

Preamble

Today, everywhere in the world, health has taken a prominent place that even economic and financial difficulties do not challenge.

Populations have three main requirements: quality of care, safety of care – two fundamental and inseparable principles –, and transparency, i.e. the right to be informed about the treatments envisaged, the possible risks associated, the expected outcomes, the treatment costs, etc. so that the joint practitioner-patient decision may be taken in full knowledge of the facts and lead to a trusting relationship.

In order to meet the requirements of quality, safety, and transparency, the authorities in charge of the population's health adopt legal or regulatory measures that become increasingly restrictive for health care professionals. They sometimes do so under media pressure and in the name of the precautionary principle, without always taking into account the opinion of the professionals themselves.

We consider that dentists and their professional associations, just as all other healthcare stakeholders, have a major part to play in defining the fundamental principles of the quality of the environment of care, and of the quality of the medical procedures themselves.

To achieve a satisfactory level of quality, all healthcare stakeholders should be involved and made aware of their responsibilities –

Policy makers and institutional players, in their endeavours to promote the well-being of their country's populations, must implement an adequate and efficient healthcare system and healthcare delivery structures that meet the needs of the country. The necessary resources must be provided by public funds or private insurance funds so that everyone has access to quality care.

Healthcare facilities. Their quality is most often defined by the country's legislation and regulatory standards. However, whatever the chosen system of healthcare delivery and funding method, quality is not possible if healthcare facilities and providers do not have the appropriate funding. In countries where private practice is the norm, medical procedures and treatments should be priced at their true value and revaluated regularly in order to enable dental practices to function properly and dentists and their auxiliary staff to receive adequate remuneration in relation to their responsibilities.

Dentists and auxiliary staff should receive the most extensive and comprehensive basic training possible to ensure a high level of professional competence. Training is a core component of quality of care. Continuing professional education throughout one's working life, whether compulsory or voluntary, also guarantees constant improvement of the quality of care.

Provided that these three conditions – i.e. political will, implementation of the necessary resources, high level practitioner training – are fulfilled, a few general and universal principles must be applied so that the practitioner in charge of the care facility can improve the quality and safety of care:

- The patient's right to choose his or her dentist freely and the dentist's freedom of practice are essential to mutual trust and successful treatment outcomes. Only a patient-centred approach can guarantee a truly personal and optimal treatment plan.
- The quality of dental care largely depends on the patient's compliance and active cooperation. Improving the quality of dentistry therefore implies that patients become aware of their own responsibility in their treatment and, after having received professional information on the possible risks and prognosis associated with each treatment, play an active part in it.
- The promotion of quality requires sufficient human resources, facilities in accordance with the quality objectives, and adequate staff remuneration and appreciation.

Introduction

It is not up to international organisations as plural as the FDI or the ERO to define a standard quality to be achieved identically in every country, nor even to determine a minimum level of quality. Technological and financial resources vary too much from country to country throughout Europe and the world. However, it is these organisations' responsibility to specify the criteria for the implementation of quality services and to provide institutions, professional organisations and practitioners with tools that will enable them to improve quality according to their needs and their objectives. Quality is not all or nothing, it is a permanent and gradual endeavour.

Whatever the chosen area of action – technical equipment, clinical and care environment processes, services to the patients – the approach to internal quality improvement is based on a number of compulsory stages:

- Assessment of the initial situation
- Identification of specific objectives
- Written description of the roles and responsibilities of each member of the dental team
- Education and training of all the persons involved
- Implementation of improvement measures
- Repeated reassessments of the new situation
- Internal feedback on the efficiency of the quality improvement measures implemented
- Reiteration of the internal quality improvement approach and identification of new objectives if necessary.

These quality improvement actions must be implemented regularly and as often as necessary, with the constant aim of achieving ever-better outcomes, in the patient's best interest.

It is with this in mind that the ERO working group "Quality of Care" has decided to work on synthetic practical recommendations for all the practitioners and professional organisations that wish to implement a quality approach, to improve the quality of the environment of care rather than the quality of the medical procedures themselves.

Five main areas of action related to the care environment in the dental practice have been identified:

1. **Infrastructure of the dental practice** (accessibility, layout of the premises...)
2. **Hygiene in the dental practice** (observance of the basic rules of hygiene, disinfection and sterilisation of all medical devices...)
3. **Safety in the dental practice** (fire safety, equipment maintenance, medical device vigilance)
4. **Patient pathway** (reception, information, consent, quality of service)
5. **Quality and constant improvement** (patient satisfaction, handling of complaints...)

A hundred recommendations, dealing mostly with prevention, have been listed. They specify standard precautions that aim at helping practitioners to better treat their patients while better protecting themselves.

The goal of the working group is not to define standards and to add new constraints to the already heavy ones that exist in all countries, but to materialise an internal quality approach in the dental practice. This approach must be based on criteria that are applicable to all and difficult to contest, bearing in mind that each individual practitioner will define his or her own objectives for improvement, describe them precisely, assess the results, and make progress at his or her own rhythm, depending on the financial and human resources available.

The working group may review and explore other quality approaches in subsequent work.

Thank you to all the members of the ERO working group "Quality of Care" for their active contribution to this work.

Dr Roland L'HERRON
Chairman

Quality in dentistry

I. Infrastructure of the dental practice

1. Access
2. Means of communication
3. Information about the structure of the dental practice
4. Waiting room
5. Treatment room
6. Lavatories
7. Access for disabled patients

II. Hygiene in the dental practice

1. Hand disinfection
2. Medical devices (single-use and reusable)
3. Maintenance of the premises
4. Waste management
5. Protection of the practitioner and practice staff

III. Safety in the dental practice

1. Fire safety
2. Safety of the premises
3. Emergency situations
4. Equipment maintenance
5. Traceability and Vigilance
6. Dental prosthesis
7. Radiation protection
8. Occupational risk assessment
9. Psychosocial risks for the practitioner (burn-out)
10. Safety of the practitioner and practice staff (assaults)

IV. Patient pathway

1. Greeting of patients on the phone
2. Appointment scheduling
3. Greeting of patients at the practice
4. Physician-patient privilege/patient confidentiality
5. Patient rights and dignity
6. Patient information and consent
7. Out-of-hours care
8. Continuity of care
9. Patient records

V. Quality and constant improvement

1. Patient, correspondent, and collaborator satisfaction
2. Knowledge update and implementation of recommendations
3. Human resources management
4. Practice meetings and internal communication

I. Infrastructure of the dental practice

1. Access

Goal: to facilitate the access to the dental practice

- 1.1. The professional name plate at the entrance to the practice bears each dentist's title, first name and surname, qualifications, speciality if applicable, contact number, and consultation days and times.
- 1.2. The dental practice employs reception staff or is equipped with an access control system.
- 1.3. The rooms to which patients have access are clearly indicated:
 - Reception area
 - Treatment room
 - Waiting room
 - Lavatory
- 1.4. The rooms with restricted access (private rooms, staff rooms, storage rooms for hazardous medical waste...) are clearly indicated and are lockable.

2. Means of Communication

Goal: to optimise the practice's means of communication

- 2.1. The dentist regularly assesses the efficiency of the practice's telephone system (e.g. sufficient number of lines, number of lost calls during consultations, number of calls received).
- 2.2. If the practice is fully computerised for the management of medical data and for other operations (e.g. book-keeping, invoicing ...), it must hold the licenses for all the software installed and used.
- 2.3. The practice computer system is equipped with regularly updated software to protect it from intrusions:
 - Internal access: login with user name and password
 - External access (Internet): firewall
 - Antivirus
- 2.4. Data backups are made every day on two different media (even and odd days). A data backup is also made every week.
- 2.5. Backups made on mobile devices are stored outside of the dental practice.

3. Information About the Structure of the Dental Practice

Goal: to inform the patient about the structure of the practice

- 3.1. The practice provides patients with written information (appointment cards, posters in the waiting room...) specifying:
 - The names of the health care professionals
 - The fees for the main procedures
 - The laws and regulations governing computerised patient data

- The address and phone number of the practice
- The practice opening times
- The contact details of healthcare professionals available outside of the opening times, particularly in case of emergency

3.2. Posters indicate that smoking is forbidden on the premises.

3.3. Posters recommend that mobile phones be switched off.

3.4. Posters indicate which means of payment the practice accepts

4. Waiting Room

Goal: to make sure that patients are comfortable in the waiting room

4.1. The treatment room and reception cannot be heard from the waiting room.

4.2. The number of seats in the waiting room is sufficient.

4.3. A small area in the waiting room is dedicated to children (child-sized table and seats, toys, magazines...).

5. Treatment Room

Goal: to meet the patient's expectations during the consultation

5.1. The area dedicated to the examination and treatment of the patient is well-separated from the other technical and administrative areas.

This is preferable whenever possible, for hygiene and confidentiality reasons. An office separated from the treatment room enables the dental assistant to accomplish their cleaning tasks more efficiently, and encourages the patient to speak more freely to the practitioner, in the certainty that no third person will overhear.

6. Lavatories

6.1. The practice has one or more lavatories.

6.2. Each lavatory is equipped with a washbasin, a liquid soap dispenser, and disposable hand towels.

It is helpful to use posters to indicate how to wash hands

7. Access for Disabled Patients

Whenever possible, the practice is accessible to wheelchairs, and by elevator if it is located upstairs.

II. Hygiene in the dental practice

1. Hand Disinfection

Goal: to prevent hand-transmitted infections

- 1.1. The nails of all care providers (the practitioner and his/her collaborators) should be short.
Hands and forearms should be bare (no rings, wedding rings, bracelets or watches).
Only short-sleeved garments should be worn.
- 1.2. Hands are systematically disinfected before and after each treatment/examination.
It is helpful to use posters or other training materials in the office.
- 1.3. The practitioner and his/her team should perform “surgical hand disinfection” prior to any surgical procedure (endodontic surgery, tooth extraction with bone milling, implant placement...).
It is helpful to use posters or other training materials in the office.
- 1.4. The equipment in the examination and treatment area has to meet the hygiene guidelines of each country. Recommendations:
 - a washbasin, preferably with a non-hand operated tap,
 - disinfection solution and liquid soap dispensers, preferably with fully disposable refills (pump included),
 - a paper hand towel dispenser.
- 1.5. A designated person is in charge of keeping the practice appropriately supplied in soap and single-use hand towels and of monitoring consumption (gloves, soap, hand towels, consumables...)
- 1.6. The single-use gloves worn by the care team are changed systematically between each patient and each time the care procedure is interrupted (e.g. to answer the phone, welcome another patient...)

2. Single-use and Reusable Medical Devices

Goals: To eliminate the pathogenic organisms present on medical devices

To prevent their transmission to other patients, staff members and the environment

A. single-use medical devices should be considered each time such devices exist and guarantee the patient a safe and efficient procedure.

B. Reusable "semi-critical" medical devices

- should be sterilised or
- undergo intermediate-level disinfection as defined in the regulations (Washer-disinfector).

2.1. All medical devices used inside the patient's mouth are immersed immediately after use in a sufficiently large tray containing aldehyde-free disinfectant/detergent solution or another disinfection solution according to the directions for use of the medical device.

2.2. The instructions for use of the detergent/disinfectant are readily available and familiar to the staff. The dilution and soaking time recommended by the manufacturer are observed.

2.3. The dental practice is equipped with a washer-disinfector that meets existing standards for processing semi-critical medical devices.

C. Reusable "critical" medical devices have to be sterilised in an autoclave using the "Prion cycle"

2.4. The small steam steriliser conforms to the European Union Standards.

2.5. The sterilizing cycle used is a type B cycle according to the European Union standards (*currently 134°C over 18min*).

2.6. Medical devices should be wrapped in pouches or placed in specific containers.

2.7. All pouches should be systematically checked and labelled at the end of the sterilization process.

The label should specify the cycle number, the sterilizer number (if necessary), the sterilization date, the use-by date.

2.8. The sterilization process should be traceable in order that a link may be established between a process and a patient.

2.9. The use-by date of sterile single-use or reusable medical devices should be checked systematically.

Category of medical device	Intended use	Level of risk of infection	Required reprocessing
Critical	Introduction into the vascular system or into sterile tissues or cavities, whatever the approach. Examples include surgical instruments, burs, probes	High risk	Sterilization or single-use or, at minimum, high-level disinfection (if sterilization is not possible and single-use does not exist)
Semi-critical	Contact with mucous membranes or superficially wounded skin. Examples include mirrors, amalgam carriers, retractors for photography, orthodontic pliers...	Medium risk	Sterilization or single-use or, at minimum, intermediate-level disinfection Washers-disinfectors ISO 15883-2
Non-critical	Contact with intact skin or no direct contact with patient. For example: dental chair	Low risk	Low-level disinfection

3. Maintenance of Premises

Goal: To limit the risk of transmission of micro-organisms from the environment

- 3.1. The surfaces near the dental unit are cleaned with a detergent/disinfectant between each patient.
- 3.2. In the treatment rooms and the areas dedicated to the processing of medical devices, the floor, wall and worktop coating materials must be smooth, washable and non-porous (wood, carpeting and carpets are strictly excluded).
- 3.3. Floors and furniture and equipment surfaces should be cleaned at least once a day.
- 3.4. The requirements for the maintenance of the premises (techniques, detergents, frequency, monitoring, schedule), in particular the bio cleaning technique (damp wiping to eliminate dust and use of a detergent or detergent-disinfectant) are described in a written protocol.
- 3.5. The members of staff in charge of maintaining the premises are trained in bio cleaning techniques and in the use of the cleaning products.
- 3.6. Maintenance staff should wear appropriate protective clothing (cleaning gloves and protective apron or gown).
- 3.7. Children's toys in the waiting room must be kept clean.
- 3.8. The lavatories must be kept clean.

4. Waste Management

Goal: To prevent risks of infection to healthcare professionals and, indirectly, to patients

- 4.1. The waste sorting area in the treatment room is equipped with:
 - a specific container (plastic box) for sharp objects,
 - a container that enables the safe transport of other types of waste.
- 4.2. Infectious clinical waste is sorted at the end of the treatment procedure, in the treatment area, and must follow a waste stream clearly segregated from the household waste stream.
- 4.3. Infectious clinical waste is disposed of in specific standardised containers which should be entrusted to an approved service provider under the terms of a written agreement.
- 4.4. The practitioner must keep a copy of the infectious clinical waste tracking and disposal form.
- 4.5. The practitioner meets all requirements for amalgam waste segregation, packaging and disposal.
- 4.6. The dental practice should be equipped with an amalgam separator.

5. Practitioner and Staff Safety in the Dental Practice

- 5.1. The single-use gloves worn by the care team are changed systematically between each patient and each time the care procedure is interrupted (e.g. to answer the phone, welcome another patient...).
- 5.2. The care team systematically wears surgical masks during treatment procedures.
- 5.3. Protective eyewear is available to all the members of the care team.
- 5.4. The equipment is purged before first use for at least 2 minutes at the beginning of each session.
- 5.5. The equipment is purged between each patient for at least 20 to 30 seconds.

Goal 1: To reduce the incidence of blood exposure incidents

- 5.6. Needles and any other sharps should be sorted directly by the person performing the procedure.
- 5.7. Needles should never be recapped using two hands – a recapping device must be used.
- 5.8. The management procedure for the management of blood exposure incidents is available.
- 5.9. The Blood Exposure Incident management protocol should be rehearsed once a year (simulation with the practice staff and recap of dedicated phone numbers).

Goal 2: To prevent risks of infection to the healthcare professionals and, indirectly, to their patients

- 5.10. The practitioner should wear specific clothing (short-sleeved gown or tunic, trousers, work shoes) and change every day and/or immediately their outfit is soiled.
- 5.11. The practitioner and the staff must be up-to-date with their vaccinations (hepatitis B, diphtheria, tetanus, polio and influenza).
- 5.12. The practice staff should undergo routine medical examinations as part of occupational health schemes.

III. Safety in the dental practice

1. Fire Safety

- 1.1. Notices giving clear instructions for fire procedures as well as a map of the premises should be prominently displayed.
- 1.2. The dental practice is equipped with a portable fire extinguisher which is clearly located (pictogram).
- 1.3. The extinguisher is checked annually by a certified professional.
- 1.4. The dental practice is equipped with a fire detector.
- 1.5. Each year, fire safety training is provided for all members of staff.

2. Safety of the Premises

- 2.1 The electrical installations and gas distribution system conform to regulations and are checked annually by a certified professional.
- 2.2 Inflammable, dangerous, and radioactive substances are stored under the conditions specified in the national regulations and within the prescribed limits for storage.

3. Emergency Situations

- 3.1. The most common accidents likely to happen to a patient (risks) must be identified (allergic reaction, life-threatening state of distress, trauma, fall from the dental chair, side-effects of a specific medicine...).
- 3.2. The staff applies the prescribed procedures to prevent and/or deal with these accidents.
- 3.3. The dental practice is equipped with a readily-available emergency kit which is checked annually and changed after each use.
- 3.4. The dental practice is equipped with a fridge used exclusively for the storage of cold-storage products. The fridge temperature is checked regularly.
- 3.5. A designated person is in charge of checking expiry dates.
- 3.6. A list of emergency phone numbers is kept up to date and displayed.

4. Maintenance of the Equipment

- 4.1 The dental practice plans and ensures or outsources the maintenance and regular quality control of all its equipment, including the steam sterilizer and radiology equipment.
- 4.2 All maintenance and quality control operations are recorded in an equipment logbook.
- 4.3 If some pieces of equipment should be unavailable, their replacement is planned and organised.

5. Traceability and Medical Vigilance

- 5.1 Accidents associated with the use of a specific health product, medical device or medication must be reported to the competent authorities
- 5.2 Any serious or not previously described medication-induced accident or side-effect must be reported to the competent authorities.
- 5.3 The traceability of all health products and medical devices is ensured (batch numbers and use-by dates are recorded to ensure an effective response to health alerts).

6. Dental Prostheses

- 6.1 Dental impression disinfection operations are conducted and detailed in writing at the dental laboratory.
- 6.2 The anonymity of the prostheses processed by the dental laboratory must be ensured.
- 6.3 The dental laboratory is required to provide traceability and conformity documents.

7. Radioprotection

- 7.1 The dental practitioner meets his or her training obligations with regard to patient radioprotection.
- 7.2 A Radiation Protection Officer is appointed in the practice.
- 7.3 The practice meets all radiation protection checks requirements:
 - technical checks of the radiological equipment,
 - internal quality control carried out by the practitioner (test patterns),
 - external quality control.
- 7.4 The results of the checks are kept and archived at the practice.
- 7.5 Dosimetry procedures are implemented for the practitioner and all exposed employees.

8. Psychosocial Risks for the Practitioner (burnout)

Practitioners should be aware of the risk of occupational exhaustion they are exposed to through their work. They should self-assess in this regard and know what measures to take to improve their situation.

9. Practitioner and Staff Safety (aggression)

- 9.1 The practitioner must know all the measures that can be taken to prevent all forms of verbal and/or physical aggression at the practice.
- 9.2 In case of aggression, the practitioner knows what actions should be taken.
- 9.3 These situations have been discussed with the healthcare and administrative staff and a protocol has been established.

IV. Patient pathway

1. Greeting of Patients on the Phone

- 1.1.** There are instructions on how to take phone calls and how to record the identity of the respondent, the identity of the caller, the date, and the reason for the call.

Situations requiring specific information are identified (e.g. specific precautions to be taken before or after treatments).

The information to be collected and the information to be transmitted are determined based on these situations.

- 1.2.** These instructions are written down in a reception procedure.
- 1.3.** Characteristics of the calls where the request has not been satisfied are recorded.

2. Appointment Scheduling

- 2.1** There is free time in the schedule to make up for delays or to take an emergency patient.
- 2.2** Each appointment is given according to the urgency of the patient's problem.
- 2.3** Enough time is planned and scheduled to treat the patient's problems.
- 2.4** The patient is informed about the planned length of his appointment.

3. Greeting of Patients at the Practice

- 3.1.** All members of the staff can be easily identified by the patient.
- 3.2.** The patient is informed about possible delays.

4. Dentist-Patient Privilege and Patient Confidentiality

- 4.1.** All information about a patient's health status, medical condition, diagnosis, prognosis and treatment and all other information of a personal kind must be kept confidential.
- 4.2.** Employees at all levels are required to maintain confidentiality.
- 4.3.** All identifiable patient data must be protected.
- 4.4.** The patient's data are only transferred to third parties with the patient's consent.
- 4.5.** The transfer of patient data is done according to national standards and regulations.

5. Patient Rights and Dignity

- 5.1.** Dental interventions may only be carried out when there is proper respect shown for the privacy of the patient.

An intervention may be carried out only in the presence of those persons who are necessary for the intervention unless the patient consents or requests otherwise.

- 5.2.** Patients have the right to a quality of care which is marked both by high technical standards and by a humane relationship between the patient and dental team.

5.3. Patients have the right to refuse or to halt a dental intervention.

The implications of refusing or halting such an intervention must be carefully explained to the patients.

5.4. Patients have right of access to their medical files and technical records and have the right to receive a copy of them.

6. Patient Information and Consent

6.1. Patients have to be fully informed about their health status, including the medical facts about their condition.

6.2. Patients have to be informed about:

- the proposed procedures, together with the potential risks and benefits of each procedure,
- alternatives to the proposed procedures, including the effect of non-treatment,
- the diagnosis, prognosis and progress of the treatment.

6.3. Patients must be informed about the costs of the planned therapy and the possible alternatives.

6.4. Patients are given sufficient time to think about the information received – several days if possible except in emergency cases.

6.5. The informed consent of the patient is a prerequisite for any intervention, as well as the sharing of the decision.

7. Out-of-hours Care

7.1. Outside the opening hours of the office or in the absence of the practitioner, the phone calls are answered by an answering machine.

7.2. On the answering machine, the opening hours of the office are clearly indicated. The message also provides precise information on who to contact in case of emergency.

8. Continuity of Care

8.1. Continuity of care is organized within the practice (mutual access to the file if there are several practitioners).

8.2. If the patient needs to be referred to a colleague, a written summary of the patient's record is provided.

8.3. A patient recall system is recommended.

9. Coordination of Treatments

9.1. The contact details of the patient's treating physician are requested from the patient and are recorded in the file.

9.2. A directory of colleagues, medical and paramedical professionals, laboratories, radiology centres and networks is available.

10. Patient Records

- 10.1. Patient records are stored in closed rooms in locked furniture and are only accessible to the practitioner him or herself and to authorized staff working under the practitioner's responsibility.
- 10.2. The patient record is updated at each consultation or treatment.
- 10.3. If patient records are stored electronically, differentiated access must be given to the staff members, with each holding a personal password that is changed periodically. Regular backups must be made.

V. Quality and constant improvement

1. Patient, Correspondent and Collaborator Satisfaction

- 1.1. Patients are always offered the possibility to make comments on how the dental practice works, preferably in writing (oral messages should be written down by the staff).
Short evaluation questionnaires are available and patients are encouraged to fill them in
The information to be collected should be updated regularly and adapted to the needs of the practice.
- 1.2. Members of the dental team are encouraged to make comments and proposals regarding the practice's work. An open and empathic atmosphere is a basic condition.
- 1.3. The gathered information is regularly reviewed and assessed by the dentist and other members of the dental team and, when applicable, changes are implemented.
- 1.4. Complaints regarding the practice are dealt with without delay, and a response is always given to the person making the complaint.

2. Knowledge Update and Implementation of Recommendations

- 2.1. Provision of high quality dental care is based on the possession of the required professional qualifications by the members of the dental team, obtained after completion of specific training.
A dentist should receive an academic training of a minimum of 5 000 hours/5 years full time, as specified in the requirements laid down in EU directive 2005/36/EC on the recognition of professional qualifications and, as a further example, according to the "Profile and Competences for the graduating European Dentist" (ADEE update 2009).
- 2.2. Continuing professional development is an essential part of dental practice, following and supplementing basic professional training.
- 2.3. The dentist's obligation is to upgrade professional knowledge and skills in accordance with domestic recommendations and/or legal requirements.

- 2.4. Other healthcare professionals working at the practice are also subject to continuing professional development. The dentist makes sure that this obligation is duly fulfilled.
- 2.5. All members of the dental team are aware of the new recommendations, new treatment methods implemented at the practice – to the extent required for each employee's tasks.

3. Human Resources Management

- 3.1. The staff of the dental practice is adequate to the needs – both as regards the number of persons employed as well as their qualifications.
- 3.2. The dentist, as team leader, is responsible for the correct delegation of tasks and supervises their execution.
- 3.3. The dentist is responsible for the well-being and ergonomics of the whole dental team.

4. Practice Meetings and Internal Communication

- 4.1. The dental team meets regularly to discuss information about patients, correspondents, collaborating people, new recommendations, indicators, the reporting of undesirable events, complaints, and to propose actions for improvement.
- 4.2. Internal communication within the practice, regardless of the means, should be clear, easily understandable, unambiguous and respectful.