



**CORE COMPETENCIES REFERENCE MANUAL FOR DENTAL SURGEONS TO
PRACTICE IN ZAMBIA.**

CORE COMPETENCIES & MINIMUM STANDARDS.

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QUALIFICATION AND RESPONSIBILITIES

Title of the Programme: BACHELOR OF DENTAL SURGERY DEGREE (BDS) or equivalent

Key Accountability for the Job: First line contact with patients in a hospital setting

Primary Roles and Responsibilities:

1. Knowledge of the basic and clinical sciences relevant to the practice of dentistry
2. Competence in clinical skills and patients care
3. Professionalism and ethical practice
4. Linking up patients with other support services
5. Supervising subordinates in the dental clinic

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 minimum competency standards for registrants who have successfully completed the Degree in Dental Surgery seeking provisional or temporal registration to practice as Dental Surgeons in Zambia.

2.0 EXIT EXAMINATIONS AND AWARD OF THE DEGREE OF DENTAL SURGERY 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 Degree in Dental Surgery award is designated the primary qualification of the Dental Surgeon and it is a pre-requisite requirement for eligibility for licensure examinations. Accordingly, a holder of the Degree in Dental Surgery award will be required to take and pass the HPCZ licensure examination to qualify for registration with the Council as a Dental Surgeon.

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 2nd Council and the 3rd 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 Licensure Examinations for Dental Surgeons 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 a pre-requisite to sit for licensure examinations.

The HPCZ Licensure Examination assesses a Dental Surgeon graduate’s ability to apply scientific knowledge, skills and performance and professional attitudes, that are important in health and disease and that constitute the basis of safe and effective patient care practice. The HPCZ Licensure Examination includes, but is not limited to, theoretical and practical examinations which complement each other components. No component is a stand-alone in the assessment of readiness for professional 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 questions, and a practical examination.

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

1. Oral Surgery
2. Operative Dentistry and Periodontology
3. Prosthodontics
4. Paediatric Dentistry and Orthodontics

Other subject areas prescribed by the curriculum such as Community Dentistry, Oral Anatomy, Physiology and Medical Biochemistry will only be assessed as cognitive domain in the theory paper. The overall expected outcome of the licensure examination is to ensure that the dental Surgeon will meet the minimum standards of attending to patients in a clinical setting.

4.0 COMPETENCE OUTCOME GUIDELINES

The process of licensure seeks to detect the candidate's attainment in each educational domain (knowledge, skills and attitude) and evaluates the minimum competence standards as benchmarks for licensure to practice the profession. It also guides prospective candidate's learning and assessment by examiners. HPCZ, on behalf of the general public and professional stakeholders, expects holders of the Degree in Dental Surgery to meet the minimum competency standards outlined in this document. The expectations are largely in three main competence areas as follows:

Overall Competences

- 1) Scientific Knowledge
 1. Demonstrate fundamental knowledge on the human body
 2. Demonstrate Knowledge of the human body by systems, its disorders, their diagnostic evaluation and treatment
 3. Demonstrate Knowledge and Understanding of Medical Diagnostic Procedures
 4. Provide Leadership, Manage Health Systems and Engage in Entrepreneurship
- 2) Skills and Performance
- 3) Demonstrate skills in various dental disciplines
 1. Perform various clinical procedures
 2. Monitoring of a Patient's Treatment
 3. Conduct Dental Research
 4. Manage a Dental Practice
 5. Communicate Effectively
 6. Utilize Information Communication Technology (ICT) Appropriate to the Practice of Dental Sciences

- 4) Attitudes, Values and Professionalism
 1. Participate in Public Health Programmes and Teach/Educate Others in Dental Sciences
 2. Collaborate and Function Effectively with other Health Professionals
 3. Demonstrate Team work and Independent Life-long Learning
 4. Adherence to Dental Practice Safety Guidelines
 5. Professionalism and Ethical Practice

5.0 CORE COMPETENCIES: DENTAL SURGEONS

DOMAIN	COMPETENCY	COMPETENCY STATEMENT	SUB-COMPETENCIES
KNOWLEDGE	Scientific knowledge	Demonstrate fundamental knowledge on the human body	1) Demonstrate knowledge, skills and attitude about the human body and its structure, development and function. 2) Demonstrate an understanding of the structure, development and function of various body parts in terms of health and disease.
	Understand the disorders of the human body and how to manage them.	Demonstrate Knowledge of the human body by systems, its disorders, evaluation and treatment	1) Demonstrate an understanding of biological and physical aspects of the body in terms of health and disease.
	Understanding of diagnostic procedures	Demonstrate Knowledge and Understanding of Medical Diagnostic Procedures	i) Demonstrate knowledge and understanding of a wide range of medical diagnostic and laboratory procedures that are essential to the Dental Surgeons' role in the healthcare team
	Provide leadership for the dental team	Demonstrate leadership, manage health systems and	i) Apply principles of leadership and management of health systems.

		engage in entrepreneurship	<ul style="list-style-type: none"> ii) Effectively manage the Dental Practice iii) Select and apply appropriate strategies and tools to plan, control and manage health system resources under their care iv) Develop the necessary capacity and abilities to engage in entrepreneurship opportunities within and outside the field of specialization.
Skills and attitude	Perform skills in various dental disciplines	Demonstrate skills to perform various dental procedures	<ul style="list-style-type: none"> I. Perform various dental procedures in oral surgery, Restorative dentistry, periodontics, orthodontics and other disciplines II. Read and critically analyse scientific publications in oral health III. Share experiences and case studies of oral health therapy practice with colleagues IV. Demonstrate understanding of current issues including recent developments in oral health; evidential base of practice; new materials and treatment techniques based on research V. Use scientific knowledge and practice experience to inform oral health practice
	Monitoring of a patient`s treatment	Demonstrate ability to monitor a patient`s treatment.	<ul style="list-style-type: none"> i) Perform diagnosis and therapeutic management of disease ii) Organise and interpret laboratory data and correlate them with clinical findings iii) Investigate and treat opportunistic infections related to HIV/AIDS iv) Order antimicrobial susceptibility tests and interpret results
	Conduct Dental Research	Demonstrate ability to conduct Dental Research	<ul style="list-style-type: none"> i) Conceptualize a research problem in Dental sciences ii) Carry out critical literature review using relevant data retrieval systems

			<ul style="list-style-type: none"> iii) Design a Dental study iv) Write a research proposal v) Apply principles of scientific enquiry and collect data vi) Utilize appropriate statistical methods and tools to analyze data vii) Interpret and critically discuss research findings in the context of published work viii) Demonstrate academic writing and research presentation skills
	Manage a Dental practice	Demonstrate ability to manage a Dental practice.	i) Apply the principles of management and leadership, supervision and quality processes within the Dental Practice.
	Communicate Effectively	Demonstrate effective communication	<ul style="list-style-type: none"> i) Communicate clearly, sensitively and effectively with colleagues, patients and their care-givers. ii) Communicate by spoken, written, and electronic methods iii) Communicate effectively in various roles, for example: as an educator, mentor, patient counsellor, and health/professional advocate.
	Utilize Technology to Manage Information	Demonstrate ability to utilize Information Communication Technology (ICT) appropriate to the Practice of Dental Sciences	<ul style="list-style-type: none"> i) Utilize ICT to communicate Dental information effectively ii) Develop, store, locate, retrieve and utilize patient biomedical information on a database iii) Access online data and information retrieval systems (e.g. Web of Science, PubMed, GoogleScholar, Embase, etc.) iv) Operate commonly used software such as MS Word, Excel, PowerPoint, Access, etc., including other relevant computer applications.
Attitudes values and professionalism	Conduct public health programmes	Demonstrate maximum participation in public Health Programmes and education	<ul style="list-style-type: none"> a) Participate in public health interventions and health promotion activities. b) Teach and educate others in Dental and medical sciences within the context of an educational setting, professional practice setting or educational programme.

	Collaborating with other health professionals	Demonstrate Collaboration and Function Effectively with other health Professionals	<ul style="list-style-type: none"> i) Develop and foster professional working relationships other health professionals and clients ii) Understand and respect the roles and expertise of other health and social professionals in the care of patients as a multi-professional team. iii) Work with colleagues in ways that best serve the interests of the patient. iv) Demonstrate ability to build team capacity and function at various levels within the team.
	Team work and independent life long practice	Demonstrate Team work and Independent Life-long Learning	<ul style="list-style-type: none"> 1.) Support development of others and self in areas of professional practice 2.) Place high value on continuous professional development and career progression. 3.) Acquire, assess, apply and integrate new knowledge to keep medical knowledge and skills up to date. 4.) Be aware of own personal and professional limits and enlist the help of colleagues and supervisors when necessary. 5.) Pass on the art and practice of Dental science, by being an effective mentor and teacher to colleagues and others
	Dental practice safety guidelines	Demonstrate adherence to Dental Practice Safety Guidelines	<ul style="list-style-type: none"> i) Demonstrate awareness and adherence to local, regional and international standards of safety, including protocols for management and disposal of dental waste. ii) Formulate safety rules and regulations for Dental personnel and support staff. iii) Promote health and occupational safety at the workplace. iv) Develop standard operating procedures of practice
	Professionalism and Ethical Practice	Demonstrate professionalism and Ethical Practice	<ul style="list-style-type: none"> i) Behave according to ethical and legal frameworks governing the practice of Dental surgeons. ii) Demonstrate awareness of local, regional and international ethical codes that guide the practice of Dental Surgeons.

			<p>iii) Value and appreciate the roles and responsibilities of Dental Surgeons in healthcare.</p> <p>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.</p> <p>v) Respect all patients, colleagues and others irrespective of age, gender, socio-economic status, political affiliation, race, religion or creed.</p> <p>vi) Do no harm to patients either by intention or negligence in the course of duty.</p> <p>vii) Protect patients and improve care.</p> <p>viii) Demonstrate global competency with regards to professionalism, patient management and practice management as measured by ongoing, continuous and progressive evaluation utilizing defined criteria.</p>

6.0 BLUEPRINT WEIGHTS BY COMPETENCE

Table 2: Weighting of Competence Areas for Theory Licensure Examination for BDS

Objectives	Scientific Knowledge	Total
1. To determine the application of knowledge in Dental Sciences	50%	50%
2. To ascertain performance of quality and reliable Clinical techniques proficiently	10%	10%
3. To ascertain proficiency to monitor patient treatment outcomes	10%	10%

4. To assess leadership and management skills to effectively manage the Dental Practice	15%	15%
5. To ascertain professionalism and demonstration of ethical conduct , including adherence to good Dental practice, safety and health guidelines.	15%	15%
Total	100%	100%

Table 3: Weighting of Competence Areas for Practical Licensure Examination for BDS

Objectives	Performance and skills	Total
1. To determine the application of knowledge in Dental Sciences	5%	5%
2. To ascertain performance of quality and reliable Clinical Dental science techniques proficiently	45%	45%
3. To ascertain proficiency in the use of Dental Skills in patient treatment outcomes	30%	30%
4. To assess leadership and management skills to effectively manage the Dental Practice	5%	5%
5. To ascertain professionalism and demonstration of ethical conduct , including adherence to good Dental practice, safety and health guidelines.	15%	15%
Total	100%	100%

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	Extract teeth including retained roots/pathology and impacted teeth
	2	Manage uncomplicated odontogenic and non-odontogenic infections
	3	Perform peri-radicular surgery
	4	Perform dento-alveolar surgery
	5	Take intra-oral and labial biopsies
	6	Insertion of osteo-integrated dental implants
	7	Pain and anxiety control
	8	Perform minor soft and hard tissue surgical procedures
Restorative	1	Diagnose caries and plan appropriate non operative care
	2	Complete a range of procedures in restorative dentistry including amalgam and tooth coloured restorations, crowns, post crowns and simple bridges
	3	Have knowledge of design and laboratory procedures used in the production of crown and bridge, and denture works.
	4	Perform basic endodontics on single and multi rooted teeth
Periodontics	1	Complete periodontal examination and charting, diagnosis and treatment plan
	2	Treat common periodontal conditions
	3	Have knowledge of when periodontal surgery is indicated
Paediatric dentistry	1	Design , insert and adjust space maintainers
	2	Have the knowledge of stainless steel crown and pulp therapy
Prosthodontics	1	Design and fit partial and full dentures
	2	Denture repair

8.0 REFERENCE MATERIALS

Oral Anatomy	1	Norton, N.S., 2016. Netter's Head and Neck Anatomy for Dentistry E-Book. Elsevier Health Sciences.
	2	Atkinson, M.E., 2013. Anatomy for dental students. Oxford University Press.
Oral pathology	1	Neville, B.W., Damm, D.D., Chi, A.C. and Allen, C.M., 2015. Oral and maxillofacial pathology. Elsevier Health Sciences.
	2	Odell, E.W., 2017. Cawson's essentials of oral pathology and oral medicine e-book. Elsevier Health Sciences.
Oral surgery	1	Peterson, L.J., Ellis, E., Hupp, J.R. and Tucker, M.R. eds., 1988. Contemporary oral and maxillofacial surgery (pp. 227-228). St. Louis: Mosby.
Dental Materials	1	McCabe, J.F. and Walls, A.W. eds., 2013. Applied dental materials. John Wiley & Sons.
	2	O'Brien, W.J. ed., 2002. Dental materials and their selection.
Periodontology	1	Newman, M.G., Takei, H., Klokkevold, P.R. and Carranza, F.A., 2011. Carranza's clinical periodontology. Elsevier health sciences.
	2	Galgut, P.N., Dowsett, S.A. and Kowolik, M.J., 2001. Periodontics: current concepts and treatment strategies. Martin Dunitz.
Restorative dentistry	1	Ritter, A.V., 2017. Sturdevant's Art & Science of Operative Dentistry-E-Book. Elsevier Health Sciences.
	2	Mcintyre, J., Mount, G.J. and Hume, W.R., 1998. Preservation and restoration of tooth structure. London: Mosby, pp.20-23.
Paediatric dentistry	1	Pinkham, J.R., Casamassimo, P.S., Fields, H.W., McTigue, D.J. and Nowak, A., 2005. Pediatric

		dentistry. Infancy through adolescence. 4th ed, Philadelphia: WB Saunders Co.
	2	Koch, G., Poulsen, S., Espelid, I. and Haubek, D. eds., 2017. Pediatric dentistry: a clinical approach. John Wiley & Sons.
Medicine	1	Kumar, P. and Clark, M.L., 2012. Kumar and Clark's Clinical Medicine E-Book. Elsevier health sciences.
		Burket, L.W., Greenberg, M.S. and Glick, M., 2003. Burket's oral medicine: diagnosis & treatment. PMPH-USA.
Public Health	1	Turnock, B., 2012. Public health. Jones & Bartlett Publishers.
	2	Hunt, S., 1993. Essential Public Health Kluwer Academic Publishers, Lancaster, ISBN.Medicine
Endodontics	1	Pitt Ford, T.R., 2004. Dental Pulp. Harty's Endodontics in Clinical Practice. 5th Edition. Edinburgh: Wright, pp.37-49.
	2	Orstavik, D. and Pitt Ford, T.R., 1998. Essential endodontology. UK: Blackwell Science Ltd, 114, pp.117-221.
Professionalism		<p>HPCZ (2016) Guidelines for good practice in the Healthcare profession – Maintaining Patient Confidentiality. HPCZ Lusaka</p> <p>HPCZ (2016) Guidelines for good practice in the Healthcare profession – Generation and management of patient records. HPCZ Lusaka</p> <p>HPCZ (2014) Professional code of ethics and discipline: Fitness to Practice. HPCZ Lusaka</p> <p>HPCZ (2016) Patients rights and responsibilities. HPCZ Bulletin, Lusaka</p>