

Patient safety and dentistry: what do we need to know? Fundamentals of patient safety, the safety culture and implementation of patient safety measures in dental practice

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Although concern for patient safety is inherent to the practice of the health care professions, its transformation into a specific body of knowledge is relatively recent and thus patient safety may be considered as a comparatively ‘new’ discipline. Its main objectives are to avoid the occurrence of preventable adverse events (accidents, errors and complications) associated with health care and to limit the impact of inevitable adverse events. Despite these simple definitions, patient safety is multifaceted, quite complex in nature and includes many key elements. Thus, it cannot be simply defined as the provision of safe health care or the protection of patients from harm by health care providers because there are economic, fiscal, social, cultural and organisational aspects of a patient safety climate. It is essential for all health care practitioners and health care organisations to become more familiar with the general context of patient safety, to actively participate in efforts to implement patient safety measures in daily practice and to establish a patient safety culture.

Key words: Patient safety, safety culture, health professions, dentistry

In view of the risks for errors and adverse events, as well as the risks for morbidity and mortality, the health care environment is considered to represent a context of high risk, and health care provision to represent a high-hazard sector^{1,2}. The possibility of the occurrence of unexpected damage related to health care is present from the beginning of medical practice. Although the serious consequences of errors and adverse events have been well demonstrated¹, the adoption of a safety culture and safety measures by the health care professions has taken longer than in other high-risk industries, such as aviation³. Despite the genuine concern for patient safety that is inherent in the practice of health care, its transformation into a specific body of knowledge is relatively recent and the objectification of the issue as a whole for health care practitioners, health managers and policymakers began to develop only at the beginning of the 1990s.

If we were to indicate a milestone that signalled the emergence of patient safety as a specific area of knowledge, we would undoubtedly select the publication of the Institute of Medicine study *To Err is Human: Building a Safer Health System* in 2000⁴. This study estimated that between 44,000 and 98,000 people died each year from medical errors in the

USA⁴. Similar figures have been released by other studies⁵. The public shock generated by the publication of these figures hiked the issue of patient safety up the agendas of health professionals, managers and politicians. As a result, patient safety became a major concern for everyone involved in health care^{1,6,7}. As the pressure to improve patient safety gains momentum daily⁷, such concerns are likely to support efforts to promote a climate of safety^{1,6–11}.

It is apparent that almost all health organisations undertake studies and implement measures to improve patient safety. The World Health Organisation (WHO) has embarked on an initiative that aims to bring a culture of patient safety to all levels of the global health arena through the various strategies encompassed by the World Alliance for Patient Safety¹². Similarly, the Organisation for Safety, Asepsis and Prevention (OSAP) has launched considerable efforts in this field¹³.

Initiatives in the dental field can be considered as quite immature in comparison with those in medicine, and some specific features of dentistry may be responsible for this situation. Nevertheless, organised dentistry has made various attempts to promote a culture of safety, an example of which is the safety resolution of the Council of European Dentists (CED). This

resolution refers to various international bodies, such as the WHO, the Organisation for Economic Cooperation and Development (OECD) and the Council of Europe, which have sought to identify patient safety risks and develop recommendations to help prevent the occurrence of adverse events. The resolution states that: 'The European Commission has stressed the importance of patient safety as a political issue at EU level and is preparing proposals on patient safety in 2008'¹⁴. According to this resolution, 'It is essential that action to improve patient safety at national, European and international level take into account the various health care settings in which patients are treated, since the types of patient safety risk and most appropriate ways of minimising them may vary according to health care setting'¹⁴. Concurrently, research regarding the adoption of a culture of patient safety and the implementation of patient safety measures in dental practice is also increasing¹⁵.

In addition, many national dental associations have made particular efforts. For example, in Spain, the Spanish Dental Council set out to create by 2009 the Spanish Observatory for Dental Patient Safety (OE-SPO) to focus on the surveillance and control of adverse events during dental practice¹⁶. The World Dental Federation (FDI) is also playing an active role in raising the awareness of dental practitioners of issues of patient safety¹⁷. As well as FDI policy statements that indirectly address the importance of patient safety¹⁸, the recent initiation by the FDI of the development of the *Multiprofessional Curriculum Guide for Patient Safety* stands as a good example of interdisciplinary collaboration in this field of endeavour¹⁹.

WHAT IS PATIENT SAFETY?

Patient safety is a relatively new discipline, the main objectives of which are to facilitate the avoidance of preventable adverse events (accidents, errors and complications) associated with health care (in this case, dentistry) and to limit the impact of inevitable adverse events. Although investigations into aspects of patient safety generate a particular type of knowledge pertaining to accidents and complications associated with the use of materials, general procedures and clinical facilities, this discipline can be defined as a cross-sectional area that can benefit from established knowledge in other fields. Most of this shared knowledge refers to the complications inherent in the practice of the various areas of medicine and dentistry. However, patient safety is multifactorial and very complex; it includes many key elements and has various facets and cannot be simply defined as the provision of safe health care or the protection of patients from harm by health care providers. Although both the patient and the practitioner are inherently involved in patient safety,

there are also economic, fiscal, social, cultural and organisational aspects that must be taken into account¹.

Patient safety focuses on the analysis of the characteristics of health systems and on the determination of 'latent risks'. These latent risks are features of the system that can allow or even encourage an adverse event to occur during the provision of care. The range of possible latent risks in a system is huge and stretches from the installation of a floor that becomes slippery when it is wet, to requirements that staff work excessively long hours and to the way in which clinical information is transmitted between professionals. Typically, when an adverse event occurs, it is usually simultaneously associated with several latent risks²⁰. Thus, it can be suggested that adverse health care events tend to occur in a context that allows or even encourages them.

Another important feature of patient safety is its 'non-punitive' character. As its basic goal is to prevent the occurrence and recurrence of adverse events (or at least to be prepared for them), patient safety does not seek to punish the guilty. In fact, the reporting of adverse events is intended to be completely anonymous.

The methodological peculiarities of patient safety refer especially to reporting systems, the classification and analysis of adverse events, and the proposed corrective measures. The analysis of problems associated with health care may be either prospective or retrospective²¹. Retrospective studies focus on events that are important because of their frequency, characteristics or severity; these are known as 'sentinel events'. These retrospective studies often use a methodology known as root cause analysis (RCA) or some of its variants²²⁻²⁴. This methodology not only allows the investigators to focus on the event itself, but also to consider characteristics of the health care system (e.g. the organisation of labour, the materials and appliances available, patient characteristics, the continuing education of professionals, the transmission and storage of information) that have allowed or encouraged the adverse event. The outcome is a comprehensive analysis of the health care environment which includes all the latent errors that have allowed a given sentinel event (e.g. a health care error, an accident in the office, a poorly treated clinical complication) to happen.

Prospective studies aim to identify potential risks associated with a treatment, work organisation, appliances or new materials. The methodology used in prospective analysis is failure mode and effects analysis (FMEA). This methodology allows for a systematic analysis (a 'risk map') of the procedures that practitioner(s) wish to start applying. This risk map allows for the implementation of measures to reduce the likelihood of these risks materialising, or to at least limit their consequences if they do emerge²⁴⁻²⁶.

The outcome of such specific patient safety methods is usually recommendations. These may be general, but are usually directed towards a specific area of care, the particular characteristics of which they take into account. Recommendations on patient safety by clinical experts may contain nothing or almost nothing that common sense does not already indicate. Problems arise because during daily practice, time pressure, haste, acquired habits, fatigue and inertia sometimes obliterate this common sense.

BASIC CONCEPTS OF PATIENT SAFETY AND TERMINOLOGY

One of the main problems to confront patient safety in its short history has pertained to the lack of a common taxonomy. To overcome this problem, the WHO has undertaken an ongoing project to develop a unified taxonomy. The International Patient Safety Classification (ICPS) is a conceptual framework that can also serve as a reference from which the dental profession can develop its own taxonomy. Table 1 shows definitions proposed to facilitate a better understanding of the exact nature of patient safety based on the ICPS²⁷ and other available sources^{4,5,20,28–34}.

PATIENT SAFETY CULTURE AND SAFETY CLIMATE

The organisational safety culture is a crucial aspect of patient safety and is a complex phenomenon¹. Safety is

considered an important aspect of service quality⁹. It is even suggested that patient safety begins with the enforcement of a safety system at an organisational level⁸ and that clinical error in acute care hospitals can only be addressed by developing a culture of safety³⁵. A safety culture can be defined as ‘the product of individual and group values, attitudes, perceptions, competencies, and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation’s health and safety management’³³ or ‘the shared attitudes, beliefs, values or assumptions that underline how people perceive and act upon safety issues within their organisations’³⁶. A culture of patient safety reflects an attitude that should permeate all activities of health professionals, the main objective of whom is to avoid the occurrence of unnecessary damage to patients as a result of treatments provided³⁷. A culture of patient safety is totally different from a ‘culture of blame’. It does not look for individuals on whom to lay blame, but, rather, it identifies the ‘latent system mistakes’ that can lead to errors by the whole dental team. Finally, and fundamentally, it is a culture that compels us to share our experiences and data, both good and bad, with our colleagues so that everyone can learn from them.

Although these terms are used interchangeably, the exact meanings of ‘safety culture’ and ‘safety climate’ are claimed to differ⁸. According to Singer *et al.*, ‘While safety climate refers to shared perceptions of what an organisation is like with regard to safety, safety culture

Table 1 Basic definitions related to patient safety

Patient safety	The reduction (or elimination as far as possible) of damage to patients resulting from health care processes or accidents associated with them
Health risk management	Trying to identify, evaluate and treat problems that can cause harm to patients, lead to malpractice claims and cause unnecessary economic losses to health care providers
Adverse event	Unexpected result of medical treatment that causes the prolongation of treatment, any type of morbidity, mortality or any other damage to which the patient should not have been exposed This is a broad concept that includes errors, accidents, delays in care, negligence, complications associated with treatment, etc. It does not include the symptoms of the patient’s presenting illness. The definition of ‘adverse event’ as it is commonly used across the health care sector is difficult to apply to dental care. Adverse events may be avoidable or unavoidable. An example of a preventable adverse event is the prescription of a drug to which a patient is allergic as a result of failing to consult clinical records. An example of a non-preventable adverse event is an adverse reaction to the administration of a local anaesthetic in a patient without clinical pathology or allergic history. However, the fact that an adverse event is not preventable does not mean that we should be unprepared to act quickly and appropriately if it occurs
Error	Mistake by omission or commission in health care practice, whether in planning (error of planning) or execution (error of execution). The error may or may not cause the occurrence of an adverse event. Although by definition all errors should be avoidable, the repetition of similar acts, in combination with organisational failures, make this task particularly difficult
Incident (‘near miss’)	An event that almost causes harm to a patient and that is avoided by luck or by an act at the last moment. An example of a near miss is the administration of a penicillin-based antibiotic to an allergic patient because this information is missing from the patient’s clinical records, which is avoided because the patient reads the prescription and reminds the practitioner of the allergy. Various studies estimate that many more near-miss incidents than real adverse events occur. In relation to the prescription of drugs, about seven times more incidents than complete adverse events are estimated to occur
Accident	An accident is defined as a random event, that is unforeseen and unexpected, and causes damage to the patient or to materials or to health care staff
Negligence	Negligence is defined as a mistake that is difficult to justify because it occurs through lack of knowledge or basic skills, the omission of minimal precautions, or neglect
Safety culture	An organisation’s culture of safety is the product of individual and group values, attitudes, perceptions, skills and patterns of behaviour which lead to commitment, style and ability in the management of the health and safety of an organisation. Those organisations with a positive safety culture are characterised by communication based on mutual trust, by shared perceptions of the importance of safety and by trust in the effectiveness of measures for prevention
Safety climate	The safety climate refers to shared perceptions of what an organisation is like with regard to safety

refers to employees' fundamental ideology and orientation and explains why safety is pursued in the manner exhibited within a particular organisation³⁴. As all health care organisations are expected to create a climate of patient safety as an organisational goal and a priority, the concepts of patient safety culture, safety climate and their implications for health care and organisations must be correctly understood by everyone involved in health care^{1,7-9}. Success in establishing a safety culture, with associated practices, may depend on prior success in achieving unidirectional, positive change in attitudes in order to create a safety climate³.

Although it is not easy to identify all the specific elements of a safe health care organisation, a recent literature survey has listed leadership, teamwork, the provision of evidence-based care, communication, learning, and being just and patient-centred as important domains (subcultures) or core values of a safety culture¹. A survey that aimed to measure the institutional culture of safety cited design improvements in health care, strategic planning, learning from errors, commitment to leadership, documenting and improving patient safety, encouraging and practising teamwork, spotting potential hazards, and using systems for reporting and analysing adverse events and measuring improvements as relevant³⁸. Strategic orientation to the establishment of a safety culture and quality improvement, open and transparent disclosure principles, health professional human resources integral to ensuring patient safety practices, effective linkage between institutions involved in patient safety, national patient safety accountability initiatives and collaborative team practice were identified as key areas⁷. In another survey, six cultural scales that emerged as relevant to patient safety were: making patient safety everyone's priority; teamwork; valuing individuals; open communication; learning, and empowering individuals³⁵. Other authors have highlighted the need to focus on the development of a 'safety climate' and predictive measures of patient safety², and to foster a non-punitive^{9,39}, open and stimulating⁹ health care culture. A safety culture is also suggested to require the highest level of professionalism⁴⁰ and to be strong and proactive³⁸. As a supportive culture of patient safety is considered essential for improving patient safety¹⁰, organisations have attempted to define the concept of a 'safety culture', to conduct staff surveys, to develop performance improvement measures surrounding patient safety, and to design tools and identify failures to reorganise the work and culture of their organisations^{1,7-10,35,38}.

WHAT NEEDS TO BE DONE?

Although progress is evident, much remains to be done. Policymakers need to take the necessary measures to

improve the culture of safety; academicians must make more effort to incorporate the principles of a culture of patient safety into educational curricula, and organisations that promote patient safety as a strategic priority around which the entire efforts of the organisation should be focused must evaluate their systems for achieving this objective^{1,8-11,35,38}. Assessing the current safety culture in general practice is suggested to be the first step in targeting improvements^{10,11}. Developing and introducing team resource management programmes and evidence-based clinical interventions, ongoing efforts to minimise variations among health care settings and the sharing of successful experiences are also suggested to be beneficial⁸. As aspects of general organisational culture have been found to be strongly related to safety climate, strategies that promote group orientation and reduce the influence of hierarchy, such as the use of multidisciplinary team training, continuous quality improvement tools and innovative human resources practices and policies, are supported as making positive contributions³⁴. Recently, real-time patient feedback was also used to introduce safety changes and to promote a safety culture⁴¹. Various publications address the need to provide more knowledge and to better train health care practitioners and students in some crucial aspects of patient safety, including interventions known to be effective in preventing errors, technical performance, team and organisational issues, and the disclosure of errors to patients⁴². Institutions that encourage the reporting of safety-related issues and that prioritise the provision of safety training programmes are reported to have a significant positive impact on the development of a safety culture⁸.

However, despite such general approaches, it should be noted that measurement of a patient safety climate is a dynamic field² and organisations differ from one another in their application of patient safety strategies^{1,11}. This implies the need for reliable and sound assessment tools^{8,10} and methods of analysis^{2,8,10} devised according to the purpose to which they will be put², and highlights the need to tailor different, or even unique, strategies that accommodate the particular circumstances of each organisation^{6,9,39,43}. It is clear that the patient safety climate differs across hospitals and among and within work areas and disciplines^{6,11}, and clinical status and job classes^{9,11,43}, and that perceptions of the safety climate significantly differ among health workers^{6,8,11}.

In addition to activities that mainly focus on technical and engineering solutions⁸, more effort must be made to better understand the relationships between measures of patient safety and patient outcomes^{2,44}, the causal relationships between safety culture changes and clinical outcomes in different culture settings⁸, and the association between the safety culture and the

safety-related behaviours of health care workers⁸. Further, the impact of changes to the organisational culture that are intended to facilitate the better implementation and internalisation of safety-related efforts and to develop a positive safety culture must be investigated^{8,9,11,35}. A culture of blame is suggested to act as an important obstacle to the development of a mature safety climate³⁹. A nationwide study conducted in hospitals in Taiwan confirmed that there is still more to accomplish because the safety culture at most hospitals was found to be insufficiently developed and considerable scope for the development of a more mature safety culture and the improvement of national patient safety policies was identified⁸.

PECULIARITIES OF PATIENT SAFETY IN DENTISTRY

From a patient safety perspective, a number of peculiarities associated with dentistry serve to distinguish it from other areas of health care, particularly from health care that is administered within hospitals¹⁶.

Damage caused to dental patients is usually less severe than that caused to patients receiving other types of health care. Dental care is less aggressive than hospital care and consequently generates comparatively milder damage. However, sometimes accidents can occur or certain treatments in compromised patients may lead to serious consequences to a patient's health. Dentists must also understand that dental manoeuvres are so numerous and repetitive that serious adverse events (although unlikely) may happen sooner or later. Moreover, as dental practice becomes more sophisticated, the risks to patients increase. Dentists more frequently handle dangerous drugs and use advanced technical appliances (e.g. lasers, electrocautery, ionising radiation) that have the potential to cause serious harm. Dentists and dental assistants may also come into contact with blood and body fluids that can transmit infectious diseases.

Dental health care settings are widely dispersed. However, strategies for ensuring patient safety have originated from and have been mainly developed for use in institutionalised care (hospitals). The hospital environment is highly structured and hierarchical, and information about a particular adverse event may arise from any of the successive phases of care. Dental care, by contrast, is very unstructured. In most parts of the world, dental care is provided by dentists who practise in isolation and have little connection with other dental practitioners. This structure limits the spread of knowledge of adverse events that occur in dental centres and decreases the possibility of detailed analysis of these adverse events.

Dental patients are usually ambulatory. In the hospital setting it is relatively easy to detect the signs and symptoms that frequently cause or arise from

adverse events. However, in dentistry, the manifestation of a problem that is caused by or arises from dental treatment is often treated by other health professionals, such as emergency paramedics or doctors. Thus, a dentist may not actually become aware of the occurrence of an adverse event.

Dental care is essentially carried out by private practitioners. This leads to the possibility that such adverse events may be hidden by dentists, especially if the event reflects the occurrence of a professional error (and will thus have negative 'trade impact').

Not all dental professionals are aware of the culture of patient safety and there is even some ignorance of the concept. However, in hospitals, because of the frequency and severity of adverse events, and the promotion campaigns undertaken by the health authorities, health professionals are more aware of patient safety. The lower frequency of adverse events in dentistry, combined with their scant relevance outside the dental clinic, may mean that substantial numbers of dental practitioners may have little awareness of the safety culture. Educational attempts may be of limited impact because of the isolated nature of most dental settings.

The issue of why it is important to promote a culture of patient safety in dental practice raises multiple points, some of which are more obvious than others.

Firstly, and as the primary consideration, the promotion of patient safety is an ethical obligation in any health care profession. The Hippocratic principle 'primum non nocere' [first, do no harm] obliges us to do no harm to the patient. In a context in which a treatment implies a degree of unavoidable damage to the patient, we must try to minimise the danger inherent in the treatment and avoid the occurrence of any possible complications.

Secondly, there are important economic reasons for the support of patient safety. Patient safety is closely linked to the concept of quality care. Any dental care in which all possible risk factors can be controlled represents the highest-quality dental care, and there is a clear relationship between the quality of treatment and the success of outcomes⁴⁵⁻⁴⁷. It is particularly important to establish an accurate understanding of the quality assurance and improvement (QA/I) process, the shared values, goals and potential benefits of different QA/I systems and tools, and the complexities associated with the implementation of QA/I systems or models in oral health care⁴⁵. By contrast, the adoption of effective patient safety measures will serve to reduce the likelihood of adverse events and thus any associated economic cost.

Thirdly, improving patient safety may imply better legal security for dental practitioners. By complying with basic guidelines and protocols pertaining to patient safety, practitioners may reduce the possibility

of errors and adverse events and, thus, diminish the occurrence of subsequent claims.

From a patient safety perspective, there is always room for improvements in any mode of treatment in any health profession; however, problems are likely to be concentrated in certain fields¹⁶. Problems can be classified according to various criteria (such as by specialty, manoeuvres, etc.). Table 2 illustrates one of the most simple systems of classification.

HOW CAN WE BEGIN TO APPLY PATIENT SAFETY MEASURES IN DENTAL PRACTICE?

The path to patient safety is long and will never reach a final destination. Therefore, the objectives must be reasonable, and the measures taken to achieve them effective. Possibly the most reasonable initial steps are:

- Educating staff regarding the patient safety culture: we must show our team our commitment to a culture of patient safety, explain its importance, and act as a team. A culture of patient safety cannot be imposed; it must be shared, and at this point appropriate team-based patient safety education is crucial³. A patient safety culture defines an attitude that should be shared by all members of the dental team. All auxiliaries, hygienists and dental practitioners should undertake training, assimilate the culture and share

experiences. However, the team leader has an essential role in directing activities and motivating the rest of the team⁴⁸

- Understanding our current situation: we need to know our current situation before taking any measures. How can we do this? We can gain an idea of our current situation by taking some simple steps: we can recall and analyse any adverse events we have previously encountered; we can check the correctness of 20 medical records chosen at random; we can review our protocols for cleaning and sterilising non-disposable instruments, and we can review our protocols for action in a life-threatening emergency
- Devising protocols to make manoeuvres and activities potentially less dangerous: we can devise protocols for the detection of patients with allergies and for the management of particular patients, such as those who are physically or mentally disabled. An easy measure against the occurrence of surgical adverse events would involve completing a checklist prior to performing any oral surgery treatment⁴⁹
- Establishing ‘safety instructions’: these represent the ‘red lines’ over which we should not step in everyday practice. In the event that we do (probably for an exceptional reason), we must justify this overstepping in the clinical record. Examples of such instructions would be: do not perform a root canal treatment

Table 2 Important aspects of patient safety

Errors in clinical documents, information and referral of patients	This area includes many different types of error <ul style="list-style-type: none"> (i) Histories which lack essential data (clinical and allergic background and updated information about medication) (ii) Use of abbreviations (or bad handwriting) that lead to confusion on the part of other professionals at the same centre using the same history (iii) Failure to provide adequate information to the patient about the procedure, its potential risks or recommendations that must be followed to avoid complications (iv) Inaccuracies in patient referrals to other professionals that may lead them to make mistakes
Prescribing errors	This is one of the most dangerous areas in clinical practice <ul style="list-style-type: none"> (i) Errors in the indication for the drug (in relation to the type of drug, dose or duration of treatment) (ii) Allergic reactions that occur because of a lack of adequate medical records (iii) Drug interactions that occur because the prescribing practitioner lacks the relevant pharmacological knowledge or fails to update the list of drugs taken by the patient (iv) Wrong dose of drug (especially common in children and in patients with alterations in the metabolism or elimination of drugs) (v) Duplication of drugs (especially common with anti-inflammatories) because of a lack of coordination among the various professionals prescribing for the same patient
Surgical events	Surgery is one of the areas that produce more adverse events that threaten patient safety. It is therefore perceived as an area for strategic action by the World Health Organization <ul style="list-style-type: none"> (i) Errors in treatment planning (sometimes associated with lack of adequate clinical records previous to treatment) (ii) Errors in the type of procedure performed (motivated by incorrect patient identification or inadequate clinical history) (iii) Errors in the area of intervention (wrong-site surgery) that occur as a result of forgetfulness or the inappropriate interpretation of records by the professional (iv) Errors in preoperative prophylaxis in medically compromised patients (v) Errors in the monitoring and control of operated patients (no postoperative instruction sheet or lack of post-surgical control) (vi) Post-surgical infections (detected late or inadequately treated)
Accidents	The list of possible accidents (random events, unforeseen and unexpected damage to the patient) is practically infinite. Data refer to all areas of accident in dental specialties <ul style="list-style-type: none"> (i) The patient falls (due to poorly organised furniture, architectural barriers, slippery floors, etc.) (ii) Heavy or sharp instruments or apparatus fall on the patient (iii) The patient suffers accidental cuts and burns (iv) The patient ingests or inhales small dental material (v) The patient suffers eye damage

without using a rubber dam; never re-use containers designed for single use only; never prescribe any drug without consulting the patient's clinical record and without directly asking the patient about allergies or other health problems, and never take an X-ray in a woman of childbearing age without protection and without asking about possible pregnancy

- Sharing experiences in patient safety with our colleagues: a fundamental feature of a culture of patient safety is the sharing of experiences. We should offer our colleagues the opportunity to learn from our mistakes. This should be accepted as an ethical duty. To do this, the most appropriate way would be to report adverse events that have already been analysed in a de-identified manner.

These simple steps allow us to set out on the path to patient safety with the objective of improving the quality and safety of oral health care and preventing the occurrence of most clinical and legal problems. Increased awareness of and familiarity with issues related to patient safety on the part of all dental practitioners and staff are naturally crucial and can be achieved through the provision of materials and documents that aim to improve patient safety and the quality of oral health care and to reduce the incidence of adverse events and errors^{12,14,16,19,45-47,49,50}.

CONFLICTS OF INTEREST

None declared.

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