

NATIONAL PROFESSIONAL DENTAL HEALTH SERVICES STANDARD



**Department of Medical Services
Ministry of Health
Thimphu
2007**

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Acknowledgement

The DMS and Ministry of Health would like to acknowledge the dedication and contribution of the following Health official for drafting this National Dental Health Facilities and Service Standards.

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Introduction

Although health care is becoming increasingly more complex, including that of dental health, for the policy makers and service providers, the agony is over how to provide equitable and universal health care. With the future political and policy shift, some health practitioners will view the license to practice as a right rather than the privilege to enhance the condition. For the actual and potential patients the situation must be clear as to what type of health care services should be provided by different types of health care providers and different health facilities. As the mouth is a window into the health of the body, dental services has taken a lead in setting national dental health services standards at different levels of health facility.

Mission of Dental Health Services in Bhutan and Objectives

Dental care is the most prevalent and yet unmet health care need of Bhutanese people at large and general public in particular. The mission of dental health services in Bhutan is to respond to unmet needs, improve oral health promotion, and update dental professionals' knowledge about public health and social determinants of health outcomes. To recognize the scope of contemporary dental education and possibility of expanding the dentistry's primary care functions to meet the public health needs in the un-reached areas, and the potential for dental care providers' role in responding to bio-terrorism, role of dentistry in enhancement of human conditions must be understood by all and endorsed. As a member of the "healing" profession the main objectives for dental services in Bhutan are mainly

- To improve quality of dental services in country by manning all district hospitals with dental surgeons and dental auxiliaries and equipping all dental units conforming to latest technology
- To improve coverage of dental services upto BHU-I level to reduce incidences of oral diseases and improve quality of life
- Periodic up-gradation of professional skills through trainings, seminars, conferences and CDE, held within and outside country in line with BMHC rules and regulations for renewal of registration.

- To enhance career ladder of dental surgeons and dental auxiliaries in line with qualification and experience.
- Initiation of conducting Annual Dental Conferences
- To promote and strengthen preventive oral health program
- To strengthen research activity in oral health related field
- To strengthen Community, Religious and School Oral Health Program
- To re-affirm and widen the scope of cost sharing for financial sustainability through privatizing secondary and tertiary dental services
- To form Dental Association of Bhutan, formulate Dental Act and Regulation and form Dental Council of Bhutan
- To create National Dental Hospital headed by Director of Dental Services and to set up Royal Dental College of Bhutan

Dental Professional Services Career Enhancement

Field of dentistry has been playing a very important role in improving the quality of life across all ages. Oral diseases account for one of the top ten morbidities. Practice of dentistry needs sound knowledge of science, high level of hand dexterity, and very good sense of aesthetics. Nature of work of dentist is very stressful manually and mentally as all vital structures are in the head and neck region, highly exposed to infectious diseases as they are in direct contact with blood and saliva (gloves provide very little protection as during instrumentation the gloves are torn either by instruments or sharp, broken teeth). Besides, dental surgeons and dental auxiliaries are exposed to numerous other health hazards like radiation hazards (all dental x-rays are exposed and developed within the dental department), laboratory metal and oxide dusts (risk of silicosis), acrylic monomer fumes, mercury vapour and acrylic dust from dentures.

Subjects/syllabus covered in under graduate course of BDS include both medical and dental topics taught during first 3 years of training, as under:

- General Anatomy and Embryology
- Dental Anatomy
- Dental Materials Science
- General Physiology

- Oral Physiology
- General Pathology
- Oral Pathology
- Microbiology
- Clinical Pathology
- Biochemistry
- General surgery
- Oral surgery
- Oral Radiology
- General Medicine
- General Pharmacology
- General and Local Anaesthesia
- Oral Medicine and Pharmacology
- Social and Preventive Medicine/Social and Preventive Dentistry

Dental subjects taught during the last two years (4th & 5th Yr) include

- Paedodontics
- Periodontics
- Prosthodontics
- Orthodontics
- Restorative Dentistry
- Endodontics
- Forensic Odontology
- Geriatric Dentistry

Courses in pathology and microbiology give an initial grounding in disease processes, while a good working knowledge of medicine, surgery, anaesthesia and pharmacology is important to a practicing dental student. All the classes and examinations on medical subjects are conducted with the MBBS students. Dental students are also required to sit for papers on dental subjects besides general medical subjects.

Advances in dentistry alongside medical sciences have seen leaps and bounds, making its contribution to medical science for the ultimate benefit of the patients.

Discovery and use of general anaesthesia by a dentist is just one example. There are atleast 14 branches of dentistry, namely,

- Oral medicine
- Oral Pathology
- Oral Radiology and Diagnosis
- Oral and Maxillofacial Surgery
- Prosthodontics
- Orthodontics
- Paedodontics
- Periodontics
- Community and Preventive Dentistry
- Conservative and Operative Dentistry
- Endodontics
- Geriatric Dentistry
- Maxillofacial Prosthesis Dentistry
- Forensic Odontology

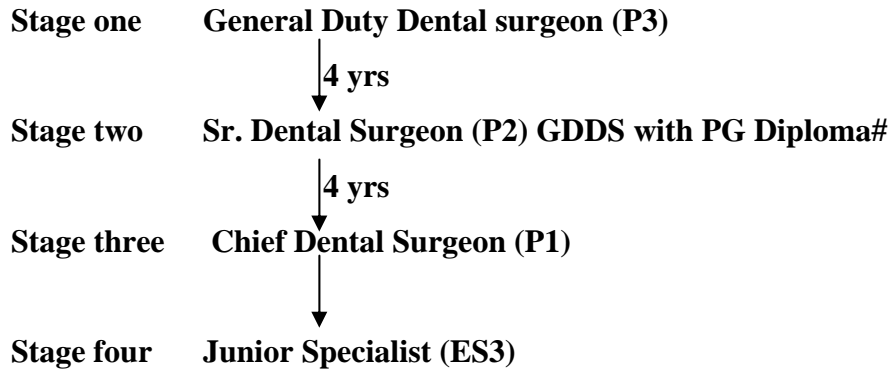
Today, dentistry is into tissue engineering, stem-cell culture, implants, application of distraction osteogenesis in craniofacial anomalies, and is at its latest and highest technological know-how in treatment planning and service delivery. So it is not just drilling, filling and pulling out of 32 teeth as most people understand, sadly, even by our MBBS colleagues.

The minimum duration of training for BDS/DDS is 5 yrs plus 1 year of internship, entry qualification shall be 12+ formal schooling with Science from the institute recognized by BMHC.

For the master degree courses such as MDS/MDS_c/MSc/Mdent/MD the minimum duration is 3 years.

Based on both duration of training and nature of work, and the amount of work load, the career ladder for dentist and dental specialists are proposed as under:

1. BDS/DDS Career Ladder



#Specialization in any speciality of dentistry.

BDS candidate **without** PG Diploma will be at the level of (P1) as the last level with number of years of services. BDS with PG Diploma **without** any year of service will enter at the P2 level and will move up to Es3 as career ladder. BDS with PG Diploma and **with** minimum of 2 years of services after probation period will be at the P1 level and will move up the career ladder to ES 3. This group of people will move to ES 2 only with master degree.

A. Generic job description of dental surgeon:

Job Description for: *Dentists, General*

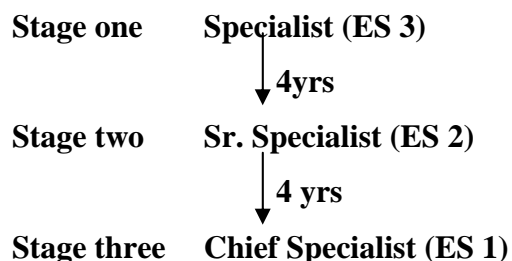
Diagnose and treat diseases, injuries, and malformations of teeth and gums and related oral structures. They may treat diseases of nerve, pulp, and other dental tissues affecting vitality of teeth.

Job Tasks for: *Dentist Surgeon, General*

- * Administer anesthetics to limit the amount of pain experienced by patients during procedures.
- * Advise and instruct patients regarding preventive dental care, the causes and treatment of dental problems, and oral health care services.
- * Analyze and evaluate dental needs to determine changes and trends in patterns of dental disease.
- * Apply fluoride and sealants to teeth.
- * Bleach, clean or polish teeth to restore natural color.

- * Design, make, and fit prosthodontic appliances such as space maintainers, bridges, and dentures, or write fabrication instructions or prescriptions for denturists and dental technicians.
- * Diagnose and treat diseases, injuries, and malformations of teeth, gums and related oral structures, and provide preventive and corrective services.
- * Eliminate irritating margins of fillings and correct occlusions, using dental instruments.
- * Examine teeth, gums, and related tissues, using dental instruments, x-rays, and other diagnostic equipment, to evaluate dental health, diagnose diseases or abnormalities, and plan appropriate treatments.
- * Fill pulp chamber and canal with endodontic materials.
- * Formulate plan of treatment for patient's teeth and mouth tissue.
- * Manage business, employing and supervising staff and handling paperwork and insurance claims.
- * Perform oral and periodontal surgery on the jaw or mouth.
- * Remove diseased tissue using surgical instruments.
- * Treat exposure of dental pulp by pulp-capping, removal of pulp from pulp chamber, or root canal, using dental instruments.
- * Plan, organize, and maintain dental health programs.
- * Produce and evaluate dental health educational materials.
- * Write prescriptions for antibiotics and other medications.
- * Use air turbine and hand instruments, dental appliances and surgical implements.
- * Demonstrate and use masks, gloves and safety glasses to protect themselves and their patients from infectious diseases.

3. MDS/MSc/MD/MDSc Career Ladder



BDS with Specialization (master degree) and without any year of service will be placed in P1. Those candidates who continue with **super-specialization** directly after obtaining master degree shall enter in ES 2.

Generic job description of various dental specialities is mentioned under with brief explanation of nature of work each specialty deals with.

Oral and Maxillofacial Surgeon

The entry qualification for this specialty shall be BDS with minimum of two years in service.

This branch of dental practice deals with the diagnosis and surgical treatment of any disease, injury, malformation, or deficiency of the jaws or associated structures. An important aspect of oral surgery is the removal of teeth, which may be complicated by their location, peculiar formation, or attachment to the jawbone. Teeth that are embedded in the jawbone or soft tissue are said to be impacted. In such cases the surrounding bone or tissue may have to be removed in order to reach the tooth. Oral surgery also includes the removal of cysts and growths in the jaws and mouth, the setting of fractures of the jaws, and operations for the correction of cleft palate and harelip.

Job Description for: *Oral and Maxillofacial Surgeons*

Perform surgery on mouth, jaws, and related head and neck structure to execute difficult and multiple extractions of teeth, to remove tumors and other abnormal growths, to correct abnormal jaw relations by mandibular or maxillary revision, to prepare mouth for insertion of dental prosthesis, or to treat fractured jaws.

Job Tasks for: Oral and Maxillofacial Surgeons

- * Administer local anaesthetics.
- * Collaborate with other professionals such as restorative dentists and orthodontists in order to plan treatment.
- * Perform surgery on the mouth and jaws in order to treat conditions such as cleft lip and palate and jaw growth problems.

- * Perform surgery to prepare the mouth for dental implants, and to aid in the regeneration of deficient bone and gum tissues.
- * Provide emergency treatment of facial injuries including facial lacerations, intra-oral lacerations, and fractured facial bones.
- * Remove impacted, damaged, and non-restorable teeth.
- * Remove tumors and other abnormal growths of the oral and facial regions, using surgical instruments.
- * Restore form and function by moving skin, bone, nerves, and other tissues from other parts of the body in order to reconstruct the jaws and face.
- * Evaluate the position of the wisdom teeth in order to determine whether problems exist currently or might occur in the future.
- * Perform minor cosmetic procedures such as chin and cheek-bone enhancements, and minor facial rejuvenation procedures including the use of Botox and laser technology.
- * Treat infections of the oral cavity, salivary glands, jaws, and neck.
- * Treat problems affecting the oral mucosa such as mouth ulcers and infections.

Orthodontics

The entry qualification for this specialty shall be BDS with minimum of two years in service. This division of dentistry deals with the correction of badly aligned and protruding teeth. If your child has habits like thumb sucking etc. or even a cut in the mouth (Cleft Palate or Lip) or projecting lower jaw this specialist will be able to guide and help the affected person. It deals with the detection, study, prevention, and correction of the condition known as malocclusion, which involves irregularities in tooth position and jaw relationships and which can lead to deformities of the jaws and face. Malocclusion may be hereditary or may be an acquired defect caused by faulty habits or early loss of teeth as a result of decay. By applying special devices and appliances to the teeth, sometimes in combination with surgery, a proper occlusion of the teeth can be effected by the orthodontist.

Job Description for: *Orthodontists*

Examine, diagnose, and treat dental malocclusions and oral cavity anomalies. Design and fabricate appliances to realign teeth and jaws to produce and maintain normal function and to improve appearance.

Job Tasks for: Orthodontists

- * Adjust dental appliances periodically in order to produce and maintain normal function.
- * Coordinate orthodontic services with other dental and medical services.
- * Design and fabricate appliances, such as space maintainers, retainers, and labial and lingual arch wires.
- * Diagnose teeth and jaw or other dental-facial abnormalities.
- * Examine patients in order to assess abnormalities of jaw development, tooth position, and other dental-facial structures.
- * Fit dental appliances in patients' mouths in order to alter the position and relationship of teeth and jaws, and to realign teeth.
- * Prepare diagnostic and treatment records.
- * Provide patients with proposed treatment plans and cost estimates.
- * Study diagnostic records such as medical/dental histories, plaster models of the teeth, photos of a patient's face and teeth, and X-rays in order to develop patient treatment plans.
- * Instruct dental officers and technical assistants in orthodontic procedures and techniques.

Prosthodontics

The entry qualification for this specialty shall be BDS with minimum of two years in service.

These specialists deal with the various methods of providing artificial substitutes, or dentures, for missing teeth, the replacement of which ensures the even distribution of the forces involved in chewing and thus prevents the loss of other teeth as a result of undue stress. The nature of the replacement depends on the health of the remaining teeth and supporting structures. If feasible, a fixed bridge is used to replace missing teeth. This type

of replacement is accomplished by constructing crowns, which cover all or a large part of the adjacent teeth, and then by attaching the artificial teeth to the crowns. A fixed bridge made of gold covered with porcelain or acrylic (a plastic material) is lifelike and cannot be readily removed. If sufficient adjacent teeth do not remain to support a fixed bridge, then a removable partial denture is constructed. This type of prosthetic device is usually secured by clasps, which embrace several of the remaining teeth. The clasps may be made of gold or of a cobalt-steel alloy. This type of appliance must be removed frequently to be cleaned. When all teeth must be replaced, a full denture is made. The retention of this type of denture depends on the firmness of the underlying tissues and the adhesion provided by the saliva in the mouth. Full dentures are usually made of acrylic, reinforced occasionally with metal. Prosthodontists also replace portions of the oral cavity that are missing because of malformations or deficiencies.

Another surgical approach to tooth replacement is the dental implant, which can take a number of forms. Screws may be drilled into the jawbone to serve as anchors for caps, a metal blade may be fixed to the bone and teeth can then be cemented to posts on the blade, or a metal frame may be placed below the gum for tooth support when the bone itself is too fragile. A full set of teeth may be implanted by such means. These expensive processes are not favored by all dentists, but a growing number of patients are choosing implant surgery. Implantology is now fast developing into a field by itself.

Job Description for: *Prosthodontists*

Construct oral prostheses to replace missing teeth and other oral structures to correct natural and acquired deformation of mouth and jaws, to restore and maintain oral function, such as chewing and speaking, and to improve appearance.

Job Tasks for: Prosthodontists

- * Collaborate with general dentists, specialists, and other health professionals in order to develop solutions to dental and oral health concerns.
- * Design and fabricate dental prostheses, or supervise dental technicians and laboratory bench workers who construct the devices.
- * Fit prostheses to patients, making any necessary adjustments and modifications.

- * Measure and take impressions of patients' jaws and teeth in order to determine the shape and size of dental prostheses, using face bows, dental articulators, recording devices, and other materials.
- * Replace missing teeth and associated oral structures with permanent fixtures, such as crowns and bridges, or removable fixtures, such as dentures.
- * Restore function and aesthetics to traumatic injury victims, or to individuals with diseases or birth defects.
- * Bleach discolored teeth in order to brighten and whiten them.
- * Place veneers onto teeth in order to conceal defects.
- * Repair, reline, and/or rebase dentures.
- * Treat facial pain and jaw joint problems.
- * Use bonding technology on the surface of the teeth in order to change tooth shape or to close gaps.

Generic job description for rest of the specialists will be given as these groups of specialists join the service

Periodontics

The entry qualification for this specialty shall be BDS with minimum of two years in service.

Gum disease is the major cause of tooth loss in the thirties. Over 90% people suffer from it in India. And now it has been shown that people having gum disease are at higher risk of getting heart problems. This branch of dentistry is concerned with the study and treatment of the supporting structures and tissues surrounding the teeth. The gums, or gingivae, and the underlying bone are subject to many disorders. Calculus encrustations on the teeth, which form over and under the gum, act as an irritant to the underlying tissues. Food accumulating on the neck of the tooth and irregularities such as cavities, malocclusions, or poorly constructed dental appliances also act as irritants. In addition, imbalance of tooth-cusp relationships may force food particles into the gums. When subjected to irritants, such soft tissues as the gingivae become inflamed, and eventually the adjacent bone may be destroyed. Thus, the tooth ultimately becomes loosened because of the loss of bone around its roots.

Inflammation of the gum is called gingivitis, and infections destroying the gum tissue and bone are called periodontitis. Although gum diseases are the greatest single cause of tooth loss after the age of 21, these conditions also occur in children. Another common gum disorder is necrotizing ulcerative gingivitis, known commonly as trench mouth, or Vincent's infection. When untreated, it destroys the interdental papillae (small protuberances) of the teeth and causes loosening of the teeth; it is often associated with widespread infection. Other common diseases of the mouth include thrush and viral infections.

Periodontal treatment includes the removal of calculus with curettes (tools for scraping) and scalers and the application of medicines to the soft tissues. Loosened teeth may be splinted together for support during the healing process; infected or necrotized gum tissue is excised; and malocclusions are corrected by grinding the teeth to obtain effective occlusal relationships.

Endodontics

The entry qualification for this specialty shall be BDS with minimum of two years in service.

This division deals with surgical and therapeutic procedures involved in the protection of the pulp (commonly known as the nerve) or its removal from the pulp cavity when diseased or injured, and root canals. Bleaching of front teeth is also included in this specialty. The treatment commonly done by these specialists is known as Root Canal Therapy.

Pediatric Dentistry

The entry qualification for this specialty shall be BDS with minimum of two years in service.

Children have milk teeth and have special problems and thus special people take care of children known as Pedodontist or pediatric dentist. The field of pediatric dentistry (formerly called pedodontics) deals with the general practice of dentistry for patients under 12 years of age and, in general, patients possessing wholly deciduous or mixed dentition-that is, both primary and permanent teeth. Such practice may include the use of

such appliances as space maintainers and bite plates for the prevention or treatment of malocclusion. Another pediatric procedure sometimes practiced is to apply a sealant to protect the chewing surfaces of a child's molars from bacteria. The teeth are first treated with a solution to make them more porous to the plastic resin that is then applied, making them more resistant to decay.

Oral Pathology

The entry qualification for this specialty shall be BDS with minimum of two years in service.

This field is concerned with the nature of oral disease, its causes, processes, and effects, together with the alterations of function and structure. Diagnosis of oral disease is accomplished through the use of laboratory tests of sputum, blood, and other body fluids, as well as through the microscopic examination of tissues. The oral pathologist, who usually works in the laboratory of a hospital, serves the patient only indirectly through consultation with the general practitioner.

Public Health Dentistry

The entry qualification for this specialty shall be BDS with minimum of two years in service.

This field is concerned with the prevention and control of dental diseases and the promotion of dental health through organized community efforts. It relates to three basic career areas in dentistry: dental public health, research, and clinical dentistry. Each of these career areas may involve practice, teaching, or administration.

Forensic Odontology

The entry qualification for this specialty shall be BDS with minimum of two years in service.

These specialist help in the forensic investigation by identifying the victims by help of teeth and associated structures.

Oral and Maxillofacial Radiology

The entry qualification for this specialty shall be BDS with minimum of two years in service. These specialists specialize in taking all kinds of x-rays and their interpretation.

Esthetic Dentistry

The entry qualification for this specialty shall be BDS with minimum of two years in service. Because of increasing awareness and demand for dental treatment for cosmetic reason, this field of dentistry is also gradually gaining importance.

Oral diseases account for one of the top ten morbidities. To address this grave situation country needs not only qualified doctors but also requires properly trained and highly skilled and motivated group of dental auxiliaries. As dentistry is both an art and science, dental auxiliaries require sound knowledge of dental science, high level of hand dexterity, and very good sense of aesthetics.

Dental Auxiliaries

Dental technicians and dental hygienists play a very vital role in delivering curative as well as preventive dental services at the grass root level. They are also responsible for carrying out Oral Health Programs in schools and communities. Besides being trained in dealing with dental problems, the technicians and hygienists are also trained in delivering first aid and treating minor medical problems.

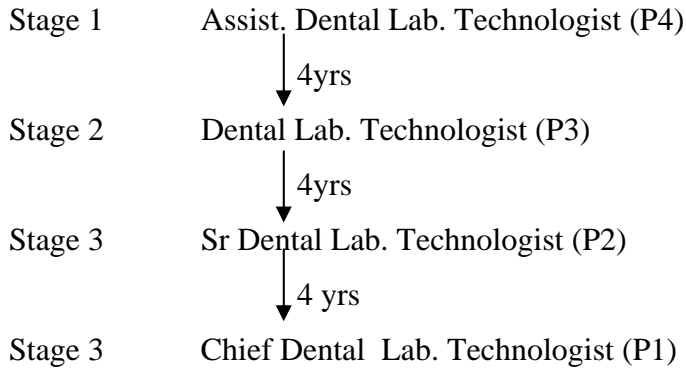
The nature of work and the work environment carries risks ranging from deadly infectious diseases to occupational hazards like exposure to metal oxides, mercury vapor, monomer fumes and x-ray radiation. It may be mentioned here that the hygienists and technicians operate the dental x-rays without having to send the patients to x-ray department.

The duration of training for technicians and hygienists involve 2 years of training in Royal Institute of Health Sciences and one year of attachment posting at JDWNRH before they are appointed as technicians and hygienists and posted out.

*The Career Ladder for Dental Technologists, Technicians, Therapist, Hygienists and
Dental Assistants*

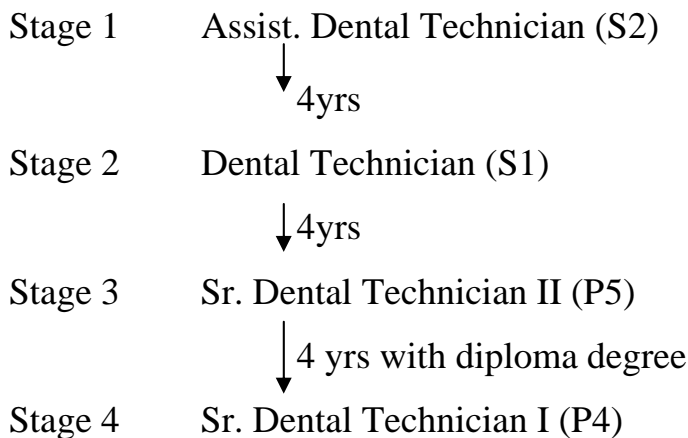
Dental Technologist

Entry qualification: Class 12 with science background; Bachelor Degree in Dental Technology (12 + in science and 3 yrs from the institute recognized by BMHC)



Technician Career Ladder (Certificate)

Entry qualification: 12+ in science and 2 years training in RHIS



Diploma Technologist (>6 Months)

Assist. Dental Technologist (P4)

Generic job description:

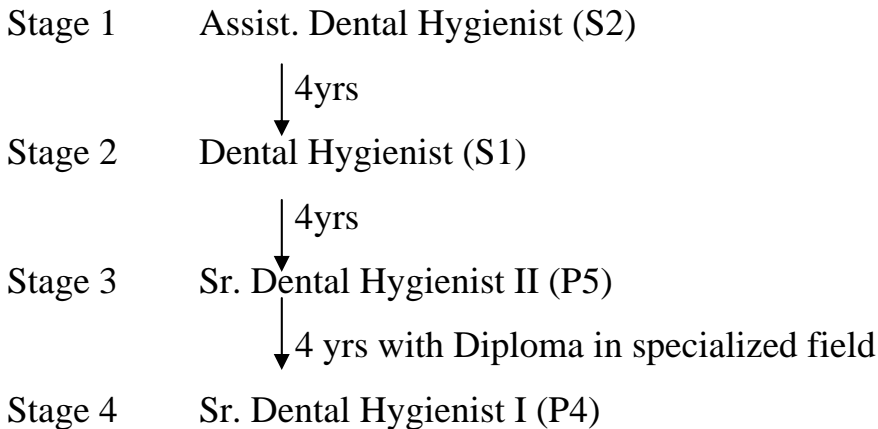
Job Tasks for: Dental Laboratory Technicians and technologists

- * Apply porcelain paste or wax over prosthesis frameworks or setups, using brushes and spatulas.
- * Build and shape wax teeth, using small hand instruments and information from observations or dentists' specifications.
- * Fabricate, alter, and repair dental devices such as dentures, crowns, bridges, inlays, and appliances for straightening teeth.
- * Fill chipped or low spots in surfaces of devices, using acrylic resins.
- * Load newly constructed teeth into porcelain furnaces in order to bake the porcelain onto the metal framework.
- * Melt metals or mix plaster, porcelain, or acrylic pastes; and pour materials into molds or over frameworks in order to form dental prostheses or apparatus.
- * Mold wax over denture set-ups in order to form the full contours of artificial gums.
- * Place tooth models on apparatus that mimics bite and movement of patient's jaw to evaluate functionality of model.
- * Prepare metal surfaces for bonding with porcelain to create artificial teeth, using small hand tools.
- * Read prescriptions or specifications, and examine models and impressions, in order to determine the design of dental products to be constructed.
- * Rebuild or replace linings, wire sections, and missing teeth in order to repair dentures.
- * Remove excess metal or porcelain, and polish surfaces of prostheses or frameworks, using polishing machines.
- * Shape and solder wire and metal frames or bands for dental products, using soldering irons and hand tools.
- * Test appliances for conformance to specifications and accuracy of occlusion, using articulators and micrometers.
- * Create a model of patient's mouth by pouring plaster into a dental impression and allowing plaster to set.
- * Prepare wax bite-blocks and impression trays for use.

- * Train and supervise other dental technicians or dental laboratory bench workers.

Career Ladder for Dental Hygienist

Entry qualification: 10 passed and 2 years training in RIHS



Job Description for: *Dental Hygienists*

Clean teeth and examine oral areas, head, and neck for signs of oral disease. They educate patients on oral hygiene, take and develop X-rays, or apply fluoride or sealants, visit schools and communities.

Job Tasks for: Dental Hygienists

- * Clean calculus deposits, accretions, and stains from teeth and beneath margins of gums, using dental instruments.
- * Feel and visually examine gums for sores and signs of disease.
- * Chart conditions of decay and disease for diagnosis and treatment by dentist.
- * Feel lymph nodes under patient's chin to detect swelling or tenderness that could indicate presence of oral cancer.
- * Apply fluorides and other cavity preventing agents to arrest dental decay.
- * Examine gums, using probes, to locate periodontal recessed gums and signs of gum disease.
- * Expose and develop x-ray film (IOPA, OPG and Lateral Cephalogram)
- * Provide clinical services and health education to improve and maintain oral health of school children

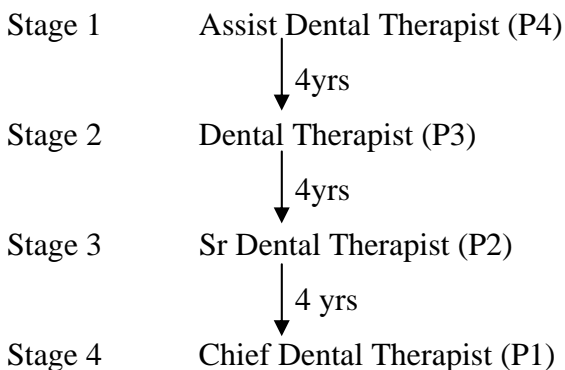
- * Remove excess cement from coronal surfaces of teeth.
- * Conduct dental health clinics for community groups to augment services of dentist.
- * Remove sutures and dressings.
- * Place and remove rubber dams, matrices, and temporary restorations.

Diploma (>6months)

Stage: Assist Dental Therapist (P4)

Career Ladder for Dental Therapist

Bachelor Degree (12 passed with science and 3 years of training in an institute recognized by BMHC).



THE JOB

A registered dentist must examine the patient and indicate clearly in writing the course of treatment that the dental therapist needs to carry out.

Like the dental hygienist, the dental therapist has an important role in promoting dental health. They will treat adult and children. The dental therapists will be able to work in all sectors of dentistry including general dental practice.

A dental therapist will be allowed carry out a range of procedures, including:

- intra and extra oral assessment
- scaling and polishing
- applying materials to teeth such as fluoride and fissure sealants

- taking radiographs
- providing dental health education on a one to one basis or in group situation
- undertaking routine restorations in both deciduous and permanent teeth, on adults and children
- using all materials except pre cast or pinned placement
- extracting deciduous teeth under local infiltration analgesia

Provided that they have completed appropriate training, dental therapist can, perform such extended duties as the following:

- undertaking the pulp therapy treatment of deciduous teeth
- placing pre formed crowns on deciduous teeth
- administering inferior dental nerve block analgesia under the supervision of a dentist
- providing emergency temporary replacement of crowns and fillings
- treating patients under conscious sedation provided the dentist remains in the surgery throughout the treatment

The dental therapist may treat wide range of high treatment needs patients, from those who:

- are dentally anxious
- are medically compromised
- are physically disabled
- have learning disabilities
- have high level of untreated decay
- are unable to access regular dental care in the general dental service

Career Ladder for Dental Assistants

Entry qualification: Standard 10 pass and with six months on the job in-service training.

They are non-operating auxiliaries who assist the dentists, the dental hygienists, dental therapists in treating patients and who are not trained to treat patients independently. But with extensive exposure to operating procedures and commensurate with qualification, they can be upgraded to dental hygienist after proper in-service training.

- **Stage 1: Jr. Dental Assistant (S4)**
4 years
- **Stage 2: Dental Assistant (S3)**
4 years
- **Stage 3: Sr. Dental Assistant (S2)**

Job Tasks for: Dental Assistants

- * Prepare patient, sterilize and disinfect instruments, set up instrument trays, prepare materials, and assist dentist during dental procedures.
- * Expose dental diagnostic x-rays.
- * Record treatment information in patient records.
- * Take and record medical and dental histories and vital signs of patients.
- * Provide postoperative instructions prescribed by dentist.
- * Assist dentist in management of medical and dental emergencies.
- * Pour, trim, and polish study casts.
- * Instruct patients in oral hygiene and plaque control programs.
- * Make preliminary impressions for study casts and occlusal registrations for mounting study casts.
- * Clean and polish removable appliances.
- * Clean teeth, using dental instruments.
- * Apply protective coating of fluoride to teeth.
- * Fabricate temporary restorations and custom impressions from preliminary impressions.
- * Schedule appointments, prepare bills and receive payment for dental services, and maintain records, manually or using computer.

Dental Health Services Standard at the Health Facility

Dental services in Bhutan are confined mainly to hospitals, and the types of services rendered are mainly curative. Given the potential link between oral and systemic diseases, prevention is an important step in oral health care.

1. BHUs
2. DISTRICT HOSPITALS
3. REGIONAL REFERRAL HOSPITALS
4. NATIONAL REFERRAL HOSPITAL (NATIONAL TEACHING DENTAL HOSPITAL)

Existing services at BHU-I: at present no dental services at BHU level but covered by nearest district hospital.

A. Dental Health Services Standard I (BHU-I) Proposed.

- * Silver Amalgams (for molar/premolar teeth)
- * Small Composite Resin/G.I. Restorations
- * Simple Extractions (due to decay, injury or fracture)
- * Re-cementing of Crowns (caps), inlays or bridges
- * Bleaching (in office and take home)
- * Oral Hygiene Instructions
- * Sealants to prevent decay
- * Fluoride Treatments to prevent decay and reduce sensitivity
- * Limited Treatment of Early (to Moderate) Periodontal Disease (referral for more advanced needs)
- * Bleaching Gel, Topical Fluoride Gel & other preventative aids
- * Routine and Urgent; with temporary pain relief or palliative treatment

HRD: Dental Therapist and Dental Assistant (1+1)

HRD existing nil

B. Dental Health Services Standard II (DH: A +B) Proposed and Existing

- * All extractions, manual and surgical
- * Surgical extractions/removal of impactions
- * Minor Oral surgery
- * Removable appliances
- * Dental X-rays, routine and as needed for specific diagnosis
- * Full mouth surveys (x-rays)
- * Periodontal Examinations/Evaluations

- * Composite Resins (tooth colored)
- * Single Crowns: Limited Fixed Bridges
- * Panoramic X-rays (to aid in TMJ & wisdom teeth evaluation)
- * Cosmetic Bonding
- * Initiate root canal treatment to relieve pain/swelling
- * Splints ("night guards")

***HRD: Dental Surgeon + Dental Hygienist + Dental Technician + Dental Assistant
(1+2+2+2)***

HRD: Existing Dental Surgeons and Technicians in DH, most DH run by Dental Hygienists.

C. Dental Health Services Standard III (RRH: A+B+C). Existing (A+B) and proposed C.

- * Root Canal Treatment
- * Advanced Periodontal Treatment, grafts
- * Orthodontics ("Braces")
- * Difficult TMD (TMJ) Problems and/or more specialized splints
- * Crown and Bridgework, Cosmetic Porcelain Veneers,
- * Fixed denture
- * Implants
- * Advanced diagnosis of oral lesions
- * Advance Oral Surgery
- * Interdisciplinary patient management

HRD: Dental Surgeon +Dental Specialists + Hygienists + Dental Technicians + Dental Assistant s+ support staff (2+1+3+3+3+2)

HRD: Dental Surgeon, Hygienist and Dental Technician

D. Dental Health Services Standard IV: (NRH: A+B+C+D)

- * Audio-visual production on Oral Hygiene, Brushing & Flossing & Periodontal Disease

- * Conduct in-country courses for Technicians, Hygienists, Therapists and other Dental Auxiliaries
- * Train paramedical staff on basic Oral Health and Hygiene
- * Train teachers on basic oral health care and management of dental emergencies through school health program
- * Conduct Dental Health Camps
- * Conduct Cleft camps for
- * Planning and executing health policies

HRD: Dental Surgeon + Dental Specialists + Therapists + Dental Hygienists + Dental Technologists + Dental Technicians + Dental Assistants + support staff (4+5+5+6+6+10+10+5)

HRD: Existing Dental Surgeons + Dental Specialists - few, + Dental Hygienists + Dental Technicians + Dental Assistants + Support staff (1+3+8+8+0+3)

Dental services to BHU-II will be rendered from BHU-I and DH. While Health Assistants in the past were taught some basic dental procedures, present group of Health Assistants are not taught any dental procedures. Health Assistants in BHU-II, however, can prescribe medicines and refer the dental patients to the nearest BHU-I or District Hospital.

DENTAL HEALTH SERVICES PRIVATE PRACTICE PROPOSAL

A. Justifications for Privatization:

- i. **Increasing demand and Pressure:** There is an increasing demand by many patients for more sophisticated services as well as treatments at their most convenient times. As of today, there are no alternative dental care services in the country. Hence many patients are going outside the country to avail such services. Such demand is likely to be transferred outside the country along with hard currency. It is in view of increasing awareness among the patients regarding availability of various services.

- ii. **Alternative Service:** Private clinics could provide an Alternative service centers for those who can afford and receive services at their own convenient times.
- iii. **Sharing of Patient load:** Patient load at the Government hospitals would be shared by private clinics, improving the patient-doctor ratio.
- iv. **Better care:** Better care can be rendered at both public and private centers, as the load would be shared.
- v. **Patient satisfaction:** rendering better services from both centers, which will be in line with the Royal Government's policy of "Gross National Happiness", can enhance Pt satisfaction and happiness. Equal care to pts of all levels of society can be reached to their satisfaction.
- vi. **Value of Services and Cost sharing:** the people would better appreciate Values of both free and paid services and contribute to cost sharing of the services available at their disposal.
- vii. **Peoples' Participation:** People would be directly involved in cost sharing of modern, more costly services.
- viii. **Quality of Service:** Quality of services rendered at different private clinics and also at the public centers would be initiated, benefiting the patients' safety and increased quality of treatment.
- ix. **Healthy Competition:** There would be professional competition in rendering the best possible services from clinic to clinic and also at the Government centres.
- x. **Sustainability of Advanced Dental Services:** The burden of financing the free dental services presently at the public centers would be shared by the private centers, thus sharing the economic burden in providing advanced and complex dental health services, the demand of which are increasing. Multiple choices of the treatment modalities and advanced treatments can be at the same time reached to the people in demand.
- xi. **Employment Avenue:** Creation of Employment centers for Bhutanese people: With the privatization, an opportunity of employment would be open to both the skilled and unskilled human resources.

- xii. **Revenue for the Royal Government:** A new avenue for contribution to the Government exchequer would be opened that would benefit the country, however small it may be though.
- xiii. **No need for patients to travel outside the country:** The services in demand could be introduced within the country and therefore, it would be convenient to every one to avail such services. They need not travel outside and spend extra expenditure on travel in addition to the treatments per se.
- xiv. **Option:** It would open up options for both the patients at large and the dentists to either opt for private practice after meeting requirements or to continue in the Government health centers.
- xv. **Professional satisfaction:** Privatization would also enhance professional satisfaction to dentists and enhance their skills, with supervision mechanisms from the Dental council/medical council in place.
- xvi. **Prevent brain drain of Professionals:** After retirement, the experienced professionals can still continue to render services through private centers to the people of his/her own country rather than looking to go elsewhere. Without the presence of privatization, every retired professional would be forced to leave the country for better employment elsewhere outside the country, thus creating a brain drain and bigger gap in realizing and reaching dental services to all sections of the society in the country.
- xvii. **Accountability in health care practices and outcomes by the practicing dentist**

B. Requirements of Right to Practice:

- i. **Qualifications:** Minimum qualification of BDS/DDS (Bachelor of Dental Surgery/ Doctor of Dental surgery) or above from recognized universities has to be obtained.
- ii. **Nationality of Practitioners:** Only Bhutanese national Dentists should be permitted to practice and given the license. Allowing foreign practitioners would defeat the very purpose of national employments and preventing hard currency outflow. Also, there is no established Dental Council at the moment to counter at times of any untoward circumstances.

- iii. **Experience of Practitioners:** A minimum of ten yrs working experience (excluding internships/probation) under Government centers or any recognized institutions would be required to maintain a High level of standard and Quality services at the private clinic level.

This will also help the Government to continue providing services to the most remote and rural communities as the freshly passed out candidates are needed to contribute their services to the people and the Royal Government rather than going straight into private practices without much experiences and compromise the quality of services.

After completion of 7 years of government service the option should be left open for the dentist to continue either in Government service or opt for private practice.

- iv. **Registered under Dental/Medical Council:** All practitioners have to be registered under the country's dental/medical council prior to obtaining license. Only registered practitioners should be allowed to practice in view of quality and standard level of service.

C. Standardization:

- i. **Equipments:** Safe and Standard available equipments, or as per the

Standard set in Dental/Medical Council has to be met by all private Centers/Clinics

- ii. **Ethical Issues:** Practice has to be within the permitted ethical practice and as per Guidance from the dental/medical council;

Issues to be addressed to improve safety and quality, identifying six precepts for health care in the future, namely, that the health care system must be: safe, effective, patient-centered, timely, efficient, and equitable

- iii. **Control of Cross Infection:** All centers should follow specific guidelines of Universal precautions to minimize cross infections in the clinics. The use of disposables, wherever possible, must be encouraged as the cost would be born by the beneficiaries (patients).

- iv. **Continued CDE/CME:** Continued improvement of technical skills and knowledge should be encouraged and such opportunities be created by the dental/medical council within or outside the country. In future, a set standard of minimum attendance of such scientific sessions may be necessity to renew licenses. The department concerned must then provide the opportunities. It maintains high

level of Quality services with enhancement of professional skills benefiting the attending patients.

v. Exchange of Scientific Knowledge, Skills and Services: In line with upgrading the standard of treatment quality, all private clinics should be allowed to avail possible opportunities to improve their services through professional contacts with outside centers.

vi. Private Dental Clinic License/ Dental lab/Dental pharmacy: It should be provided to ONLY a person with above qualifications and experiences. Fronting should be discouraged right from the beginning.

vii. Employment: Only National subordinates must be employment by all private clinics in the country. Hiring of professional services from outside the country for more than three months should be considered illegal.

License to Dental Hygienists: License for Dental Pharmacy may be given to qualified dental hygienist for independent management and sale. Dental/medical council prior to processing of such license must certify them and should meet the existing EDP regulations. However, in the interest of general peoples' safety and standard clinical practice, **no license for "Dental Clinics"** be given to Dental Hygienists, as it would immediately compromise safety and treatment standard.

License to Dental Technicians: License for independent "Dental lab service" may be given to qualified and experienced Dental technicians only after certification by dental/medical council prior to processing of such license. They must adhere to fabrication of following prosthesis on time-to-time supervision of experienced dentists. Prosthesis allowed should be Acrylic Complete dentures/ partial dentures, temporary crowns/bridges and removable orthodontic appliances on prescription of a doctor. They must refer any pts with complications or those that are beyond their capacity to manage.

D. Mal-practices: What constitutes malpractice

- i. Practice without license.
- ii. Non-nationals practicing more than three-month duration in Bhutan, employment of foreigners.

- iii. Fronting of license.
- iv. Unethical practices
- v. Professional negligence.

E. Mode of Private Practice that may be allowed:

- i. Off-hours Payment clinics-** in the same Government established facility, private clinics may be practiced but, however, there are many pros and cons that need to be weighed. Government can earn extra revenue by charging for using the existing facility, while at the same time the practicing team (Dental). At present Local administrations discourage two practices under one roof.
- ii. Private Practice while in Government Service:**
(Off-hours/days)- allowing the present dentists/auxiliaries to practice outside their duty hours/days under a separate License in private clinics. This is the most common mode approached by many developing countries in reaching the services to all sections of society at their convenient times. However, those who are serving in remote areas and other districts must be compensated by some mechanisms.
- iii. Out of Government Service Private Practice:**
License to those who opt to stay out of Government service and fulfilling requirements or those who want to practice after retirement should be given license to practice independently.

F. Probable Places of Private License/Practice at the moment:

- i. Thimphu
- ii. Phuntsholing
- iii. Gelegphu
- iv. Samdrup Jongkhar.

Conclusion

This proposal envisages a guiding frame work for Ministry of Health in delivering standard, systematic and sustainable dental health services and manpower requirement across the country. With clear roles and responsibilities of each category of dental personals outlined and service standards set for each health facility, the policy makers and health planners will have clear idea of present situation and future course of action. Keeping in view of government policy of for financial sustainability, proposal for privatization of secondary and tertiary dental health services are stated here. Privatization will reduce patient burden on government hospitals and ensure equitable basic dental health services.