



Dental Assisting National Board, Inc.
Measuring Dental Assisting Excellence®

Radiation Health and Safety (RHS®)

Exam Outline and Suggested References

State Regulations

Each state's dental board implements regulations and establishes rules for delegating legally allowable duties to dental assistants. Passing one or more of the DANB component exams or earning DANB certification only conveys authority to perform these duties in those states that recognize these exams or this certification as meeting state dental assisting requirements. This information is available at www.danb.org.

Effective 01/01/2018

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RHS

Exam Outline Overview

RHS Exam Weighting by Domain

- I. Expose and Evaluate (26%)
- II. Quality Assurance and Radiology Regulations (21%)
- III. Radiation Safety for Patients and Operators (31%)
- IV. Infection Control (22%)

RHS Exam Administration

- Number of Questions: 100
- Time for Exam: 75 minutes
- Tutorial Time: 5 minutes
- Comment Time: 5 minutes

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RHS Exam Outline

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NOTE: DANB uses "image receptor" to refer to conventional film or sensors used for digital imaging.

Domain I: Expose and Evaluate (26%)

A. Assessment and Preparation

1. Describe patient preparation for radiographic exposures (e.g., inspect the patient's head and neck for removable appliances and foreign objects).
2. Select radiographic technique.
 - a. Describe use and purpose of intraoral and extraoral radiographic images, including but not limited to:
 - i. periapical.
 - ii. bitewing.
 - iii. occlusal.
 - iv. panoramic.
 - v. cephalometric and other extraoral views.
 - b. Select radiographic survey to examine or view conditions, teeth or landmarks.
 - c. Describe technique modifications based on anatomical variations.
3. Select equipment for radiographic technique.
 - a. Describe purpose or advantage of accessories.
 - b. Select image receptor size.
 - c. Describe purpose and advantage of double (dual) film packets.

B. Acquire

1. Describe how to acquire radiographic images using various techniques.
 - a. Define radiographic exposure concepts.
 - b. Intraoral
 - i. Define factors that influence quality of the radiographic image.
 - ii. Compare paralleling and bisecting angle techniques (e.g., advantages, disadvantages).
 - iii. Describe the parts and functions of radiographic film packets and digital image receptors.
 - c. Extraoral
 - i. Identify function and maintenance of film cassettes and intensifying screens.
 - ii. Describe exposure technique (i.e., patient positioning).
 - a) Panoramic radiography.
 - b) Cephalometric radiography.
 - iii. Demonstrate basic understanding of CBCT (cone-beam computed tomography).
2. Demonstrate basic knowledge of digital radiography.
 - a. Advantages/disadvantages.
 - b. Handling errors.
 - c. Image receptors.
3. Demonstrate basic knowledge of conventional film processing.
 - a. Functions of processing solutions.
 - b. Process exposed intra- and extraoral films using automatic processors.
 - c. Procedures for processing films.

C. Evaluate

1. Evaluate radiographic images for diagnostic value.
 - a. Describe features of a diagnostically acceptable radiographic image.
 - b. Identify and describe how to correct errors related to acquiring intraoral radiographic images.
 - c. Identify and correct radiographic processing errors.
 - d. Identify and describe how to correct improper film handling errors.
 - e. Identify and describe how to correct errors related to acquiring panoramic radiographic images.
2. Mount and label radiographic images.
 - a. Describe how to mount radiographic images using facial (buccal and labial) view.
 - i. Identify anatomical landmarks that aid in mounting.

- ii. Match tooth views to tooth mount windows.
 - iii. Demonstrate understanding of radiographic image viewing techniques.
- b. Identify anatomical structures, dental materials and patient information observed on radiographic images (e.g., differentiating between radiolucent and radiopaque areas).

D. Patient Management

1. Describe techniques for patient management before, during and after radiographic exposure (e.g., patients with special needs).
2. Describe techniques for patients with a severe gag reflex.

Domain II: Quality Assurance and Radiology Regulations (21%)

A. Quality Assurance

1. Evaluate film storage areas.
2. Identify and describe how to correct errors related to improperly storing radiographic film.
3. Describe how to prepare, maintain and replenish automatic processor solutions.
4. Identify conditions required for film processing.
5. Describe how to implement quality assurance procedures.

B. Radiology Regulations

1. Describe how to prepare radiographic images for legal requirements, viewing, duplication and transfer.
2. Describe how to store chemical agents used in dental radiography procedures according to regulatory agencies, in compliance with the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard.
3. Describe how to dispose of chemical agents and other materials used in dental radiography procedures.

Domain III: Radiation Safety for Patients and Operators (31%)

A. Identify current American Dental Association (ADA) guidelines for patient selection and limiting radiation exposure.

B. Apply the principles of radiation protection and hazards in the operation of radiographic equipment.

1. Factors affecting x-ray production (e.g., kVp, mA, exposure time).
2. X-radiation characteristics.
3. X-ray machine factors that influence radiation safety (e.g., filtration, shielding, collimation, PID [cone] length).
4. X-radiation physics.
 - a. Primary radiation.
 - b. Scatter (secondary) radiation.
5. Protocol for suspected x-ray machine malfunctions.

C. Demonstrate knowledge of patient safety measures to provide protection from x-radiation.

1. Major causes of unnecessary x-radiation exposure.
2. X-radiation biology:
 - a. short- and long-term effects of x-radiation on cells and tissues.
 - b. concepts of x-radiation dose and effective dose.
3. Reduce x-radiation exposure to patients (ALARA).

D. Address patient radiation concerns (e.g., informed consent, patient refusal).

E. Identify operator safety measures to provide protection from x-radiation.

1. Sources of x-radiation to operators/other staff while exposing image receptors.
2. Safety measures to reduce operator x-radiation exposure.
3. X-radiation physics and biology pertaining to operator exposure.

F. Describe techniques for monitoring individual x-radiation exposure.

1. ALARA principle as related to operator safety.
2. Function of a personal monitoring device.

Domain IV: Infection Control (22%)

A. Standard Precautions for Equipment

1. Demonstrate understanding of infection control techniques used to minimize cross-contamination during radiographic procedures according to ADA, Centers for Disease Control and Prevention (CDC) and OSHA guidelines for conventional and digital radiography.
2. Demonstrate understanding of barriers used to minimize cross-contamination during radiographic procedures according to ADA, CDC and OSHA guidelines for conventional and digital radiography.

B. Standard Precautions for Patients and Operators

1. Demonstrate understanding of infection control for radiographic procedures according to ADA, CDC and OSHA guidelines for conventional and digital radiography.
2. Describe infection control techniques used during radiographic processing, following ADA, CDC and OSHA guidelines.

RHS Exam Suggested References

DANB exam committees use the following textbooks and reference materials to develop this exam. This list does not include all the available textbooks and materials for studying for this exam; these are simply the resources that exam committee subject matter experts have determined provide the most up-to-date information needed to meet or surpass a determined level of competency for this exam. Any one reference will likely not include all the material required to study to take and pass the exam.

This list is intended to help prepare for this exam. It is not intended to be an endorsement of any of the publications listed. You should prepare for DANB certification and component exams using as many different study materials as possible.

Textbook References

1. Bird, Doni L., and Debbie S. Robinson. *Essentials of Dental Assisting*. 5th ed. St. Louis, MO: Elsevier/Saunders, 2013.
2. Bird, Doni L., and Debbie S. Robinson. *Modern Dental Assisting*. 11th and 12th ed. St. Louis, MO: Elsevier/Saunders, 2015 and 2017.
3. Ianucci, Joen M., and Laura J. Howerton. *Dental Radiography Principles and Techniques* (with CD-ROM). 5th ed. St. Louis, MO: Elsevier/Saunders, 2017.
4. Johnson, Orlen N., and Evelyn M. Thomson. *Essentials of Dental Radiography for Dental Assistants and Hygienists*. 9th ed. Upper Saddle River, NJ: Pearson Education, 2012.
5. Miller, Chris H. *Infection Control and Management of Hazardous Materials for the Dental Team*. 5th and 6th ed. St. Louis, MO: Elsevier/Mosby, 2014 and 2018.
6. Phinney, Donna J., and Judy H. Halstead. *Dental Assisting: A Comprehensive Approach*. 5th ed. Clifton Park, NY: Delmar Cengage Learning, 2013.

Organizational References

1. Centers for Disease Control and Prevention (CDC). www.cdc.gov.
 - *Guidelines for Infection Control in Dental Health-Care Settings — 2003* (MMWR, Vol. 52, RR 17)
 - *Centers for Disease Control and Prevention. Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care*. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health; 2016
2. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). www.osha.gov.
 - *Hazard Communication Standard* (Code of Federal Regulations #29, Part 1910)
 - *Bloodborne Pathogens Standard* (1910.1030)
3. American Dental Assistants Association (ADAA). www.dentalassistant.org.
 - *An Introduction to Basic Concepts in Dental Radiography* (Course #715)

4. The DALE Foundation. www.dalefoundation.org.
 - *DANB RHS Review*
 - *Conventional Dental Radiography Review*
 - *DANB RHS Practice Test*
 - *Glossary of Dental Terms*



Dental Assisting National Board, Inc.

Measuring Dental Assisting Excellence®

The RHS® exam is a component of the National Entry Level Dental Assistant (NELDA®) and Certified Dental Assistant™ (CDA®) certification programs.

NELDA component exams

Anatomy, Morphology and Physiology (AMP)

Radiation Health and Safety (RHS)

Infection Control (ICE®)

CDA component exams

Radiation Health and Safety (RHS)

Infection Control (ICE)

General Chairside Assisting (GC)



Dental Assisting National Board, Inc.
Measuring Dental Assisting Excellence®

Infection Control (ICE[®])

Exam Outline and Suggested References

State Regulations

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ICE

Exam Outline Overview

ICE Exam Weighting by Domain

- I. Standard Precautions and the Prevention of Disease Transmission (20%)
- II. Prevention of Cross-contamination during Procedures (34%)
- III. Instrument/Device Processing (26%)
- IV. Occupational Safety/Administrative Protocols (20%)

ICE Exam Administration

- Number of Questions: 100
- Time for Exam: 75 minutes
- Tutorial Time: 5 minutes
- Comment Time: 5 minutes

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ICE Exam Outline

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This exam references the following (see p. 7 for full citations for these references):

- Centers for Disease Control and Prevention. Guidelines for Infection Control in Dental Health-Care Settings-2003
- Centers for Disease Control and Prevention. Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care
- Occupational Safety and Health Administration (OSHA) Bloodborne Pathogens (BBP) standard
- OSHA Hazard Communication standard

Domain I: Standard Precautions and the Prevention of Disease Transmission (20%)

A. Recognize infectious diseases and their relationship to patient and occupational risk.

1. Identify modes of disease transmission.
2. Needs for immunization against infectious diseases (e.g., hepatitis B, influenza).

B. Demonstrate understanding of how to review a medical history to prevent adverse reactions during dental care (e.g., adverse reactions to latex or vinyl).

C. Demonstrate understanding of proper hand hygiene as performed before, during and after oral surgery and intraoral procedures, including but not limited to:

1. products (e.g., antimicrobial, antibacterial, alcohol rub).
2. skin/nail care.
3. techniques (e.g., length of time, sequencing).
4. select appropriate hand hygiene protocol.

D. Describe how to protect the patient and operator by using personal protective equipment (PPE) (e.g., masks, gloves, eyewear, gowns).

1. Selection and sequence of placing, removing and disposing of PPE according to the procedures(s) and areas, including but not limited to:
 - a. instruments/device processing.
 - b. laboratory.
 - c. oral surgery.
 - d. radiology.
 - e. treatment room.
2. Management of contaminated PPE according to the OSHA Bloodborne Pathogens standard.

E. Demonstrate understanding of how to protect the patient and operator through the reduction of aerosol, droplets and spatter, including but not limited to:

1. barrier techniques.
2. dental dams.
3. evacuation techniques.
4. patient eyewear.
5. pre-procedural mouth rinses.

Domain II: Prevent Cross-contamination during Procedures (34%)

A. Demonstrate understanding of how to maintain aseptic conditions to prevent cross-contamination for procedures and services.

1. Identify modes of disease transmission.
2. Clean and disinfect for breakdown and setup of clinical treatment areas, the laboratory and equipment.
 - a. Prepare and use chemical disinfection for breakdown and setup.
 - b. Use barrier techniques for equipment and/or surfaces.
 - c. Prepare procedure-specific setups (e.g., single-use devices [SUD], single unit dosing, aseptic retrieval).
 - d. Maintain and monitor dental unit water lines.
 - e. Clean and maintain evacuation lines and traps.
3. Clean and disinfect radiological areas and equipment.
4. Use aseptic techniques for acquiring and processing conventional and digital radiographic images.

5. Select proper methods of disinfection for impressions and dental appliances.
6. Dispose of biohazardous and other waste according to federal regulations.

Domain III: Instrument/Device Processing (26%)

A. Demonstrate understanding of processing reusable dental instruments and devices.

1. Transport contaminated instruments/devices to prevent cross-contamination.
2. Follow work flow patterns to avoid cross-contamination of instruments/devices and supplies.
3. Clean and maintain dental instruments/devices and supplies prior to sterilization.
4. Prepare and use chemical agents for cleaning instruments/devices.
5. Prepare dental instruments/devices and supplies for sterilization.
6. Select the system for sterilization.
7. Select the system for sterilization monitoring (e.g., biological monitoring, chemical integrators).
8. Package and label instruments/devices for sterilization.
9. Load and unload the sterilizer.
10. Store and maintain integrity of sterile instruments/devices and supplies.

B. Demonstrate understanding of how to monitor and maintain processing equipment and sterilizers (e.g., ultrasonic cleaner, autoclave).

1. Interpret sterilization monitoring devices, errors and results.
2. Respond to equipment malfunctions.

Domain IV: Occupational Safety/Administrative Protocols (20%)

A. Demonstrate understanding of occupational safety standards and guidelines for personnel.

1. CDC Guidelines for Infection Control in Dental Health-Care Settings – 2003.
2. CDC Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care, 2016.
3. OSHA Bloodborne Pathogens standard as it applies to, but not limited to:

- a. engineering and work practice controls.
 - b. needle and sharps safety.
 - c. record keeping and training.
 - d. sharps exposure and post-exposure protocol (e.g., first aid procedures).
4. OSHA Hazard Communication standard as it applies to, but not limited to:
 - a. chemical exposure/hazard (e.g., amalgam, nitrous oxide, laser) and first aid.
 - b. engineering and work practice controls.
 - c. safety data sheets (SDS).
 - d. secondary containers.
 5. Federal regulations (e.g., EPA, FDA).

B. Demonstrate understanding of how to maintain and document programs/policies for infection control and safety, including but not limited to:

1. exposure control plan.
2. infection control breaches.
3. quality assurance (quality improvement).
4. sterilization logs/records.
5. training records.

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3. Miller, Chris, and Charles J. Palenik. *Infection Control and Management of Hazardous Materials for the Dental Team*. 6th ed. St. Louis, MO: Elsevier/Mosby, 2018.
4. Molinari, John, and Jennifer Harte. *Cottone's Practical Infection Control in Dentistry*. 3rd ed. Philadelphia, PA: Lippincott, 2010.
5. Phinney, Donna J., and Judy H. Halstead. *Dental Assisting: A Comprehensive Approach*. 4th ed. Clifton Park, NY: Delmar, 2013.

Organizational References

1. The Organization for Safety and Asepsis (OSAP). www.osap.org.
 - *From Policy to Practice: OSAP's Guide to the Guidelines*
 - *OSAP's OSHA & CDC Guidelines: Interact Training System*
2. The American Dental Assistants Association (ADAA). www.dentalassistant.org.
 - *Infection Control in the Dental Office: A Review for a National Infection Control Exam (Course #0906)*
 - *Guidelines for Infection Control in Dental Health Care Settings (Course #1305)*
3. The DALE Foundation. www.dalefoundation.org.
 - *DANB ICE Review*
 - *DANB ICE Practice Test*
 - *Glossary of Dental Terms*
 - *CDEA module: Understanding CDC's Summary of Infection Prevention Practice in Dental Settings: Basic Expectations for Safe Care*

4. Centers for Disease Control and Prevention (CDC). www.cdc.gov.
 - *Guidelines for Infection Control in Dental Health-Care Settings — 2003* (MMWR, Vol. 52, RR 17)
 - *Centers for Disease Control and Prevention. Summary of Infection Prevention Practices in Dental Settings: Basic Expectations for Safe Care. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health; 2016*
 - *Updated U.S. Public Health Service guidelines for the management of occupational exposures to HBV, HCV, and HIV and recommendations for postexposure prophylaxis* (MMWR, Vol. 50, RR 11)
5. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). www.osha.gov.
 - *Hazard Communication Guidelines for Compliance* (Publication 3111)
 - *Hazard Communication Standard* (Code of Federal Regulations #29, Part 1910)
 - *Bloodborne Pathogens Standard* (1910.1030)



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NELDA component exams

Anatomy, Morphology and Physiology (AMP)

Radiation Health and Safety (RHS®)

Infection Control (ICE)

CDA component exams

Radiation Health and Safety (RHS)

Infection Control (ICE)

General Chairside Assisting (GC)

COA component exams

Orthodontic Assisting (OA)

Infection Control (ICE)



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Measuring Dental Assisting Excellence®

General Chairside Assisting (GC)

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Exam Outline Overview

GC Exam Weighting by Domain

- I. Collection and Recording of Clinical Data (10%)
- II. Chairside Dental Procedures (45%)
- III. Chairside Dental and Laboratory Materials (13%)
- IV. Patient Education and Oral Health Management (10%)
- V. Prevention and Management of Patient Emergencies (12%)
- VI. Office Operations (10%)

GC Exam Administration

- Number of Questions: 120
- Time for Exam: 90 minutes
- Tutorial Time: 5 minutes
- Comment Time: 5 minutes

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Domain I: Collection and Recording of Clinical Data (10%)

A. Identify basic oral and dental anatomy, physiology and development, including but not limited to:

1. blood vessels.
2. bones.
3. glands/lymphatics.
4. muscles.
5. nerves.
6. oral cavity.
7. teeth.

B. Demonstrate understanding of the preliminary physical examination.

1. Record the purpose of patient's visit and/or chief complaint.
2. Assess patient's general physical condition and evidence of abnormal characteristics.
3. Take, record, observe and measure vital signs.
4. Recognize and describe abnormal findings in the head and neck region.

C. Demonstrate understanding of charting.

1. Identify permanent and primary teeth using the Universal numbering system.
2. Identify the surfaces of the tooth.
3. Chart conditions in the oral cavity and accurately transcribe the record.

D. Demonstrate understanding of diagnostic aids.

1. Prepare for and assist with the collection of diagnostic data (e.g., photographs).
2. Take impressions and pour models for diagnostic study casts.

E. Demonstrate understanding of treatment documentation.

1. Record treatment and prescriptions (e.g., medication, instructions) on chart.
2. Record recommended treatment and patient's acceptance or refusal of the treatment.
3. Record patient's compliance.

Domain II: Chairside Dental Procedures (45%)

A. Demonstrate understanding of four-handed dentistry techniques.

1. Prepare the treatment room.
2. Prepare treatment trays with armamentarium in sequence of use and delivery position.
3. Seat and prepare a patient, position and adjust equipment.
4. Use four-handed dentistry concepts in all treatment procedures, including but not limited to:
 - a. access and visibility during treatment procedures.
 - b. positioning during dental treatment.
 - c. instrument transfers.

B. Demonstrate understanding of how to select and prepare armamentarium:

1. impression trays.
2. chairside and dental emergency procedures, including but not limited to:
 - a. amalgam restorations.
 - b. anesthetics.
 - c. bleaching/whitening.
 - d. composite restorations.
 - e. crown and bridge preparation/cementation.
 - f. dental dam application.
 - g. desensitization of the teeth.
 - h. endodontic therapy.
 - i. extractions.
 - j. fluoride application.
 - k. immediate dentures.
 - l. impactions.
 - m. implants.

- n. incision and drainage.
- o. initial/final impressions.
- p. interceptive orthodontics.
- q. occlusal equilibration/adjustment.
- r. oral examination.
- s. oral prophylaxis.
- t. periodontal procedures (e.g., root planning and curettage).
- u. periodontal surgical dressing placement/removal.
- v. removable partial or full dentures.
- w. rotary instruments.
- x. sealant application.
- y. stainless steel crown placement/removal.
- z. suture placement/removal.
- aa. temporary cementation.
- bb. temporary restoration (e.g., provisionals, IRM, sedative/palliative fillings).
- cc. treatment of dry socket.

C. Demonstrate understanding of intraoral procedures, including but not limited to:

1. maintain field of operation (e.g., retraction, suction, irrigation, drying).
2. place and remove cotton rolls.
3. assist with and/or polish teeth.
4. assist with and/or apply topical fluoride.
5. assist with and/or perform a vitality test.
6. assist with and/or control minor bleeding after any surgical procedure.
7. assist with, place and/or remove temporary cement.
8. assist with and/or remove excess cement from coronal surfaces of teeth, restorations and appliances.
9. assist with and/or apply and remove the dental dam.
10. prepare, assist with, and/or apply and remove matrix bands.
11. assist with and/or apply topical anesthetic to site of injection.
12. assist with and/or monitor the administration of nitrous oxide/oxygen analgesia.
13. identify and change rotary instruments in dental handpieces.
14. assist with general dentistry and dental emergency procedures, including but not limited to:
 - a. administration of anesthetics.
 - b. cavity preparation and restoration.
 - c. crown and bridge restoration, preparation, temporization and cementation.

- d. desensitization of the teeth.
- e. endodontic therapy.
- f. fabrication of removable partial or full dentures.
- g. fluoride application.
- h. implants.
- i. occlusal equilibration/adjustment.
- j. occlusal registration.
- k. oral examination and data collection.
- l. oral prophylaxis.
- m. oral surgery.
- n. periodontal procedures.
- o. placement of sealants.
- p. placement of stainless steel crowns.
- q. post-operative treatment and complications.
- r. suture placement and removal.
- s. taking initial/final impressions.

D. Demonstrate understanding of patient management.

- 1. Calm and reassure apprehensive patients.
- 2. Manage patients, including patients with special needs, during routine clinical procedures.
- 3. Monitor and record patient's response to drugs/medications.

Domain III: Chairside Dental and Laboratory Materials (13%)

A. Chairside Dental Materials (Preparation, Manipulation, Application)

- 1. Impression
 - a. Describe how to prepare, mix, deliver and store materials for impressions:
 - i. alginate (e.g., irreversible hydrocolloid).
 - ii. elastomers.
 - iii. waxes.
- 2. Restorative
 - a. Describe how to prepare, mix, deliver and store restorative materials, including but not limited to:
 - i. amalgam.
 - ii. cements.

- iii. composites.
 - iv. dentin bonding materials.
 - v. glass ionomers.
 - vi. temporary restorative materials.
 - vii. varnishes, bases and liners.
 - b. Prepare and/or seat temporary crowns.
3. Sedative/Palliative
- a. Describe how to prepare, mix and store sedative/palliative materials, including but not limited to:
 - i. periodontal surgical dressings.
 - ii. post-extraction dressings.
 - iii. sedative dressings.
4. Other Dental Materials
- a. Describe how to select and manipulate finishing, polishing and cleaning agents.
 - b. Describe how to prepare, mix, deliver and store other dental materials, including but not limited to:
 - i. bleaching/whitening agents.
 - ii. bonding agents.
 - iii. endodontic materials.
 - iv. etchants.
 - v. pit and fissure sealants.

B. Laboratory Materials and Procedures

- 1. Describe how to select, manipulate and store materials, including but not limited to:
 - a. acrylic products or acrylic substitutes.
 - b. dental waxes.
 - c. gypsum products.
- 2. Demonstrate understanding of laboratory procedures, including but not limited to:
 - a. fabricate custom impression trays.
 - b. fabricate custom occlusal appliances and bleaching/whitening trays.
 - c. fabricate diagnostic casts (e.g., trimming and finishing).
 - d. polish fixed appliances and prostheses.
 - e. polish removable appliances and prostheses.

Domain IV: Patient Education and Oral Health Management (10%)

A. Demonstrate understanding of oral health information to be provided to the patient.

1. Patient education topics, including but not limited to:
 - a. advantages and disadvantages of various restorative materials or procedures.
 - b. causes of dental diseases.
 - c. classifications and importance of occlusion.
 - d. effect of systemic disease on the healing process.
 - e. functions of saliva.
 - f. functions of primary and permanent teeth and relationship of the supporting structures.
 - g. personal oral habits that can compromise general health.
 - h. stages of the eruption and exfoliation of the teeth.
 - i. special dental health needs (e.g., due to physical status or age).
 - j. procedures and services being delivered.
 - k. effects of types of fluoride, advantages of administration methods, and dangers of overdosage.

B. Demonstrate understanding of pre- and post-treatment instruction.

1. Provide oral and written pre- and post-treatment instructions (e.g., prescribed medications).
2. Care for removable and non-removable appliances and prostheses.

C. Demonstrate understanding of plaque control techniques, including but not limited to:

1. toothbrush selection and brushing techniques.
2. evaluate oral healthcare status and habits.
3. evaluate response to home-care therapy.
4. provide preventive oral healthcare information based on individual patient needs.
5. oral hygiene devices (e.g., toothbrush, floss, interdental aid, oral rinse, irrigating aid).
6. plaque disclosing aids.

D. Demonstrate understanding of nutrition.

1. Evaluate basic nutritional needs as they relate to dental health.
2. Describe relationship of diet to the development of caries.

Domain V: Prevention and Management of Patient Emergencies (12%)

A. Medical Conditions/Emergencies

1. Identify medical conditions that can cause medical emergencies, including but not limited to:
 - a. alcohol/substance abuse.
 - b. allergies.
 - c. asthma.
 - d. blood dyscrasias.
 - e. cancer.
 - f. cardiovascular disease.
 - g. diabetes mellitus or hypoglycemia.
 - h. emphysema.
 - i. epilepsy.
 - j. hypertension or hypotension.
 - k. kidney or liver problems.
 - l. pregnancy.
 - m. prosthetic replacements.
 - n. respiratory infection.
 - o. rheumatic fever.
2. Recognize medications related to the present and/or past medical/dental history.
3. Describe preventive measures to be used following drug administration to avoid drug-induced emergencies.
4. Describe how to respond to and assist in management of signs and symptoms of medical conditions/emergencies likely to occur in the dental office, including but not limited to:
 - a. airway obstruction.
 - b. allergic reactions.
 - c. blood loss.
 - d. cardiovascular or cerebrovascular irregularities.
 - e. contagious diseases.
 - f. diabetes- or epilepsy-related incidents.
 - g. fainting.
 - h. metabolic or neurologic disease.
 - i. reactions to drugs, anesthetics.
 - j. respiratory irregularities (e.g., hypo- or hyperventilation, asthma).
 - k. shock.

5. Describe how to assemble, maintain and recognize the use of drugs, emergency supplies, and equipment for the prevention and/or management of an emergency.
6. Describe how to prepare and post a listing of emergency support personnel.

B. Dental Conditions/Emergencies

1. Identify signs and symptoms of dental conditions/emergencies, including but not limited to:
 - a. oral contagious diseases.
 - b. soft tissue inflammations of the oral cavity.
 - c. hard tissue of the oral cavity.
 - d. dental intraoral trauma.
2. Describe how to implement and/or assist with the management of dental emergencies.

Domain VI: Office Operations (10%)

A. Supply and Inventory Control

1. Describe how to maintain and control supplies, including but not limited to:
 - a. manage backorders according to the inventory control system.
 - b. order supplies, instruments and equipment to maintain specified levels.
 - c. record and inventory items used.
 - d. rotate expendable supplies according to the expiration date.
 - e. rotate nonexpendable supplies according to the inventory control system.
2. Describe how to maintain security and records of controlled substances.

B. Maintenance of Equipment/Instruments

1. Describe how to perform preventive maintenance.
2. Describe how to store supplies (e.g., sterile disposable products, nitrous oxide, oxygen).

C. Demonstrate understanding of patient reception, communication and accounting, including but not limited to:

1. appointment control process.
2. basic concepts of third-party payment (e.g., insurance).
3. explain fees charged to a patient, as directed by the dentist.
4. financial management of a dental office.
5. initiate referral procedures for the patient, as directed.
6. receive and dismiss patients and visitors.

D. Legal Aspects of Dentistry

1. Demonstrate understanding of legal records, including but not limited to:
 - a. how to store items in patient records (e.g., radiographic images, histories, correspondence).
 - b. items included as part of a legally documented patient record.
 - c. legal significance of medical and dental histories.
 - d. precautions in lending records to another dental office.
 - e. how to record patient telephone communications and dental and medical consultations.
 - f. how to protect personal information.
2. Demonstrate understanding of legal responsibilities and regulations, including but not limited to:
 - a. action that a dental assistant should take after a threat to sue for malpractice.
 - b. consent for routine and emergency office dental care.
 - c. precautions to prevent lawsuits against dental personnel.
 - d. legal responsibilities of the dental assistant in relation to the state dental practice act.
 - e. patient refusal of recommended routine, surgical and emergency treatment.
 - f. patient's right to privacy according to Health Insurance Portability and Accountability Act (HIPAA) regulations.
 - g. responsibilities and/or obligations of the dentist and patients in the dentist-patient relationship.
 - h. Occupational Safety and Health Administration (OSHA) and Centers for Disease Control and Prevention (CDC) guidelines to maintain office compliance.

GC Exam Suggested References

DANB exam committees use the following textbooks and reference materials to develop this exam. This list does not include all the available textbooks and materials for studying for this exam; these are simply the resources that exam committee subject matter experts have determined provide the most up-to-date information needed to meet or surpass a determined level of competency for this exam. Any one reference will likely not include all the material required to study to take and pass the exam.

This list is intended to help prepare for this exam. It is not intended to be an endorsement of any of the publications listed. You should prepare for DANB certification and component exams using as many different study materials as possible.

Textbook References

1. Bird, Doni L., and Debbie S. Robinson. *Essentials of Dental Assisting*. 5th ed. St. Louis, MO: Elsevier/Saunders, 2013.
2. Bird, Doni L., and Debbie S. Robinson. *Modern Dental Assisting*. 11th and 12th ed. St. Louis, MO: Elsevier/Saunders, 2015 and 2017.
3. Gaylord, Linda J. *The Administrative Dental Assistant*. 3rd and 4th ed. St. Louis, MO: Elsevier/Saunders, 2012 and 2017.
4. Hatrick, Carol D., and W. S. Eakle. *Dental Materials: Clinical Applications for Dental Assistants and Dental Hygienists*. 3rd ed. St. Louis, MO: Elsevier/Saunders, 2016.
5. Little, James W., Donald A. Falace, Craig S. Miller and Nelson L. Rhodus. *Dental Management of the Medically Compromised Patient*. 8th ed. St. Louis, MO: Elsevier/Mosby, 2013.
6. Malamed, Stanley F. *Medical Emergencies in the Dental Office*. 7th ed. St. Louis, MO: Elsevier/Mosby, 2015.
7. Phinney, Donna J., and Judy H. Halstead. *Dental Assisting: A Comprehensive Approach*. 4th ed. Clifton Park, NY: Delmar, 2013.

Organizational References

1. American Dental Assistants Association (ADAA). www.dentalassistant.org
 - *General Chairside Assisting: A Review for a National Chairside Exam (Course #613)*.
2. The DALE Foundation. www.dalefoundation.org.
 - *DANB GC Review Part I*
 - *DANB GC Review Part II*
 - *DANB GC Practice Test*
 - *Glossary of Dental Terms*



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