



**CORE COMPETENCE REFERENCE MANUAL FOR DENTAL THERAPISTS TO  
PRACTICE IN ZAMBIA**

**CORE CURRICULUM & MINIMUM STANDARDS**

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## Qualifications and Responsibilities

**Title of the programme:** Diploma in Dental Sciences or its equivalent

**Key accountability for the job:** First line contact with dental patients in a health facility.

**Primary roles and responsibilities:**

- Provision of curative and preventive oral health care services
- Carrying out health centre and dental department administrative roles
- Referral of patients to appropriate level of health care

## 1.0 INTRODUCTION

The Health Professions Council of Zambia (HPCZ) is a statutory body that was established by the Health Professions Act No. 24 of 2009. The Act renames and continues the existence of the Medical Council of Zambia established by the Medical and Allied Professions Act of 1977. The Health Professions Act No. 24 provides for the registration of health practitioners and regulation of their professional conduct; provides for the licensing of health facilities and the accreditation of health care services provided by health facilities; and provides for the recognition and approval of training programmes for health practitioners.

Following the issuance of the guidelines for introduction of licensing examinations for health professionals to be registered with the Health Professions Council of Zambia, this bulletin provides an outline of the core curriculum and minimum standards for registrants who have completed the Diploma in Dental Sciences seeking full registration as Dental Therapists.

## 2.0 EXIT EXAMINATIONS AND AWARD OF THE DIPLOMA IN DENTAL SCIENCE BY TRAINING INSTITUTIONS

Training institutions, private or public, (local and foreign) approved by the Health Professions Council of Zambia are mandated to examine and graduate their students under their own seal and authority. The Diploma in Dental Science award is designated the primary qualification of the Dental Therapist and it is a pre-requisite requirement for eligibility for licensure examinations. Accordingly, a holder of the Diploma in Dental Science award will be required to take and pass the HPCZ licensure examination to qualify for registration with the Council as a Dental Therapist.

## 3.0 LICENSURE EXAMINATIONS BY THE HEALTH PROFESSIONS COUNCIL OF ZAMBIA

A person shall not practise as a health practitioner, unless that person is registered as a health practitioner in accordance with the Health Professions Act No. 24 of 2009. In the exercise of its functions under this Act, the 2<sup>nd</sup> Council and the 3<sup>rd</sup> Council of the Health Professions Council of Zambia instituted Licensure Examinations to help maintain standards given the emergence of multiple private and public training institution. This “Bulletin of Information on the Core Competencies and Minimum Standards for the Licensing Examinations for Dental Therapists to Work in Zambia” binds all parties regulated under this Act. Examination fees for licensure examinations, as prescribed by the Council, are payable to the Health Professions Council of Zambia as part of the eligibility to sit licensing examinations.

The HPCZ Licensing Examination assesses a medical practitioner’s ability to apply knowledge, concepts, and principles, and to demonstrate fundamental patient-centred skills, that are important in health and disease and that constitute the basis of safe and effective patient care. The HPCZ Licensing Examination includes, but is not limited to, theoretical and clinical examinations which complement each and the other components as prescribed in the curriculum for which this

programme was approved. No component is a stand-alone in the assessment of readiness for medical practice in Zambia.

The candidate will be assessed under three domains, namely:-

- 1. Knowledge,
- 2. Skills
- 3. Attitude.

The above domains will be assessed by means of a theory exam comprising of multiple choice, essay type and a practical examination

The four main **subject areas** (assessed under all three learning domains) for Dental Therapists in Zambia are:

1. Oral surgery
2. Periodontology
3. Restorative dentistry
4. Community dentistry

Other subject areas prescribed by the curriculum such Public Health, health systems management will only be assessed as cognitive domain in the theory paper. The overall expected outcomes of the licensure examination is to ensure that the Dental Therapist will meet the minimum standards of performing various dental procedures in a health facility.

#### 4.0 COMPETENCE OUTCOME GUIDELINES

The curriculum must identify attributes in each educational domain (knowledge, skills and attitude) and present them to guide student learning and assessment by examiners. HPCZ directs health practitioners to be compassionate and empathetic in caring for patients and to be trustworthy and truthful in all their professional dealings. Health practitioners have a responsibility to respect and provide care that is up to standard for the lives and health that are entrusted by patients. The expectations are largely in three main competence areas as follows.

##### Overall Competences

###### 1) Scientific Knowledge

- 1.1. Application of basic knowledge of oral anatomy and physiology of the human body.
- 1.2. Explaining major pathological processes that affect oral health.
- 1.3. Generating and advancing new knowledge through research that improves oral health.
- 1.4. Apply basic principles of prevention of oral diseases

###### 2) Skills and Performance

- 2.1. Take dental and medical history.
- 2.2. Perform complete oral check-up.
- 2.3. Take, process radiographs, interpret and record the findings correctly
- 2.4. Perform extractions of deciduous and permanent teeth except for impacted teeth
- 2.5. Perform fillings on deciduous and permanent teeth

- 2.6. Perform scaling and polishing of teeth
  - 2.7. Apply topical fluoride and fissure sealants on teeth
  - 2.8. Diagnose oral health conditions
  - 2.9. Conduct oral health education
  - 2.10. Plan and execute community health programmes
  - 2.11. Conduct general preventive maintenance of equipment and instruments
- 3) Attitudes, Values and Professionalism
- 3.1. Practices professionally and ethically at all times
  - 3.2. Uphold and respect of patient's autonomy, dignity and confidentiality.
  - 3.3. Work with colleagues in ways that best serve the patient's interests.
  - 3.4. Work with honesty, integrity and fairness.
  - 3.5. Demonstrate politeness, kindness and empathy to the patients
  - 3.6. Promotes oral health and disease prevention in communities

5.0 CORE COMPETENCIES: Dental Therapy

	<b>COMPETENCY</b>	<b>COMPETENCY STATEMENT</b>	<b>SUBCOMPETENCIES</b>
KNOWLEDGE	SCIENTIFIC KNOWLEDGE	Graduates should. Demonstrate Understanding and application of scientific knowledge relevant to oral health	i) Explain the basic oral anatomy and physiology of the human body. ii) Explain how the major pathologic processes affect the oral cavity. iii) Apply knowledge of basic health sciences to inform best practice
		Graduates should Demonstrate understanding of current biological, physical, cultural, social and psychological factors which influence the attainment and maintenance of oral health	<ul style="list-style-type: none"> <li>• Demonstrate an understanding of biological, physical, cultural, social and psychological factors in oral health therapy</li> <li>• Apply this knowledge in the development and delivery of oral health care for individuals and communities.</li> <li>• Apply knowledge of these factors to inform best practice.</li> <li>• Communicate this knowledge to patients, care-givers, and the wider community</li> </ul>
		Graduates should demonstrate Understanding of the Legal Requirements of Practicing in an Oral Health Workplace	<ul style="list-style-type: none"> <li>• Demonstrate familiarity with and compliance to relevant legislation and Dental Profession standards of practice.</li> </ul>

	SCIENTIFIC KNOWLEDGE	Graduates must assess the Effectiveness of Oral Health Strategies	<ul style="list-style-type: none"> <li>• Demonstrate understanding of the prognosis for treatment strategies offered to individual patients and to the community at large</li> <li>• Communicate this knowledge to colleagues and professional stakeholders in general</li> <li>• Review and assess outcomes of care</li> <li>• Perform routine physical examinations</li> <li>• Perform appropriate medical procedures</li> <li>• Perform preventive &amp; promotive health care</li> <li>• Refer complicated cases to next level of care</li> </ul>
		Graduates must Undertake Scientific Enquiry and methodology	<ul style="list-style-type: none"> <li>• Read and critically analyse scientific publications in oral health</li> <li>• Share experiences and case studies of oral health therapy practice with colleagues</li> <li>• Demonstrate understanding of current issues including recent developments in oral health; evidential base of practice; new materials and treatment techniques based on research</li> <li>• Use scientific knowledge and practice experience to inform oral health practice.</li> </ul>



	Skills and Performance	Graduates must be able to perform clinical skills in provision of oral health	<ul style="list-style-type: none"> <li>• Take dental and medical history.</li> <li>• ii) Make a patient feel comfortable and relatively pain-free</li> <li>• iii) Perform complete oral check-up.</li> <li>• iv) Take, process radiographs, interpret and record the findings correctly</li> <li>• v) Diagnose oral health conditions</li> <li>• vi) Perform extractions of deciduous and permanent teeth except for impacted teeth</li> <li>• vii) Perform fillings on deciduous and permanent teeth</li> <li>• viii) Perform scaling and polishing of teeth</li> <li>• ix) Apply topical fluoride and fissure sealants on teeth</li> </ul>
		Graduates should be able to communicate effectively with patients, other health professionals and the public on oral health matters	<ul style="list-style-type: none"> <li>• Perform basic managerial, administrative and information technology skills</li> <li>• Function harmoniously in a multi-disciplinary healthcare team set up.</li> <li>• Communicate with patients, the public and other health professionals</li> </ul>
		Graduates should be able to clinically manage oral health conditions and perform appropriate case management	<ul style="list-style-type: none"> <li>• Formulate a treatment plan</li> <li>• Identify and execute therapeutic options for patients</li> </ul>

		strategies to provide curative services to the patient.	<ul style="list-style-type: none"> <li>• Manage potentially life-threatening oral health conditions</li> <li>• Provide first aid</li> <li>• Refer complicated cases to the next level of care</li> <li>• Perform agreed upon procedures such as but not limited to; Exodontia, periodontology, Restorative dentistry Use of local and topical anaesthesia Flouride application Conducting outreach programmes Manage clinical records</li> </ul>
	. Utilize Technology to Manage Information	Graduates should be able to utilize basic information communication technology (ICT) to manage patient's information	<ul style="list-style-type: none"> <li>• Operate basic ICT platforms such as Email, Internet and computer software such as MS Word, Excel, PowerPoint, etc relevant to manage information.</li> <li>• Use information and educational technology to support oral health research, education and patient care</li> </ul>
	Provide Leadership and Management	Graduates should be able to demonstrate ability to provide leadership and management in the field of practice or various practice settings.	<p>Perform leadership and management roles and responsibilities assigned.</p> <ul style="list-style-type: none"> <li>• Manage health system resources</li> </ul>

	Provide Patient Care	Graduates should be able to provide patient care in public and private healthcare settings.	<ul style="list-style-type: none"> <li>i) Obtain and evaluate essential patient information to identify oral health problems</li> <li>ii) Formulate an evidence based oral health care plan that addresses the aetiology of oral disease, the attainment or maintenance of oral health, priority of management, patient options, anticipated outcomes and the duration of treatment</li> <li>iii) Develop and execute patient management plans.</li> <li>vii) Provide curative and preventive oral health care services.</li> </ul>
<b>Attitudes, Values and Professionalism</b>	Professionalism and Ethical Practice	Graduates should be able to demonstrate professionalism, ethical practice and conduct	<ul style="list-style-type: none"> <li>i) Behave according to ethical and legal frameworks governing the practice of dental therapists.</li> <li>ii) Demonstrate awareness of local, regional and international ethical codes that guide the practice of dental therapists.</li> <li>iii) Value and appreciate the roles and responsibilities of dental therapists in healthcare.</li> <li>iv) Be polite, considerate, trustworthy and honest, and act with integrity, maintain confidentiality, respect patients' dignity and privacy and understand the role of informed consent.</li> <li>v) Demonstrate caring and respectful behaviour when interacting with patients and their families.</li> </ul>

			<ul style="list-style-type: none"> <li>vi) Respect all colleagues and others irrespective of age, gender, socio-economic status, political affiliation, race, religion or creed.</li> <li>vii) Do no harm to patients either by intention or negligence in the course of duty.</li> <li>viii) Protect patient's rights</li> <li>ix) Improve care by prioritizing health and safety of patients</li> </ul>
		An entry level graduate should be able to raise awareness of oral health and its effect on general health and well-being of individuals and communities	<ul style="list-style-type: none"> <li>i) Promote awareness and understanding of the relationship between oral health and general health</li> <li>ii) Demonstrate a commitment to oral health promotion by working with other health personnel and/or educational staff where appropriate</li> <li>iii) Facilitate patients' access to services and resources</li> </ul>
		An entry level graduate should be able to appreciate and value teamwork, life-long learning and professional development.	<ul style="list-style-type: none"> <li>i) Support development of others and self in areas of professional practice as a dental professional</li> <li>ii) Place high value on continuous professional development and career progression.</li> <li>iii) Acquire, assess, apply and integrate new knowledge to keep medical knowledge and skills up to date.</li> <li>iv) Be aware of own personal and professional limits and enlist the help of colleagues and supervisors when necessary.</li> </ul>

			v) Pass on the art and practice of dentistry, by being an effective mentor and teacher to students and others.

## 6.0 BLUEPRINT WEIGHTS BY COMPETENCIES

**Table 2: Weighting of Competence Areas for Theory Licensure Examination for Diploma in Dental Sciences.**

<b>Objectives</b>	<b>Content &amp; Weighting of Dip.DS Competences</b>
1. To determine the <b>application of knowledge in Dental Sciences</b>	<b>50%</b>
2. To ascertain <b>performance of quality and reliable Clinical techniques proficiently</b>	<b>10%</b>
3. To ascertain <b>proficiency</b> to monitor patient treatment outcomes	<b>10%</b>
4. To assess <b>leadership and management skills</b> to effectively manage the Dental Practice	<b>15%</b>

5. To ascertain <b>professionalism</b> and demonstration of <b>ethical conduct</b> , including <b>adherence to good Dental practice, safety and health guidelines.</b>	<b>15%</b>
<b>Total</b>	<b>100%</b>

**Table 3: Weighting of Competence Areas for Practical Licensure Examination for Diploma in Dental sciences**

<b>Objectives</b>	<b>Content &amp; Weighting of Dental Therapist Competences</b>
	<b>Total</b>
1. To determine the <b>application of knowledge in Dental Sciences</b>	<b>5%</b>
2. To ascertain <b>performance of quality and reliable clinical dental science techniques proficiently</b>	<b>45%</b>
3. To ascertain <b>proficiency in the use of Dental skills in</b> patient treatment outcomes	<b>30%</b>
4. To assess <b>leadership and management skills</b> to effectively manage the Dental Practice	<b>5%</b>
5. To ascertain <b>professionalism</b> and demonstration of <b>ethical conduct</b> , including	<b>15%</b>

<b>adherence to good Dental practice, safety and health guidelines.</b>	
<b>Total</b>	<b>100%</b>

### 7.0 CORE PROCEDURES (LIST NOT EXHAUSTIVE)

The following procedures are the minimum standards and a full list could be found in the curriculum

Oral Surgery	1	Extractions of deciduous teeth
	2	Extractions of permanent teeth excluding impacted teeth
	3	Giving oral hygiene instructions
Periodontology	1	Scaling and polishing
Restorative dentistry	1	Restoring deciduous teeth using temporal and permanent restorations
	2	Restoring permanent teeth using temporal and permanent restorations but not Root canal treatment, indirect restorations and crown and bridge
	3	Fluoride application
	4	Fissure sealing
	5	Atraumatic Restorative Technique
Community Dentistry	1	Carry out oral health sensitization programmes
	2	Apply fissure sealants



## 8.0 REFERENCES (TEXT BOOKS)

Oral anatomy		Atkinson, M., (2013). Anatomy for Dental Students. Oxford, UK: Oxford University Press
Medical Biochemistry		John W Baynes and Marek H Dominiczak. 2005, Medical Biochemistry. 2nd edition. Oxford, Toronto
Medicine		Nicholas A, Boon. (2006). Davidson's Principles and Practice of Medicine. 20th edition. Churchill Livingstone.
Dental equipment and instrumentation		Linda R. Bartolomucci Boyd. 2012. Dental Instruments. 4th edition. USA. Elsevier
Dental Materials		Kenneth J Anausavice (2003). The science of Dental Materials 11th edition USA Elsevier Richard Van Noort. (2007) introduction to Dental Materials 3rd Edition London Elsevier
Periodontology		Gehrig J.S. and Willmann D.E. (2016). Foundations of Periodontics for Dental Hygienists, 4th Edition. Wolter Kluwer Health.
Oral Surgery		Gustav O. Kruger (1984) Oral and Maxilofacial Surgery. USA, Mosby Company. Richard C. Bennett (1984) Monheim's Local Anesthesia and pain Control in Dental Practice, Canada, Mosby Mitchell Laura, Mitchel .A David (1999).Oxford Handbook of clinical Dentistry. Oxford