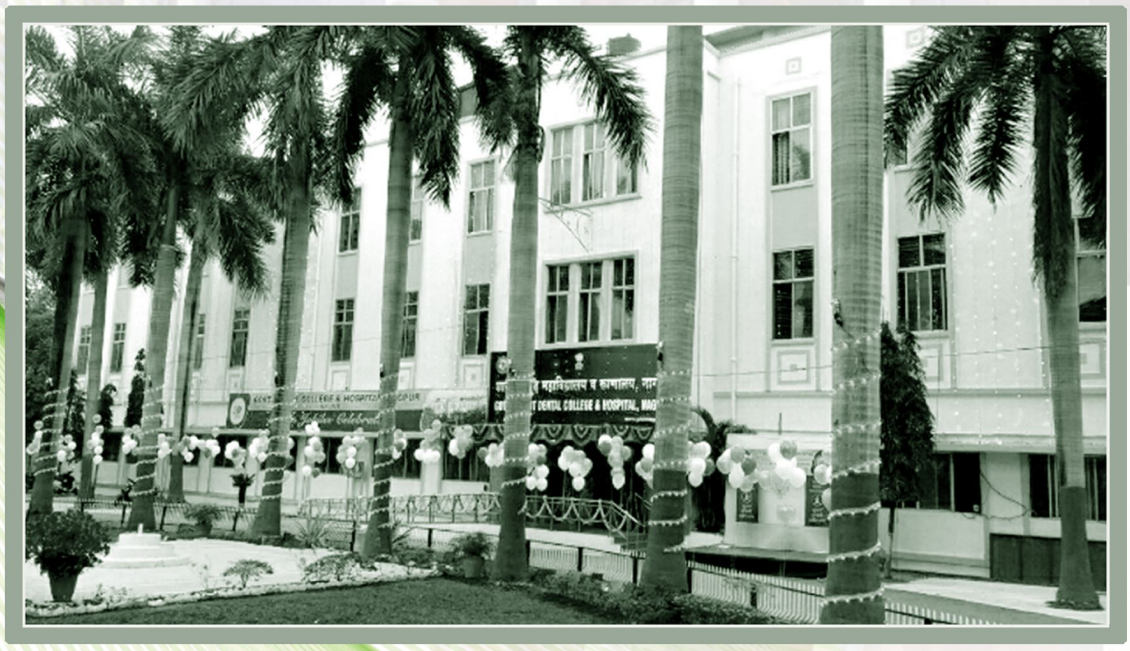
PATIENT SAFETY MANUAL



GOVERNMENT DENTAL COLLEGE & HOSPITAL NAGPUR

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PREFACE

Despite the extensive attention and public commitments towards patient safety over the last few decades, levels of avoidable harm in Dental healthcare around the world remain unacceptably high. By creating a booklet with broad scope and clear descriptions of the key concepts and thinking in patient safety, we have aimed to connect with a much wider readership than those with a professional or academic interest in the subject. We have not limited ourselves to theoretical models or risk management methodologies. We have aimed to address safety in various Dental specialties.

We have also dealt with how the structure, culture and leadership of Dental healthcare Institution can determine how many patients suffer avoidable harm and how safe they and their families should feel when putting their trust in our dental services.

Safety problems relating to non-technical skills are also discussed; this is a topic of great importance but under-represented in Dental educational and training curricula. Any assessment of the prospects for creating much safer Dental healthcare systems and facilities everywhere will be bound to conclude that it will be a long journey. That is why this new booklet has embraced the next generation of Dental health professionals with such warmth and enthusiasm.

We have added a title that summarizes the safety recommendations developed by Government Dental College &Hospital , Nagpur.

We express our deep gratitude to the authors for their work. We also thank those many friends and colleagues who have made themselves available to review the chapters from a technical and linguistic point of view. We dedicate our work on this manual to the memories of all those patients and families who have suffered through avoidable harm in their care. It is on the foundation of a safer future for all patients, everywhere in the world, that the goal of universal Dental health coverage should be built.

Dr. Abhay Datarkar
Dean
Government Dental College & Hospital, Nagpur

CONTENT S:

INTRODUCTION

"We envision a system of care in which those who give care can boast about their work and those who receive care can feel total trust and confidence in the care they are receiving."

Donald Berwick, MD, MPP

Providing high quality, safe, and effective patient care is a central goal of all clinicians. Stemming from the early recognition by Hippocrates of the potential for harm to patients through the delivery of care millennia ago, and advancing through the broad acceptance of the tenets of ―first do no harm, patient safety initiatives have moved to the forefront of health systems redesign in the last decade.

Hippocratic principle promotes the principle "Primum Non Nocere" (first, do no harm). Minimize danger inherent in treatment and avoid the occurrence of any possible complications.

Dentists handle dangerous drugs and use advanced technical appliances (e.g. lasers, electrocautery, ionizing radiation) cause serious harm. Dentists and dental assistants come into contact with blood and body fluids that can transmit infectious diseases. Promotion of patient safety is an ethical obligation in any health care profession.

Government Dental College & Hospital, Nagpur recognizes that each organization is unique, and organizations may be at different points along their journey to achieve patient safety.

This manual provides some general ideas around foundations of patient safety, basic elements of a patient safety program, and suggestions to get started or to maintain your program, to review as your organization reflects on its individual patient safety plan. We have worked closely with every departmental professional to develop this manual.

As you begin to consider and then implement a patient safety program, your Institution can serve as a resource, providing opportunities for finding, and sharing, best practices.

DEFINITIONS:

To understand dental patients' safety, it is necessary to understand few definitions.

The following definitions are provided by the ICPS (International Patient Safety Classification) proposed by the World Alliance for Patient Safety of the World Health Organization (WHO).

Patient Safety: Patient safety means a decrease in (or elimination of, to the greatest extent possible) the harm to patients caused by treatments provided, or from accidents associated with those treatments.

Risk Management: This is the attempt to identify, evaluate and deal with problems which may cause harm to patients, to file complaints about malpractice and to avoid unnecessary economic losses for health care providers.

Adverse Event: Unexpected result of a health care treatment which leads to prolonging treatment, some type of morbidity, mortality or simply any harm which the patient should not have suffered. It is a broad concept which includes errors, accidents, delays in providing care, negligence, etc., but not the complications inherent to the patient's disorder or disease itself.

Error: Mistake due to action or omission in health care practice, whether an error of planning or an error of execution. The error may or may not lead to the existence of an adverse event. ***Near miss***: Event which nearly causes harm to the patient and which is avoided by luck or due to action at the last moment. One example would be prescribing an antibiotic derived from penicillin to an allergic patient, because this

information does not appear in his or her clinical record, and gaining knowledge of that allergy because the patient informs us of it when we provide him or her with the prescription.

Accident: Random, unforeseen and unexpected event which causes harm to the patient or any other type of harm (material damage, harm to health care personnel, etc.).

Negligence: Error which is difficult to justify due to a lack of knowledge or basic skills, failure to take minimum precautions, carelessness, etc.

GOALS OF PATIENT'S SAFETY

Patient safety strategies aim at preventing unintended damage to patients as a result of health care. Patient safety efforts help also to detect early and limit non preventable harm. Given the complexity of Dental health care systems, it is impossible to completely prevent the occurrence of errors, accidents, or complications during the provision of dental or surgical treatment.

It is evident, however, that dentists, the same as other health care professionals, have an ethical and legal obligation to protect our patients from harm in as much as reasonably possible.

Government Dental College & Hospital, Nagpur has following goalsto achievepatients safety

1. Correctly identify the patients
2. Effective communication
3. Safety alert for High-alert medicines
4. Eliminate errors like wrong-side, wrong-patient, wrong procedure surgeries
5. Reduce the health-care acquired diseases
6. Reduce risk of patient hurt against equipment, falls

Similarly,Government Dental College & Hospital, Nagpur has following Four strategic areas for improving patient safety:

1. Identifying threats to patient safety by incident reporting
2. Evaluating incidents and identifying best practice
3. Communication and education about patient safety
4. Building a safety culture

IDENTIFYING ADVERSE FACTORS AND EVENTS

"The single greatest impediment to error prevention in the medical industry is that we punish people for making mistakes."

Lucian Leape, MD

It is of prime importance regarding classification and analysis of adverse events and taking proposed corrective measures.Prospective analysis would be identifying the potential risks associated with treatment, work organization, appliances or new materials failure mode and effects analysis.

Retrospective analysis would be regarding events important with frequency, characteristics, severity (sentinel events), health care error, an accident in office, poorly treated clinical complications

Incident reporting is a very important tool in developing Dental patients' safety strategies. Without incident reporting and learning from mistakes, the profession will never know the extent of the problem.

This practice needs to be encouraged as it is the only way to know the size of the problem and therefore to develop the means for dealing with these issues which affect patient care.

Patient safety became a scientific discipline only when we began to record and measure damage unnecessarily experienced by patients and to assess also the results of preventive interventions.

On patient safety, dentistry has been lagging behind medicine. The main causes of this delay are usually the perception of relatively minor damage to dental patients (compared with those who receive medical treatment, especially in hospital) and the geographical dispersion of dental clinics where care is usually provided with little communication between them.

The first problem that arises when we talk about patient safety in dentistry is the lack of data on adverse events actually occurring in the practice of dentistry. In a centralized environment such as a hospital, it is easier to detect, record, and analyze adverse events in medical care. In contrast, most of the clinical problems that arise in ambulatory settings as dispersed as dental care remain within the involved dental clinic's environment and are never known to the rest of the profession.

In this regard, we must remember that reporting adverse events is one of the best services we can provide to our profession. Anonymous reporting is a highly ethical behaviour that allows our colleagues to learn from clinical or surgical mistakes.

COMMON ERRORS IN DENTAL CLINICAL DOCUMENTS, INFORMATION, AND REFERRAL OF PATIENTS

1. Histories which lack essential data (clinical and allergic background and updated information about medication)
2. Use of abbreviations (or bad handwriting) that lead to confusion on the part of other professionals at the same centre using the same history
3. Failure to provide adequate information to the patient about the procedure, its potential risks or recommendations that must be followed to avoid complications
4. Inaccuracies in patient referrals to other professionals that may lead them to make mistakes.
5. Errors in the indication for the drug (in relation to the type of drug, dose or duration of treatment)
6. Allergic reactions that occur because of a lack of adequate medical records
7. 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

8. Wrong dose of the drug (especially common in children and in patients with alterations in the metabolism or elimination of drugs)
9. Duplication of drugs (especially common with anti-inflammatories) because of a lack of coordination among the various professional prescribing for the same patient.

SURGICAL EVENTS

1. Errors in treatment planning (sometimes associated with lack of adequate clinical records previous to treatment)
2. Errors in the type of procedure performed (motivated by incorrect patient identification or inadequate clinical history)
3. 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
4. Errors in pre-operative prophylaxis in medically compromised patients
5. Errors in the monitoring and control of operated patients (no post-operative instruction sheet or lack of post-surgical control)

ACCIDENTS

1. The patient falls (due to poorly organized furniture, architectural barriers, slippery floors, etc.)
2. Heavy or sharp instruments or apparatus fall on the patient
3. The patient suffers accidental cuts and burns
4. The patient ingests/inhales small dental material
5. The patient suffers eye damage.

SAFETY CULTURE

"Every system is designed to get the results it gets…"

Paul Batalden, MD

It is 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 organization's health and safety management.

Dental Academicians must incorporate principles into educational curricula and institutions must promote patient safety. There must be a multidisciplinary team training of dentists, continuous quality improvement tools, innovative human resources, practices, and policies

It compels us to share our experiences and data, both good and bad, with our colleagues so that everyone can learn from them. Providing a firm organization goal, mission and culture along with cores of leadership, teamwork, provision of evidence-based care, communication, learning, patient-cantered.

Making an institutional culture of patient safety through strategic planning, learning from errorsand commitment to leadership, documenting and improving patient safety, encouraging and practicing teamwork, spotting potential hazards and using systems for reporting and analyzing adverse events and measuring improvement.

PATIENT SAFETY IN GOVERNMENT DENTAL COLLEGE & HOSPITAL, NAGPUR

"Safety is a core value, not a commodity that can be counted, which shows itself only by the events that do not happen." Erik Hollnage

Government Dental College & Hospital, Nagpur is bound to certain code of conducts which incorporated patients' safety measures too. After identifying day to day errors in dental practice at the institution, following safety measures are being designed for dental patients satisfaction.

Applying safety measures in Government Dental College & Hospital, Nagpur are like:

1. Educating staff regarding patient safety culture
2. Understanding our current situation
    a. Recall and analyze adverse events encountered
    b. Check correctness of 20 dental records chosen at random
    c. Review our protocols for cleaning and sterilizing non-disposable instruments
    d. Review our protocols for action in a life-threatening emergency.
3. Devising protocols to make maneuvers and activities in potentially less dangerous criteria.
4. Establishing "Safety Instructions" (red lines)
    a. Do not perform Root Canal Treatment (RCT) without rubber dam
    b. Never re-use containers designed for single-use only
    c. Never prescribe any drug without consulting patient clinical record and without directly asking the patient about allergies or other health problems
    d. Never take X-ray in a woman of child-bearing age without protection and without asking possible pregnancy

e. Sharing experiences in patient safety with our colleagues.

Recommending World Health Organization's concept of patient's safety

To promote patient safety, the Government Dental College & Hospital, Nagpur encourages:

1. Patient safety instruction in dental curricula to promote safe, patient-centred care.

2. Professional continuing education by all licensed dental professionals to maintain familiarity with current regulations, technology, and clinical practices.

3. Compliance with and recognition of the importance of infection control policies, procedures, and practices in dental health care settings in order to prevent disease transmission from patient to care provider, from care provider to patient, and from patient to patient. Monitor the onset and progression of infection in the oral cavity.

4. Routine inspection of physical facility in regards to patient safety. This includes development and periodic review of office emergency and fire safety protocols and routine inspection and maintenance of clinical equipment.

5. Recognition that informed consent by the parent, and assent from the child when applicable, is essential in the delivery of Dental health careand effective relationship/ communication practices can help avoid problems and adverse events. The parent should understand and be actively engaged in the planned treatment.

6. Accuracy of patient identification with the use of at least two patient identifiers, such as name and date of birth, when providing care, treatment, or services.

7. An accurate and complete patient chart that can be interpreted by a knowledgeable third party.Standardizing abbreviations, acronyms, and symbols throughout the record is recommended.

8. An accurate, comprehensive, and up-to-date medical/ dental history including medications and allergy list to ensure patient safety during each visit. Ongoing communication with health care providers, both medical and dental, who manage the child's health helps ensure comprehensive, coordinated care of each patient.a pause or time out with dental team members present before an invasive procedure to confirm the patient, planned procedure, and tooth/surgical site are correct.

9. Inclusion of fire prevention and management protocols in procedure and emergency plans. A time out may be used to assess the fire potential of a procedure when nitrous oxide or oxygen or LPG cylinders is to be used. If an ignition source and fuel are present, risk of a patient fire may be reduced by monitoring the flow of gases and using high volume suction for at least one minute prior to the use of a potential ignition source. In addition, maintaining a moist working field and avoiding cutting dry can decrease fire risk.

10. Appropriate staffing and supervision of patients treated in the dental Clinics.

11. Adherence to recommendations on behaviour guidance, especially as they pertain to use of advanced behaviour guidance techniques (i.e., protective stabilization, sedation, general anaesthesia).

12. Standardization and consistency of processes within the practice. A policies and procedures manual, with on-going review and revision, could help increase employee awareness and decrease the likelihood of untoward events.

    Dentists should emphasize procedural protocols that protect the patient's airway (e.g., rubber dam isolation), guard against unintended retained foreign objects (e.g., surgical counts; observation of

placement/removal of throat packs, retraction cords, cotton pellets, and orthodontic separators), and minimize opportunity for iatrogenic injury during delivery of care (e.g., protective eyewear).

Establish barriers to prevent ingestion or inhalation of materials or small instruments.Periodically monitor procedures to ensure that these operations are performed according to established protocols.

13. Minimizing radiation exposure through adherence to the as low as reasonably achievable (ALARA) principle, equipment inspection and maintenance, and patient selection criteria.

    Limit the exposure of patients to ionizing radiation only to what is strictly necessary.Although no adverse event is collected related to dental radiological exams, recent studies show possible health problems arising from the unwarranted use of such tests. To reduce patient exposure to radiation the following may be done.

    Restrict patient exposure to ionizing radiation only to what is strictly necessary. Avoid the systematic use of radiographs without clinical suspicion of pathology. These restrictions should be tighter in the case of children.

    Protect from ionizing radiation anatomic areas that are not under study, using barriers. This is especially recommended in the cervical area. Always be aware of a possible pregnancy among patients or staff potentially exposed to ionizing radiation. Prevent accidental exposure of patients or caregivers to ionizing radiation.

    Use visual alerts such as posters or lights that indicate the performance of radiographic tests, and so on. Choose diagnostic systems that emit a minimal amount of ionizing radiation.

14. All facilities performing sedation for diagnostic and therapeutic procedures to maintain records that track adverse events. Such events then can be examined for assessment of risk reduction and improvement in patient safety.

15. Dentists who utilize anaesthesia, providers take all necessary measures to minimize risk to patients. Prior to delivery of sedation/general anaesthesia, appropriate documentation shall address rationale for sedation/ general anaesthesia, informed consent, instructions to parent, dietary precautions, preoperative health evaluation, and any prescriptions along with the instructions given for their use. Rescue equipment should haveregular safety and function testing and medications should not be expired. The dentist and anaesthesia providers must communicate during treatment to share concerns about the airway or other details of patient safety.

16. Ongoing quality improvement strategies and routine assessment of risk, adverse events, and near misses. A plan for improvement in patient safety and satisfaction is imperative for such strategies.

17. Comprehensive review and documentation of indication for medication order/administration. This includes a review of current medications, allergies, drug interactions, and correct calculation of dosage.

18. Vigilance in monitoring public health concerns (e.g., severe acute respiratory syndrome corona virus 2 [SARS-CoV-2]). This includes taking appropriate steps to ensure patient and staff safety as recommended by local and national sources with recognized expertise.

19. Promoting a culture where staff members are empowered and encouraged to speak up or intervene in matters of patient safety.

20. Look after the quality of clinical records.

Large number of serious adverse reactions caused by allergies (latex and β-lactam antibiotics), endocarditis caused by the lack of antibiotic prophylaxis, major bleeding in anticoagulated patients, undetected severe (some fatal) infections in immunocompromised patients, and so on.

Clinical records (especially those related to previous pathologies, allergies, and regular medication) must be properly completed and must be periodically updated.

In case of any potentially dangerous circumstance, this should stand out in a clearly visible way (without breaching the confidentiality of our records). Under no circumstances should you treat a patient (or prescribe a medication) without having reviewed his or her medical history.

21. Check the procedures for cleaning, disinfection, sterilization, and preservation of clinical instruments.Inform and train the personnel in charge of cleaning, disinfection, sterilization, and preservation, ensuring their proficiency and awareness of the importance of these tasks. Make the necessary periodic checks (chemical and bacteriological) to ensure efficacy of sterilization cycles. Personally train all new staff in cleaning, disinfection, and sterilization procedures. In this way, we prevent transmission to the new members of possible misconceptions the staff may have.

22. Protect the patient's eyes during dental procedures. Cases of significant eye damage (one with complete loss of the eyeball) caused by instruments fallen from the work tray or accidental scalpel cuts during surgery. Patient's ocular protection with goggles, similar to those we use, is one of the easiest and most effective patient safety measures. Every dentist has seen different substances or fragments of a material jump to the patient's eyes. Usually, these incidents cause only temporary discomfort.

23. Use a checklist in all oral surgical procedures.

24. Have an action protocol for life-threatening emergencies in the dental clinic.

25. Errors in prescribing and dispensing medication are very common in hospital care. In dental care, prescribing errors are not infrequent and may cause serious even fatal adverse events as described in the second point.

To mitigate as much as possible the occurrence and consequences of these adverse events, the dental team must adhere to these safe practices. Do not prescribe any medication without performing a “dual control,” reviewing the patient's clinical record and by asking the patient directly about known allergies.

Inform the patient adequately about treatment: goals, duration, number and characteristics of injections, and the importance of full compliance. Make sure that the prescription is legible and is consistent with the patient's medical history.

In patients with polypharmacy (a large percentage of older patients), make sure to document all the drugs the patient takes and their possible interactions with the medication you prescribe.

Make sure that the doses used are correct, particularly for children and patients with compromised metabolism or drug elimination (renal and/or hepatic failure).Always ask women of childbearing age about the possibility of pregnancy.

After completion of drug treatment, ask patients about their physical and mental performance and record the appearance of clinical problems during the course of their medication.

26. Ingestion or inhalation of materials or small dental instruments is a “classic” accident during dental care performed without the use of appropriate barriers, rubber dams, or “threads,” ensuring that small tools (such as implant screwdrivers) are not ingested or inhaled. The vast majority of ingestion or inhalation accidents usually have no clinical effect, but swallowed sharp instruments may need to be removed by gastroscopy. The vast majority of inhalation cases may require performing a bronchoscopy.

27. Have an action protocol for life-threatening emergencies in the dental clinic. Vital emergency situations in the dental office are fortunately rare.

The tasks and maneuvers to be performed must be protocolized for the dental team to perform properly and not chaotically. This protocol should include the specific tasks of each team member (stay with the patient, bring and operate emergency instruments or equipment, call for external help, etc).

A person must be designated to keep medication and emergency equipment updated and ready; keep in mind that some drugs have a short shelf-life.

The direct care of the patient experiencing a medical urgency is a key aspect in which errors are detected frequently. It is essential that the dentist stays with the patient until the emergency is solved or until the patient is taken to the hospital by external emergency responders (paramedics).

If evacuation to an external health center is performed by the dental team, the dentist must necessarily accompany the patient. In any case, although apparently the patient recovers completely, it is advisable to accompany the patient to his or her home.

28. Never reuse packaging materials or substances intended for one clinical use only. Containers intended for clinical use only contain less preservatives and prevent bacterial growth; therefore, if used repeatedly, they could lead to infection of the area in which the substance is placed.

    Furthermore, the reuse of disposable clinical materials poses a risk of contamination with blood, which may transmit viral infections to other patients (as has happened several times in hospitals).Reuse of containers to package materials other than the original products can also lead to dangerous confusion.

TEAMWORK AND ITS ROLE IN PATIENTS' SAFETY

Each member in a dental institution must

- Be involved in transmitting basic knowledge on patient safety.
- Integrate the basic steps of "patient safety" in all heath care activities.
- Encourage reporting of errors or conflictive situations.
- Participate in the discussion of these at staff consultations.
- Encourage the dental team to embrace patient safety.

CARE OF MEDICAL EQUIPMENT AND DEVICE'S GOAL:

To provide safe and reliable medical devices to the patients is a part of patients safety. Government Dental College & Hospital Nagpur ensures following protocol in consideration with dental, medical equipment's

1. To ensure selection and purchase of high quality medical equipment and devices

2. To maintain the functionality, reliability and safety of medical equipment and devices

3. To prevent damage, reduce the cost of maintenance, increase durability and life span of medical equipment and devices

4. To increase awareness of incident that potentially involve harm to medical devices

5. To implement incident reporting system from medical equipment and devices error

6. To prevent disruption of regular services

7. To coordinate and maintain shared responsibilities among users, managementand manufacturer/vendor

8. To ensure medical equipment and devices are safely used for the patients Process

While following the protocol, following precautionary measures are also taken into consideration

1. Include safety standards and criteria during evaluation, selection and for accepting donated dental and medical equipment

2. Dental and Medical equipment and devices are received and stored appropriately at organization sites

3. Plan and implements a program for quality inspection, testing and maintain related documents accordingly

4. Dental and Medical equipment and devices issued to units /Departments are appropriate to meet the individual's need for care and services

5. The Dental and medical equipment and devices to be operated by skilled/trained/experienced users only

6. All Dental and medical equipment and devices to be operated as per the standard operating procedure/environment given by the manufacturer

7. Maintain Dental and medical equipment maintenance register in the Departments and units to monitor safety and reliability of repaired Dental and medical equipment

8. Provides timely maintenance, replacement or backup equipment when appropriate in coordination with procurement and management

9.Provide 24 hours emergency services by Biomedical engineering services (BSE) during breakdown of medical equipment and devices

10.Provides regular hands on trainings on cleaning, handling, maintenance and operation of medical equipment to the users by the BES/vendor/manufacturers

11.Maintain and report incidents for corrective and preventive action(incident report form)

12.Develop SOP on handling, maintenance, cleaning, disinfection and sterilization of Dental and medical equipment and its parts and accessories.

CONCLUSION:

Most preventable adverse events during the dental health care are produced by a relatively small number of causes. Therefore, a few basic safety procedures can reduce significantly these preventable adverse events. Set in place protocols to ensure the quality of clinical records and verify procedures for cleaning and sterilization; exercise extreme care when prescribing drugs or performing radiographic exams; ban reusing of disposable instruments, containers, or materials intended for a single clinical use; provide ocular protection to all patients, and always use protective barriers to avoid ingestion or inhalation of small instruments; use a surgical checklist; closely monitor the evolution of infectious processes; and always be prepared for possible life-threatening emergency situations in the dental office.

Patient safety constitutes a whole culture of which dental practices cannot remain on the sidelines. Nevertheless, up to the present time, few steps have been taken to bring dentistry in line with the other health care professions in this respect.

Because there are no “dental risk management plans” similar to the one proposed, its proposal is not based on any other dentistry-related documents. Due to the breadth and complexity of the problem, we deemed it appropriate to design a plan which can be carried out sequentially and which guarantees that the objectives sought out are achieved.

The plan consists of seven steps which cover the main objectives sought in Patient Safety. Working on patient safety requires seeking humble objectives and, above all, remaining perseverant in terms of the difficulties which will inevitably arise.

Through this manual, we would like to offer our cooperation and share knowledge and work methodologies with any other dental institutions that works to improve patient safety.

Patient safety can be improved using proper protocols, education, communication, learning initiatives from hazards that had taken place earlier, rectification, monitoring, and safety standards. Every clinician must make it mandatory to follow the patient safety standards. The strict body must be maintained who monitors and regulates these principles being followed in Dental hospitals and clinics.

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