Geneva: World Health Organization.
- Yarmohammadian, M., Shokri, A., Bahmanziari, N., & Kordi, K. (2013). The blind spots on Accreditation program. *Journal of Health System Research*, 9(1), 1158-1166.

