RCDC
THE ROYAL COLLEGE OF DENTISTS OF CANADA

Fellowship Examination Blueprint: Endodontics

Blueprint

Competency Domain	Percentage
1. Assessment, Diagnosis, and Prognosis	30 – 40%
2. Treatment Planning and Decision-Making	20 – 30%
3. Treatment Delivery and Management	30 – 40%
4. Patient and Interdisciplinary Communication	3 – 7%

Competencies

1. Assessment, Diagnosis, and Prognosis
   - 1.1 Review a patient's social history, medical history, dental history (e.g., trauma, orthodontic treatment, periodontal treatment, recent dental restoration), and pain history (including non-odontogenic sources)
   - 1.2 Assess a patient's chief complaint with a history-taking interview
   - 1.3 Perform extra-oral and intra-oral exams and diagnostic tests
   - 1.4 Perform diagnostic tests and methods to distinguish between pain of odontogenic and non-odontogenic origin
   - 1.5 Prescribe and interpret the required imaging, including advanced modalities when indicated.
   - 1.6 Diagnose pulpal and periapical status
   - 1.7 Forecast the outcome of endodontic treatment based on:
     - 1.7.1 Endodontic status (e.g., anatomy and morphology, history of previous endodontic treatment, pulpal and periapical diagnoses)
     - 1.7.2 Periodontal status
     - 1.7.3 Restorative status (e.g., previous restoration, restorability, pre-treatment isolation, restorative demand)
   - 1.8 Understand the criteria for successful treatment (e.g., success vs. survival)
   - 1.9 Assess prognosis and outcome based on the best available current evidence
   - 1.10 Assess treatment outcomes through clinical and radiographic measures
   - 1.11 Evaluate periodontal status
   - 1.12 Evaluate endodontic status
   - 1.13 Evaluate the quality of existing restoration
   - 1.14 Assess healing progress

1.15 Identify possible etiological factors of non-healing endodontic treatment
1.16 Recommend corrective treatment strategies or refer to an appropriate specialist
1.17 Keep systematic and complete records

2. Treatment Planning and Decision-Making

2.1 Assess the need for medical consultation
2.2 Establish endodontic treatment options based on the diagnosis
2.3 Effectively communicate benefits, risks, alternatives, and prognosis of treatment options to the patient
2.4 Discuss the need for additional procedures (e.g., endodontic, restorative, periodontal, orthodontic) and/or referral to other specialists
2.5 Develop a treatment plan considering patient preference
2.6 Establish a rationale for recommended endodontic treatment
2.7 Document informed consent
2.8 Provide recommendations for restoring endodontically treated teeth

3. Treatment Delivery and Management

3.1 Manage patient anxiety, stress, and pain
- 3.1.1 Chair-side manners and reassurance
- 3.1.2 Effective local anesthetic strategies
- 3.1.3 Pharmacology (e.g., analgesia, antibiotics, sedation, and anxiolytics)

3.2 Provide vital pulp therapy:
- 3.2.1 Indirect pulp capping
- 3.2.2 Direct pulp capping
- 3.2.3 Partial pulpotomy
- 3.2.4 Pulpotomy

3.3 Provide nonsurgical endodontic treatment:
- 3.3.1 Pre-endodontic isolation
- 3.3.2 Primary teeth
- 3.3.3 Permanent teeth
- 3.3.4 Apexogenesis, apexification, and regenerative endodontics
- 3.3.5 Perforation and resorption repair
- 3.3.6 Post and core removal, separated instrument, silver point, paste removal, carrier-based obturation removal
- 3.3.7 Nonsurgical root canal retreatment
- 3.3.8 Intracoronal bleaching

3.4 Provide surgical endodontic treatment:

- 3.4.1 Soft tissue management (flap designs and closure)
- 3.4.2 Incision and drainage, trephination
- 3.4.3 Exploratory surgery
- 3.4.4 Root-end resection (apicoectomy)
- 3.4.5 Root-end filling (retrofilling)
- 3.4.6 Perforation and resorption repair
- 3.4.7 Root amputation, hemisection
- 3.4.8 Periradicular curettage and biopsy
- 3.4.9 Guided tissue regeneration
- 3.4.10 Prevention and management of surgical complications
- 3.4.11 Intentional replantation, auto-transplantation

3.5 Manage traumatic dental injuries:

- 3.5.1 Initial neurological and clinical assessment
- 3.5.2 Soft tissue management
- 3.5.3 Enamel fracture
- 3.5.4 Crown fracture (uncomplicated and complicated)
- 3.5.5 Crown-root fracture (uncomplicated and complicated)
- 3.5.6 Horizontal root fracture
- 3.5.7 Concussion and subluxation
- 3.5.8 Luxation (lateral, intrusive, and extrusive)
- 3.5.9 Avulsion (exarticulation)
- 3.5.10 Alveolar fracture involving teeth
- 3.5.11 Scheduling regular follow-up appointments according to guidelines
- 3.5.12 Communication of the possible sequelae of dental trauma/outcomes

3.6 Manage endodontic complications:

- 3.6.1 Procedural incidents (e.g., instrument separation, perforation, sodium hypochlorite accident, canal deviation, restorative failure)
- 3.6.2 Flare-ups
- 3.6.3 Post-treatment persistent pain
- 3.6.4 Local anesthetic complications

3.7 Manage medically compromised patients

3.8 Manage dental emergencies

3.9 Adhere to strict infection control and clinical safety protocols during endodontic procedures, including isolation and disinfection techniques.

RCDC
THE ROYAL COLLEGE OF DENTISTS OF CANADA

4. Patient and Interdisciplinary Communication
   - 4.1 Communicate effectively with patients, their families, and other healthcare professionals.
   - 4.2 Adapt communication based on the patient's age and stage of development.
   - 4.3 Obtain informed consent from patients and/or their parents or guardians.
   - 4.4 Collaborate with members of the interdisciplinary healthcare team.
   - 4.5 Demonstrate collegiality when discussing differing opinions with other healthcare professionals.
   - 4.6 Ensure the continuity and coordination of patient care through the appropriate transfer of information.

Topics

This is intended to provide guidance for Examiners in developing cases. It outlines key content areas within each subject to ensure comprehensive coverage and balanced assessment across the examination.

Topics	# of Cases
1. Non-Surgical Endodontics	4 – 5
2. Surgical Endodontics	2 – 3
3. Trauma	2 – 3
4. Pharmacology	1 - 2
5. Medically Compromised Patients	2 – 3
6. Interdisciplinary Treatment Planning	2 – 3

Subtopics

1. Non-Surgical Endodontics
   1. Diagnosis and Case Selection
   2. Access Cavity Preparation
   3. Root Canal Anatomy and Morphology
   4. Working Length Determination and Canal Negotiation
   5. Cleaning and Shaping (instrumentation techniques, irrigation protocols)
   6. Obturation Techniques and Materials
   7. Management of Pulpal and Periapical Pathologies (e.g., necrotic pulp, irreversible pulpitis)
   8. Management of Procedural Errors (e.g., ledging, transportation, perforations)
   9. Retreatment and Post-Treatment Disease
   10. Outcomes and Prognosis

2. Surgical Endodontics
    1. Indications and Case Selection
    2. Surgical Anatomy and Access
    3. Root-End Resection and Retrograde Filling
    4. Microsurgical Techniques
    5. Hemostasis and Suturing
    6. Management of Surgical Complications
    7. Healing and Outcome Assessment
    8. Flap Design and Management
    9. Use of Magnification and Technology (e.g., CBCT, endo microscope)

3. Trauma
    1. Classification and Diagnosis of Dental Trauma
    2. Management of Luxation Injuries (concussion, subluxation, extrusion, lateral, intrusion)
    3. Management of Crown and Crown-Root Fractures
    4. Management of Avulsion and Replantation
    5. Pulpal and Periodontal Healing Response
    6. Splinting Techniques and Duration
    7. Complications (resorption types, ankylosis, pulp canal obliteration)
    8. Prognosis and Long-Term Follow-Up

4. Pharmacology
    1. Analgesics (NSAIDs, opioids, steroids)
    2. Antibiotics in Endodontics (indications, agents, resistance)
    3. Local Anesthesia (agents, techniques, complications)
    4. Pharmacologic Considerations in Special Populations (pediatric, geriatric)
    5. Drug Interactions Relevant to Endodontic Treatment
    6. Sedation and Anxiety Management in Endodontics
    7. Prognosis and Long-Term Follow-Up

5. Medically Compromised Patients
    1. Consideration for management of medically compromised patients
    2. Management of medical emergencies in dental clinic
    3. Emergency Protocols and Risk Management

RCDC
THE ROYAL COLLEGE OF DENTISTS OF CANADA

6. Interdisciplinary Treatment Planning
    1. Endo-Perio Lesions and Differential Diagnosis
    2. Restorative Considerations Post-Endo (e.g., ferrule effect, post selection)
    3. Orthodontic Considerations in Endodontically Treated Teeth
    4. Prosthodontic Planning (abutment selection, crown lengthening)
    5. Management of Cracked Teeth and Vertical Root Fractures
    6. Communication and Referral with Other Specialists
    7. CBCT in Interdisciplinary Planning
    8. Decision-Making for Tooth Retention vs. Extraction and Implant