

DENTAL LABORATORY REGULATION

Health Regulation Department

Dubai Health Authority

2013

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Acknowledgment

Dubai Health Authority (DHA) is pleased to present the DHA **Dental Laboratory Regulation** which represents a milestone towards fulfilling the DHA strategic objectives in providing “A world class integrated health system that ensures excellence in health and healthcare for the Emirate of Dubai and promotes Dubai as a globally recognized destination for healthcare”.

This Regulation places an emphasis on facility design and services criteria with a focus on quality of services and safety of professionals based on the local and federal laws in addition to international accreditation standards.

Therefore, this document provides a base for the Health Regulation Department (HRD) to assess the Dental Laboratory’ performance in Dubai and to ensure safe and competent delivery of services. It will also assist the Dental Laboratories in developing their quality management systems and in assessing their own competence to ensure compliance with DHA regulatory requirements and the United Arab Emirates (UAE) federal laws.

The Dental Laboratory Regulation was developed by the Health Regulation Department (HRD) in collaboration with Subject Matter Experts whose contributions have been invaluable. The Health Regulation Department would like to gratefully acknowledge those professionals and to thank them for their dedication to quality in health and their commitment in undertaking such a complex task.

The Health Regulation Department
Dubai Health Authority

I. Scope

This regulation applies to all dental laboratories, whether associated with dental clinics or independent dental laboratories, subject to licensure under the Dubai Health Authority (DHA) establishment law which includes governmental, semi-governmental, private dental laboratories and dental laboratories operating in free zone areas.

The DHA reserves the right to amend the **Dental Laboratory Regulation** stipulated herein without prior notice; the latest version of the regulation shall be published on the DHA website www.dha.gov.ae

II. Purpose

The DHA is the sole responsible entity for regulating, licensing and monitoring all healthcare facilities and healthcare professionals in the Emirate of Dubai. Through the development, establishment, and enforcement of this regulation which matches best practices for operating Dental Laboratories, the DHA will ensure provision of the highest levels of quality and healthcare services at all times.

III. Definitions:

- **Dental Laboratory** shall mean a facility prepared for providing dental works like dentures, bridge, ceramics or other dental restorations such as implant, crowns based on the order of a dentist. Dental Laboratory can be established independently or within a health care facility providing dental services.
- **Dental Technician** is one who makes appliances and restorative devices, such as bridges, dentures etc., to the specifications of a dentist.
- **Functional Program** shall mean a detailed plan prepared by the dental laboratory and management which describes the project purpose, delivery of care model, facility and service users, layout/operational planning, physical environment, projected operational use and demand, relevant operational circulation patterns, departmental operational relationships and patient, dentist and dental laboratory staff needs.
- **Health Care Worker (HCW)** shall mean an individual employed by the hospital/ clinic, (whether directly, by contract with another entity), provide direct

or indirect patient care, this includes but not limited to healthcare professionals, medical and nursing students, administrative staff and contract employees who either work at or come to the hospital site.

- **Licensure** shall mean issuing a license to operate a health facility to an individual, government, corporation, partnership, limited liability company, or other form of business operation that is legally responsible for the facility's operation.
- **Patient** shall mean any individual who receives medical attention, care or treatment by any healthcare professional or admitted in a health facility.
- **Process** relates to what is actually done for the service user and how well it is done. Process indicators measure the activities carried out in the assessment and treatment of service users and are often used to measure compliance with recommended practice, based on evidence or the consensus of experts.
- **Risk Management** is defined as 'a logical and systematic method of establishing the context, identifying, analyzing, evaluating, treating, monitoring and communicating risks associated with any activity, function or process in a way that will enable organizations to minimize losses and maximize opportunities.
- **Universal Precautions** refers to the practice in medicine, of avoiding contact with patients' bodily fluids, by means of wearing nonporous articles such as medical Gloves, goggles and face shields.

IV. Acronyms:

DHA	: Dubai Health Authority
DHCW	: Dental Healthcare Workers
DM	: Dubai Municipality
DED	: Department of Economic Development
DT	: Dental Technician
HCW	: Healthcare workers
HRD	: Health Regulations Department
LLC	: Limited Liability Company
MEP	: Mechanical, Electrical and Plumbing
UAE	: United Arab Emirates

CHAPTER ONE: LICENSURE PROCEDURES

1. Introduction

- 1.1. A dental laboratory is a place where dental technicians apply their knowledge and skills to produce work as per the requirements of the dentists that use their services.
- 1.2. The aim of the dental laboratory is to supply the dental technicians a facility that is safe to carry out their procedures.

2. General Licensure Criteria

2.1. Registration

- 2.1.1. A person or entity must obtain a license from Dubai Health Authority (DHA) to operate a dental laboratory in the Emirate of Dubai. This applies to governmental, semi-governmental, private and organizations operating in free zone areas.
- 2.1.2. Health Regulation Department (HRD) shall receive applications to operate Dental Laboratories in the Emirates of Dubai according to the applicable laws regarding this issue. For further information click here to see *Article 4 and 5* of the *Federal Law number 2/1996* concerning *Private Health Facilities*.
- 2.1.3. Submission of an application to the HRD via Sheryan the online licensing system is a requirement for licensure in order to establish a Dental Laboratory in the Emirate of Dubai. The health facility licensing procedures are described in the Health Regulation section of the DHA website www.dha.gov.ae .
- 2.1.4. The application shall include the dental laboratory's proposed functional program along with a detailed feasibility study and floor plans drawings.
- 2.1.5. Dental Laboratory could be established independently or within a dental clinic provided there are enough qualified and licensed dental technicians associated with it.

- 2.1.6. In case of building a new dental laboratory, the application file must include two sets of drawings as hard copies in addition to two sets of AutoCAD CD, drawings that shall specify the following:
- 2.1.6.1. General Location
 - 2.1.6.2. Accessibility
 - 2.1.6.3. Surrounding streets and accesses
 - 2.1.6.4. Car parking (on ground and in building/ structure)
 - 2.1.6.5. Number of cars/staff/ patients/ visitors as per Dubai Municipality (DM) standards
 - 2.1.6.6. Total built up area
 - 2.1.6.7. Foot print area
 - 2.1.6.8. All floor plans must be at scale 1/100
 - 2.1.6.9. Independent Heating, Ventilation and Air Conditioning (HVAC), and Mechanical Electrical Plumbing (MEP) and Fire service.
 - 2.1.6.10. The application file should include physical features of the site, laboratory equipment, furniture and other utilities i.e. medical waste storage area.
- 2.1.7. The land plot allocated for the new dental laboratory must be approved for commercial use by DM. In case of operating the dental laboratory in existing villa or flat, the premises must be approved for commercial use by DM.
- 2.1.8. The applicant must review the facility design to ensure compliance with DHA **Health Facility Guidelines: Planning, Design, Construction and Commissioning** published in DHA website www.dha.gov.ae.
- 2.1.9. Upon receipt of a completed applicant's file, the HRD shall conduct a detailed review of the submitted material to determine compliance and suitability for further processing.

- 2.1.10. The HRD shall issue an Initial Approval letter for the dental laboratory, with defined services and restrictions particular to the applicant's request.
- 2.1.11. This letter will be required to complete the facility licensing procedures by local and federal authorities including, but not limited to:
- 2.1.11.1. The Department of Economic Development (DED) in Dubai or equivalent licensing bodies (i.e. free zones authorities).
- 2.1.11.2. Dubai Municipality (DM).
- 2.1.12. In case of application rejection, a detailed list of issues will be provided for corrective action after which the applicant is required to re-submit a new application with applicable fees.

NOTE: For further details regarding the application form, ownership, licensure procedures, application fee and design re-submission fee please [click here](#) or visit the Health Regulation on the DHA website www.dha.gov.ae.

2.2. Facility Name

- 2.2.1. During the initial registration process, the HRD will tentatively deal with dental laboratory under the owner's name.
- 2.2.2. The facility shall be issued a permanent and distinctive name by the DED following the final approval issued by HRD. This name must not be changed without prior notification.
- 2.2.3. Name of the facility must not tend in any way to mislead the public as to the type or extent of care provided.

2.3. Final Inspection and Issuing the License

- 2.3.1. An online request for final inspection through *Sheryan* the online licensing system should be submitted by the applicant, upon which an onsite pre-operational assessment will be conducted by HRD.
- 2.3.2. To obtain the DHA license, the applicant must meet the following:

- 2.3.2.1. Employ a sufficient number of qualified and licensed dental technicians to meet patient needs for all services/procedures provided in the facility.
- 2.3.2.2. Install dental equipment required for provision of the dental laboratory services in accordance with manufacturer specifications.
- 2.3.2.3. Provide documented policies and procedures for the following:
 - 2.3.2.3.1. Infection control measures and hazardous waste management.
 - 2.3.2.3.2. Patient health record.
- 2.3.3. Maintain adequate lighting and utilities, including temperature controls, water taps, sinks and drains, electrical outlets and communications.
- 2.3.4. Keep floors, work surfaces, and other areas clean and neat.
- 2.3.5. Clearly display the hours of operation of the facility as well as the type of services available.
- 2.3.6. Clearly display hazardous signs aimed to restrict access for the safety of patients, visitors and staff.
- 2.3.7. Designate secured areas for the collection of medical waste, general storage facilities for supplies and equipment and storing area for hazardous materials.
- 2.3.8. The facility safety plan, design and equipment shall comply with the fire safety requirements by the Dubai Civil Defense Department.
- 2.3.9. A license shall be issued by HRD to a specific licensee for a specific location(s) and shall not be transferable. The license shall be issued only for the premises and the individual owner, operator or to the corporate entity responsible for its governance, as identified in the application. Based on the result of the onsite assessment and after meeting the DHA requirements and recommendation (if any).

2.3.10. The dental laboratory license is valid for one year.

2.3.11. Every license shall state the name and address of the facility, the DED license number, the period of licensure validity, the specific service(s) that the facility is licensed to deliver.

2.3.12. The facility license should be visibly posted on the premises.

2.4. Management Responsibilities

Upon obtaining the license the management of the facility must fulfill certain obligations which include:

2.4.1. Comply with all federal and local laws and regulations.

2.4.2. Take necessary measures to distribute new DHA circulars and announcements among all facility professionals.

2.4.3. Cooperate with HRD inspectors and/or any duly authorized representative and provide requested documentation or files.

2.4.4. Avoid giving misleading information and false statements which may lead to legal action against professionals or the facility.

2.4.5. Settling of any violation fines related to professionals or the facility.

2.4.6. Maintaining malpractice insurance for all licensed healthcare professionals as per *Article 25 and 26* of the *UAE Federal Law number 10/2008* concerning *Medical Liability*.

2.4.7. Submit to the *Health Data and Information Analysis Department* in DHA the required statistical data of the facility.

2.4.8. Obtain prior approval from the Ministry of Health (MOH) for media and advertisement materials, for further information regarding the media and advertisement materials approval procedures and requirements please visit the MOH website www.moh.gov.ae.

2.5. Compliance Review

- 2.5.1. At any time and upon reasonable cause, HRD may conduct random inspection to audit the dental laboratory to determine the facility compliance with the DHA regulations, and take appropriate action if required.
- 2.5.2. The HRD inspectors and/or any duly authorized representative shall conduct regular onsite inspections to ensure compliance with the relevant DHA regulations.
- 2.5.3. The onsite inspections may be scheduled or un-announced.
- 2.5.4. After every inspection in which non-compliance to the DHA regulations has been identified, the authorized inspectors shall issue an onsite copy of the field inspection report followed by a letter stating the identified violations.
- 2.5.5. The dental laboratory management shall submit to the HRD a written plan of correction of violations cited within fifteen days after receiving the noncompliance letter stating the identified violations.

2.6. Application for License Renewal

- 2.6.1. Application for renewal of the facility license must be submitted not less than 30 days prior to expiration of the license and shall conform to all renewal requirements.
- 2.6.2. The applicant's failure to submit the renewal licensing application within the given time shall result in expiration of the current license on its last effective date. In such cases, the facility will be subjected to financial penalties and may lead to null and void of the facility license.
- 2.6.3. DHA dental laboratory license will be renewed for a period of one year after fulfilling the HRD requirements for re-licensure assessment. License renewals shall require operator compliance with DHA post operational assessment inspection requirements.

2.7. Temporary Suspension of the License

- 2.7.1. If identified that any dental laboratory poses an imminent risk to the safety of patients, employees or visitors of the facility; HRD shall assess the facility operations or specific service.
- 2.7.2. HRD may recommend to the Director General of DHA the temporary suspension of the facility license or specific services.
- 2.7.3. The Director General shall form an investigative committee and may issue a decree of temporary suspension.

2.8. Voluntary Cancellation of the License

- 2.8.1. Should a facility wish to cease its services, a voluntary cancellation request must be signed by the owner of the dental laboratory and submitted at least (30) days before closure of the facility.
- 2.8.2. The management of the facility shall comply with existing DHA regulations regarding cancellation of the health facility license.

2.9. Null and Void License

- 2.9.1. As per the *UAE Federal Law number 2/1996* concerning *Health Facilities*, the health facility license is considered null and void by force of law in the following conditions:
 - 2.9.1.1. Transferring the facility ownership to a different individual, corporation, Limited Liability Company (LLC), etc.
 - 2.9.1.2. Closure of the facility for a period of six months without presenting a valid and justified reason(s).
 - 2.9.1.3. The facility is not operating for a period of six consecutive months from the date of issuing the facility license.
 - 2.9.1.4. Cancellation or liquidation of health facility Corporation, partnership or LLC.

2.10. Changes/Modifications Required DHA Approvals

2.10.1. The facility management should obtain prior approval from the HRD for the following changes or modifications which include, but not limited to:

2.10.1.1. Ownership

2.10.1.2. Facility trade name

2.10.1.3. Facility location

2.10.1.4. Voluntary permanent or temporary closure of the facility

2.10.1.5. Relocation of existing services

2.10.1.6. Major construction or renovation work in the facility

2.10.1.7. Adding an extension or annex to the existing health facility building.

2.11. Renovations and Additions to the Facility Building

2.11.1. Any renovation work that may involve change or addition to the premises shall require prior review and approval by the DHA and amendment of the dental laboratory license.

2.11.2. The dental laboratory management must submit an application file including both the preliminary and final architectural plans with specifications showing the proposed change or addition.

2.11.3. Any alterations or additions to the existing facility building shall comply with the construction standards and building codes of the DM and meet the DHA *Health Facilities Guidelines: Planning, Design, Construction and Commissioning*.

2.11.4. For further information regarding the DHA *Health Facilities Guidelines* please click here or visit the Health Regulation site in DHA website www.dha.gov.ae

CHAPTER TWO: DENTAL LABORATORY DESIGN REQUIREMENTS

3. Physical Facility Criteria

3.1. General design considerations

- 3.1.1. The facility size and layout shall depend on the functional requirements and organization of services within the facility.
- 3.1.2. Combination or sharing of the facility functions shall be permitted; provided the layout does not compromise the safety standards.
- 3.1.3. The design, construction, renovation, expansion, equipment, and operation of health care facilities are subject to provisions of several local and federal laws environmental pollution control. This includes but not limited: to hazardous waste materials storage handling, and disposal; medical waste storage and disposal
- 3.1.4. Carpets cannot be used in the dental laboratories.
- 3.1.5. Selected flooring surfaces shall be easy to maintain, readily cleanable and appropriately wear-resistant for the location.
- 3.1.6. Wall finishes shall be washable, moisture-resistant and smooth, wall finish treatments shall not create ledges or crevices that can harbor dust and dirt.
- 3.1.7. Joints for floor openings for pipes and ducts shall be tightly sealed.
- 3.1.8. Wired glass; or plastic, break-resistant material that creates no dangerous cutting edges when broken shall be used in certain areas such as glass doors and sidelights
- 3.1.9. Laboratory work areas shall include sinks with water and access to vacuum, gases, telephone /data service, and electrical service as needed.
- 3.1.10. Chemical safety provisions. These shall include emergency shower, eye-flushing devices, and appropriate storage for flammable liquids, etc.
- 3.1.11. The facility should be clean and properly maintained and have adequate day light and ventilation. The space allocated should be adequate for the activities performed. Local, direct exhaust must be placed over all

- burnout , casting and/or boil-out areas, with providence to outdoor ventilation. This exhaust must be located within 18”of the source equipment in order to effectively remove heat, smoke or odours.
- 3.1.12. If no local exhaust is provided, the lab must demonstrate that their ventilation system is effective through air sampling data , high no of air exchanges per hour based on square feet of applicable area.
- 3.1.13. Dental technicians should work in clean, well-lit and well-ventilated areas.
- 3.1.14. Technicians can have their own workbenches that are equipped according to the scope of work.
- 3.1.15. In the use of laboratory gases such as Oxygen and Argon, they must be placed securely and away from flammable gases. They may store in an upright position marked as empty or full and what gas it contains and secured through a canister holder or chained to the wall or building structure.
- 3.1.16. “Casting well(s) must be made of non-flammable materials, as well as all lubricants, cleaners, etc. used on the equipment. This includes any product that contains a propellant which can get trapped in the well and ignite when heated. Proof of compliance can be demonstrated by posting a sign on the machine or in close proximity to it, plus showing documentation that employees have been trained on this safety precaution”
- 3.1.17. “Appropriate first aid kit(s) must be readily accessible and regularly maintained Appropriate first aid kit(s) must be readily accessible and regularly maintained”
- 3.1.18. Dental Laboratory Infection Control: Items that ultimately come in contact with mucous membranes requires sterilization. Heat sensitive items that cannot be heat sterilized must be disinfected using a minimum intermediate – level (tuberculocidal) disinfectant (Ref: Cottone’s Practical Infection Control in Dentistry, third edition pg. 248)

- 3.1.19. There should be a dedicated place to mold metal (especially crowns, bridges, chrome cobalt).
- 3.1.20. There should be a dedicated place to mould ceramics, that is isolated from the other area of the dental laboratory with dust protection (antedust).
- 3.1.21. Sharps containers must be fixed near use areas.
- 3.1.22. Requirements for proper hand hygiene shall include but, not limited to:
- 13.1.16.1. Conveniently located hand wash basins, used only for washing purpose with hands free operating taps.
 - 13.1.16.2. Wall mounted non-refilling liquid soap dispenser next to each hand wash basin.
 - 13.1.16.3. Wall mounted paper towel in use.
 - 13.1.16.4. Staff education on hand washing technique.
- 3.1.23. Approved list of antiseptic and disinfectants shall be used in the facility.
- 3.1.24. Use and safe storage of antiseptics and disinfectant solutions must be according to manufactures instructions.
- 3.1.25. Material Safety Data Sheets (MSDS) shall be available for all chemical agents and disinfectants solutions used in the facility.
- 3.1.26. Equipment storage, cleaning disinfection and sterilization methods are appropriate for the type of instrument/equipment used in the facility.
- 3.1.27. Each dental laboratory facility shall arrange vaccination of HCW's. Recommended immunizing agents and immunization schedules for HCW's is available in **Appendix 1** Proof of HCW's immunization should be maintained in the facility.
- 3.1.28. There should be a dedicated place for the polishing process.
- 3.1.29. There must be enough counter space to work with Plaster of Paris and gypsum products and a dedicated product dispenser.

3.1.30. Lounge, locker, and toilet facilities shall be conveniently located for male and female laboratory staff.

3.1.31. There should be a storage space available to keep the laboratory materials and supplies.

3.1.32. Waste and Environmental Management.

3.1.33. Waste and environmental management should support safe practice and a safe environment. The dental laboratory facility shall develop and implement a waste and environmental management policies.

3.1.33.1. The policy shall include segregation and disposal of waste in a suitable manner in accordance with the local regulations of the Emirate of Dubai.

3.1.33.2. The waste management policy shall cover handling, storing, transporting, and disposing all kinds of waste.

3.1.33.3. Independent storage area with dedicated containers must be available for disposing waste material. Area shall be ventilated properly.

3.1.33.4. The facility must have contract with a specialized company to regularly collect, transport and destroy waste materials according to the conditions issued by Public Health Department in Dubai Municipality.

3.1.33.5. Disposing hazardous medical liquids, drugs, solutions and dangerous chemical materials into usual sewage disposal is prohibited.

3.1.33.6. Cleanliness throughout the facility shall be maintained by trained domestic help.

3.2. Working space requirements and specifications includes, but not restricted to:

3.2.1. A hard stone surface as a counter space.

- 3.2.2. Bench with light.
- 3.2.3. Laboratory chairs.
- 3.2.4. Bunsen burner.
- 3.2.5. Hand piece and controller.
- 3.2.6. Suction unit for dust extraction.
- 3.2.7. Drawers.

3.3. Lighting

- 3.3.1. The facility should have proper lighting for the working tables and working area.
- 3.3.2. Natural lighting is useful for the ceramics room area to differentiate the ceramics colour.

3.4. Ventilation

- 3.4.1. The facility should be provided with suctioning fans to refine the atmosphere and with special suctions placed above the thermal ovens to suck the ascending vapours and gases out of the ovens.

3.5. Safety

- 3.5.1. Fire Safety and Security Management
Dental Laboratory facility management shall ensure that the health care environment is safe, functional, supportive and effective for all the staff members.
 - 3.5.1.1. The facility shall establish a fire safety plan for early detection, confining, extinguishment, rescue, evacuation and alerting the Dubai Civil Defence.
 - 3.5.1.2. The facility shall maintain fire extinguishers and fire protection equipment and devices as per the Dubai Civil Defence requirements.

- 3.5.1.3. The facility should train staff to respond to fire events in the building, Orientation on the fire safety measures must be included in new staff induction program.
- 3.5.1.4. There should be evacuation maps posted in the facility to indicate current locations marked with "You are here" to provide information regarding Escape routes and Fire exits.
- 3.5.1.5. The facility staff shall be aware about the following:
 - 3.5.1.5.1. Location and use of fire hose reel/cabinets/blankets.
 - 3.5.1.5.2. Assembly points
 - 3.5.1.5.3. Fire alarms/ call points break glass / pull station.
- 3.5.1.6. The facility shall abide with the fire prevention and safety measures required by Dubai Civil Defence.
- 3.5.1.7. Security personnel (if available) should be educated and provided with information in relation to security risks and responsibilities and oriented on their scope of work, fire safety and emergency codes.
- 3.5.1.8. Emergency contact number for local police and Dubai Civil Defence shall be displayed.
- 3.5.2. The facility must have a policy on "Disaster Management" and communicate this with all the staff members.
- 3.5.3. Hazards that may lead to slipping, falling, electrical shock, burns, poisoning, or other trauma should be identified and eliminated.
- 3.5.4. Laboratory floor should be made of fire proof material.
- 3.5.5. The facility must comply with the Dubai Municipality (DM) regulations regarding protection of the health and safety of employees.

3.6. Drainage System

- 3.6.1. Water drainage system should be wide enough to allow easy passage of water.
- 3.6.2. Special filters should be placed under the basins to collect all dirt and left over plaster, to prevent it from going through the drainage system.

3.7. Smoking Policy

- 3.7.1. Smoking inside the dental laboratory is strictly prohibited for all professionals and visitors.
- 3.7.2. The facility management is responsible to implement this policy.
- 3.7.3. Signboards should be fixed at the main entrance, alerting individuals regarding this policy.

3.8. Equipment

- 3.8.1. The facility should be equipped with the appropriate equipment and supplies which are required in order to provide the services. Lists of these instruments are listed below but are not restricted to only these.
- 3.8.2. All equipment used should be inspected, maintained and tested on a regular basis and according to manufacturers' specifications.
- 3.8.3. The area used to mould metal should include the following but not restricted to:
 - 3.8.3.1. Casting machine for casting all dental alloy
 - 3.8.3.2. Preheating furnace
 - 3.8.3.3. Wax elimination furnace
 - 3.8.3.4. Soldering unit
 - 3.8.3.5. Sand blast unit
- 3.8.4. The area used to mould ceramics should include the following, but not restricted to:

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- 3.8.4.1. Porcelain furnace
 - 3.8.4.2. Ultra sonic unit
 - 3.8.5. The area used for polishing should include the following, but not restricted to:
 - 3.8.5.1. Polishing unit for dry and wet polish
 - 3.8.5.2. Electrolytic polishing unit
 - 3.8.5.3. High-speed grinder
 - 3.8.6. There must be a specified place for the following equipment:
 - 3.8.6.1. Polymerization unit
 - 3.8.6.2. Burn out unit
 - 3.8.6.3. Flask press
 - 3.8.7. There must be a specified place for models that includes the following, but not restricted to:
 - 3.8.7.1. Model trimmer (single or double disc).
 - 3.8.7.2. Vibrator.
 - 3.8.7.3. Plaster dispenser.
 - 3.8.7.4. Model duplicate unit

Note: Electric locks should be of (UK type) taking in consideration the electro-voltage of these machines.

CHAPTER THREE: ADMINISTRATION OF DENTAL LABORATORY

4. Administration of the Dental Laboratory

- 4.1. Dental laboratory should function in a manner to ensure high-quality health services while recognizing basic patient rights.
- 4.2. All dental laboratories should have policies describing organizational structure, including lines of authority, responsibilities, accountability and supervision of personnel.
- 4.3. All such practices should have a laboratory head e.g. dental technician that establishes policies and is responsible for the activities of the facility and its staff.
- 4.4. Each facility shall maintain a written policy with regard to the qualifications of its head. He/she shall assure that all procedures are carried out by or under the direction of qualified, skilled and experienced licensed dental technicians.
- 4.5. Administrative policies should be implemented, so as to provide safe environment and ensure that the facility and personnel are adequate and appropriate for the services/ procedures performed.
- 4.6. All applicable regulations must be observed.

5. Roles and Responsibilities

Dental Laboratory Technology is both a science and an art. Since each dental patient's needs are different, the duties of a dental laboratory technician are comprehensive and varied. Although dental technicians seldom work directly with patients, except under the direction of a licensed dentist, they are valuable members of the dental care team. They work directly with dentists by following detailed written instructions and using impressions (moulds) of the patient's teeth or oral soft tissues to create:

- Full dentures for patients who are missing all of their teeth.
- Removable partial dentures or fixed bridges for patients who are missing only one or a few teeth.
- Crowns, which are caps for teeth that are designed to restore their original size and shape.
- Veneers that enhance the esthetics and function of the patient.
- Orthodontic appliances and splints to help straighten and protect teeth.

5.1. The dentist

- 5.1.1. Should comply with all legal responsibilities in the performance of all clinical procedures to enable the dental technician to provide the highest quality of service.
- 5.1.2. Assume the legal responsibilities in relation to the patient for both the clinical treatments and for the services accepted from the dental laboratory technician.
- 5.1.3. Provide in writing specific directions and specifications to the dental technician in respect of the services required.

5.2. The dental technician

Dental technicians work with a variety of materials including, but not restricted to:

- Waxes,
- Plastics,
- Precious and non-precious alloys,
- Stainless steel,
- Variety of porcelains and
- Composites or polymer glass combinations.

Many technicians acquire skill in the use of sophisticated instruments and equipment while performing laboratory procedures. It is important for the technician to help create tooth replacements that are both attractive and functional. Dental treatment involves collaboration between a dentist and a dental technician to provide the best possible oral healthcare to the population.

Dental technicians should:

- 5.2.1. Should accept, comprehend and follow the directions and specifications, provided by the dentist.
- 5.2.2. Liaise with the dentist in respect of alternative or new techniques and procedures.
- 5.2.3. Comply with the instructions and advice, provided by the manufacturers of materials.

5.2.4. Ensure that directions and specifications are available which permit the production of a high standard service.

5.2.5. Assume the legal responsibilities for work within the laboratory, as specified by the laws and regulations of the country.

6. Qualification requirements

6.1. All dental technicians should have appropriate valid licensure by DHA.

6.2. They should have the necessary training and skills to provide the dental laboratory services.

6.3. All personnel assisting in the service provision must be appropriately trained, qualified, supervised, and sufficient in number.

6.4. Functional responsibilities of all professionals and assisting personnel should be defined and delineated.

6.5. Policies and procedures for oversight of professionals and personnel should be in place.

7. Dental Laboratory Infection Control

7.1. Dental laboratories, including those in dental clinics and or independent, must be isolated from possible transmission of pathogens or be properly prepared to prevent cross contamination from patients and dental healthcare workers (DHCW) or to patients and other workers.

7.2. Procedures should be implemented to minimize the sources and transmission of infections and maintain a sanitary environment. A system should be in place to identify, manage, handle and dispose of hazardous materials and wastes whether solid or liquid.

7.3. The dental laboratory has responsibility to comply with and enforce all laws and regulations related to infection control. At this stage, DHA Dental Infection Control Guideline is considered as reference guideline for all dental laboratories facilities in issues related to infection control policies and procedures.

7.4. Dental laboratories must operate under strict hygiene conditions, hence would follow one of two general considerations to manage infection control options as detailed below:

Option 1: The laboratory must be regarded as an isolated area. All prostheses, impressions, and other laboratory work shall be disinfected before entering the laboratory. Any dental work leaving the laboratory must be maintained in strict hygienic conditions to be dispatched to dentists for patient use.

Option 2: The laboratory must have a receiving area to isolate, evaluate, and decontaminate all materials entering the laboratory. Any dental work leaving the laboratory must be maintained in strict hygienic conditions to be dispatched to dentists for patient use.

NOTE: Both options are effective and applicable.

- 7.5. It is important for effective communication to exist between the laboratory and the user/client concerning the requirements for:
- 7.5.1. Case submission.
 - 7.5.2. The proper steps to be taken in order to ensure proper disinfection of materials entering and leaving the laboratory.
- 7.6. Standard precautions should be observed in the dental laboratory at all times. The use of universal precautions has eliminated the need for special handling of cases from "high risk" patients. In other words, all patients are treated as though they are capable of transmitting a blood borne disease.

8. Dental Technicians and Dentists-Collaboration

- 8.1. Dental technician work directly with dentists, by following detailed written instructions and using impressions (moulds) of the patient's teeth or oral soft tissues to create:
- 8.1.1. Full dentures for patients who are missing all of their teeth.
 - 8.1.2. Removable partial dentures or fixed bridges for patients who are missing only one or a few teeth.
 - 8.1.3. Crowns, which are caps for teeth that are designed to restore their original size and shape; veneers, that enhance the aesthetics and

function of the patient and orthodontic appliances and splints to help straighten and protect teeth.

8.1.4. Fabricate dental restorations like inlays and onlays.

8.2. Accurate, effective and adequate communication between the Dental Technician and Dentist is vital for high quality end products.

9. Reporting and Data Collection Requirements

9.1. Reporting should be structured in a manner to consistently encourage a free flow of information. Reporting requirements should be consistent with relevant patient confidentiality regulations implemented in DHA.

9.2. Health Regulation Department shall develop a set of Key Performance Indicators (KPIs) which will enable it to measure the dental laboratory performance in various aspects.

9.3. Dental laboratory shall submit data consistent with e-Health guidelines and standards set by the DHA.

10. References

1. Important Information for Dental Laboratories Physically Located in Minnesota or Laboratories Doing Business with Dentists in Minnesota; <http://www.nadl.us/userfiles/files/2013%20Important%20Information%20for%20Dental%20Laboratories%20Physical.pdf>; 7th October 2013.
2. Accreditation Standards for Dental Laboratory Technology Education Programs; Commission on Dental Accreditation; http://www.ada.org/sections/educationAndCareers/pdfs/dlt_2014.pdf ; 7th October 2013.
3. Lab Technician; America Dental Association; <http://www.ada.org/357.aspx> ; 7th October 2013.
4. Guidelines on Dental Infection Prevention and Safety; Health Regulation Department; Dubai Health Authority; <http://www.dha.gov.ae/EN/SectorsDirectorates/Directorates/HealthRegulation/Medic>

[alComplaint/Documents/Dental%20Infection%20Control%20Guidelines.pdf](#); 7th

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5. The Dental Laboratory; <http://www.den-lab.com/TheDentalLaboratory.pdf> ; 7th

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6. National Board for Certification in Dental Laboratory Technology; CDL handbook and application; <http://www.nbccert.org/cdl/CDLApplication.pdf>; 7th October 2013.

7. World at work: Dental laboratory technicians; N. Torbica and S Krstey; Occupational and Environmental Medicine; US National Library of Medicine;

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2078071/> 7th October 2013.

Appendix 1

Vaccine	Indications	Dose Schedule
HEPATITIS B recombinant vaccine	3-dose schedule, IM in the deltoid 2 nd dose given 1 month after 1 st dose 3 rd dose given 4months	Workers at risk of exposure to blood and body fluids
INFLUENZA vaccine (inactivated)	Annual single-dose vaccination, IM, with current vaccine	Workers who have contact with patients at high risk or working in chronic-care facilities; workers age 50 or over or who have high risk medical conditions
MEASLES live-virus vaccine	1 dose SC; 2 nd dose at least 4weeks later.	Workers born during or after 1957 without documentation of (1)receipt of two doses of live vaccine on or after their first birthday, (2)physician-diagnosed measles or (3) laboratory evidence of immunity. Vaccine should also be considered for all workers, including those born before 1957, who have no proof of immunity.
MUMPS live-virus vaccine	1 dose SC; no booster	Workers believed to be susceptible can be vaccinated; adults born before 1957 can be considered immune.
RUBELLA live- virus vaccine	1dose SC; no booster	Male female workers who lack documentation of receipt of live vaccine on or after their first birthday or who lack laboratory evidence of immunity. Adults born before 1957 can be considered immune, except women of child bearing age.
VARICELLA-ZOSTER live-virus vaccine	Two 0.5mL doses SC; 4-8 wks if age 13 or older.	Workers without reliable history of varicella or laboratory evidence of varicella immunity.