

# Fundamentals of Dental Assisting Curriculum

## 2013

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Adapted and revised to meet the requirements for entry-level and expanded functions Dental Assistant preparing for employment in dental healthcare settings through secondary and postsecondary educational and training programs.

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# **SECTION 1: Didactic Education**

## FUNDAMENTALS OF DENTAL ASSISTING

Educational parameters of the didactic component of the Fundamentals of Dental Assisting Curriculum:

<b>Unit</b>	<b>Title</b>	<b>Number of Tasks</b>
1.0	Introduction to the Dental Profession	38
2.0	Dentistry and the Law	61
3.0	Dental Terminology	190
4.0	Preventative Oral Health	62
5.0	Infection Control	214
6.0	Patient Management	70
7.0	Anatomy	108
8.0	Dental Equipment	51
9.0	Dental Instruments and Procedures	112
10.0	Clinical Records	84
11.0	Oral Pathology	95
12.0	Emergency Care	62
13.0	Dental Anesthesia	78
14.0	Chair-Side Assisting	70
15.0	Dental Materials	77
16.0	Obtaining Alginate Impressions	151
17.0	Introduction to Dental Radiography	
<b>Total</b>		<b>1,524</b>

## **1.0 Introduction to the Dental Profession**

### Intended Outcome

Given information about the dental team, specialties, and dental assisting credentials, the student will perform 80% of the following tasks with accuracy on the didactic exam.

### Tasks

Number of tasks to master = 38

### **1.01 The Dental Team**

- A. Identify 5 members of the dental profession.
  - 1. Dentist
  - 2. Dental Assistant
  - 3. Dental Hygienist
  - 4. Business Assistant
  - 5. Dental Laboratory Technician
  
- B. Define the 5 members of the dental team.
  - 1. Dentist: Leader of the dental team, responsible for all of the treatment and care of the patient.
  - 2. Dental Assistant: Aids the dentist in diagnosis, treatment, and dental care.
  - 3. Dental Hygienist: Concerned with the prevention of dental disease; specializing in the cleaning, polishing, and radiographing teeth; periodontal treatment; and patient education.
  - 4. Business Assistant: Responsible for the smooth and efficient operation of the business office.
  - 5. Dental Laboratory Technician: Performs dental lab procedures according to a written prescription of a licensed dentist.

## 1.02 The Dental Specialties

- A. Describe the 9 specialty fields of dentistry.
1. Dental public health: Involves public/community education to control and prevent disease.
  2. Endodontics: Concerned with the cause, diagnosis, prevention, and treatment of diseases and injuries to the pulp and associated structures.
  3. Oral and maxillofacial radiology: Enhance imaging techniques to locate tumors and infectious diseases of the jaw, assist in trauma cases, and help pinpoint temporomandibular disorders (newest of the specialties).
  4. Oral and maxillofacial surgery: Involves the diagnosis and surgical treatment of diseases, injuries, and defects of the oral and maxillofacial regions.
  5. Oral pathology: Concerned with the nature of the diseases affecting the oral cavity and adjacent structures. Perform biopsies and work closely with oral surgeons to provide a diagnosis.
  6. Orthodontics: Involves the diagnosis, prevention, interception, and treatment of all forms of malocclusion of the teeth and associated structures.
  7. Pediatric dentistry: Concerned with the oral healthcare of children from birth to adolescence, often dealing with emotional or behavioral problems.
  8. Periodontics: Concerned with the diagnosis and treatment of the oral tissues supporting and surrounding the teeth.
  9. Prosthodontics: Concerned with the restoration and replacement of natural teeth with artificial replacements.

### 1.03 Dental Assisting Credentials

For the most current information check [www.danb.org](http://www.danb.org).

- A. Identify 7 acronyms used in the identification of Dental Assistants.
  - 1. CDA: Certified Dental Assistant
  - 2. CDPMA: Certified Dental Practice Management Administrator
  - 3. COA: Certified Orthodontic Assistant
  - 4. COSMA: Certified Oral and Maxillofacial Surgery Assistant
  - 5. RDA: Registered Dental Assistant
  - 6. EFDA: Expanded Function Dental Assistant
  - 7. CPDA: Certified Preventative Dental Assistant
  
- B. Explain how each of the 7 Dental Assisting credentials may be obtained.
  - 1. CDA: Granted by the Dental Assisting National Board after successful completion of the national certification examination.
  - 2. CDPMA: This credential is no longer granted but is still recognized. Granted by the Dental Assisting National Board to recognize successful completion of the specialty examination in Dental Practice Management.
  - 3. COA: Granted by the Dental Assisting National Board to recognize successful completion of the specialty examination on Orthodontics.
  - 4. COMSA: This credential is no longer granted but is still recognized. Granted by the Dental Assisting National Board to recognize successful completion of a specialty examination in oral and maxillofacial surgery.
  - 5. RDA: Given by some states to indicate that specific requirements have been met to practice expanded and advanced functions for that state.
  - 6. EFDA: Given by some states to indicate specific requirements have been met to practice expanded and advanced functions of that state.
  - 7. CPDA: The newest credential granted by the Dental Assisting National Board to recognize successful completion of the specialty exam in the areas of coronal polishing, pit and fissure sealants, topical fluoride, and topical anesthetic.

### 1.04 Professional Organizations

- A. List 5 dental organizations and the profession they represent.
  - 1. ADA: American Dental Association
  - 2. ADHA: American Dental Hygiene Association
  - 3. ADAA: American Dental Assistants Association
  - 4. DANB: Dental Assisting National Board
  - 5. ADLTA: American Dental Laboratory Technician Association

## 2.0 Dental Ethics and the Law

### Intended Outcome

Given information about legal, ethical and risk management considerations, the student will be able to perform 80% of the following tasks on the didactic examination.

### Tasks

Number of tasks to master = 61

### 2.01 Legal Considerations

- A. Identify 5 agencies that regulate dentistry.
  - 1. State Board of Dentistry
  - 2. Drug Enforcement Agency
  - 3. State Board of Pharmacy
  - 4. Occupational Safety and Health Administration
  - 5. Environmental Protection Agency
  
- B. Identify current prohibitions specified by Rule 35 of the Idaho Dental Practice Act which can be found at <http://isbd.idaho.gov>.
  
- C. Define 2 types of statutory law that affects dentistry.
  - 1. Civil law: Crimes against an individual.
    - a. Contract law refers to a binding agreement between two or more people.
    - b. Tort law involves acts, intentional or unintentional, that causes harm to a person or damage to property.
    - c. Administrative law involves regulations established by government agencies.
  - 2. Criminal law: Crimes against society.
    - a. Felony is a major crime; in dentistry this includes insurance fraud and drug abuse.
    - b. Misdemeanor is a lesser crime; in dentistry this usually involves an infraction of the dental practice act.
    - c. Infraction is a minor offense such as a traffic violation.
  
- D. List who may be the subject of a law suit.
  - a. Initiating Dentist
  - b. Dental Assistant
  - c. Hygienist
  
- E. State the purpose of professional liability insurance.
  
- F. Explain who owns the dental record.

G. Define what a Dental Practice Act is.

1. The Dental Practice Act specifies the legal requirements for the practice of dentistry within each state.

H. Define reciprocity.

1. Reciprocity is a system that allows individuals in one state to obtain a license in another state without retesting.

I. Define 3 types of supervision according the Idaho State Dental Practice Act.

1. Direct Supervision: Requires that a dentist diagnose the condition to be treated, a dentist authorize the procedure to be performed, a dentist remain in the dental office while the procedure is performed, and before dismissal of the patient a dentist approves the work performed by the dental auxiliary.
2. Indirect Supervision: Requires that a dentist authorize the procedure and that a dentist be in the dental office while the procedure is performed.
3. General Supervision: Requires that a dentist authorize the procedure which is carried out, but does not require that a dentist be in the office when the authorized procedure is performed.

J. Define malpractice.

1. Malpractice: Professional negligence or failure to provide due care or the lack of due care.

K. Define standard of care.

1. Standard of care: The level of knowledge, skill and care comparable with that of other dentists who are treating similar patients under similar conditions.

## 2.02 Ethical Considerations

- A. Define risk management.
  - 1. Risk management: Procedures and practices that are used to avoid lawsuits.
  
- B. List 7 elements of an informed consent.
  - 1. Description of treatment
  - 2. Alternatives of treatment
  - 3. Risk of complications
  - 4. Prognosis
  - 5. Cost
  - 6. Time needed to complete
  - 7. Age and mental capacity of patient
  
- C. List 2 ways to obtain informed consent.
  - 1. Verbal consent
  - 2. Written consent
  
- D. List 13 ways to manage risk.
  - 1. Informed consent
  - 2. Review medical history
  - 3. Emergency preparedness
  - 4. Clear/realistic patient expectations
  - 5. Maintain high level of skill
  - 6. Adequate patient safety equipment
  - 7. Disclosure of unexpected events
  - 8. Comprehensive/accurate treatment record
  - 9. Never criticize previous treatment
  - 10. Protect privacy of patient (HIPPA)
  - 11. Document privacy of patient (HIPPA)
  - 12. Identify responsibility and obligations in the dentist/patient relationship
  - 13. How to respond to a threat of malpractice suit
  
- E. List 6 guidelines for managing chart entries as a legal record.
  - 1. Keep a separate chart for each patient
  - 2. Correct errors properly
  - 3. Make chart entry during patient visit, do not rely on memory
  - 4. Write legibly in ink and date and initial each entry
  - 5. The entry should be complete
  - 6. Never change or alter the chart after a problem arises

## 3.0 Dental Terminology

### Intended Outcome

Given information about the value of dental terminology, prefixes, word roots and suffixes the student will perform the following tasks with 80% accuracy on the didactic examination.

### Tasks

Number of tasks to master = 190

### 3.01 Dental Prefixes

A. List and define the following 83 dental prefixes.

- |             |                                    |               |                                     |
|-------------|------------------------------------|---------------|-------------------------------------|
| 1. a-; an-  | without, away from, not            | 26. edem/a-   | swelling                            |
| 2. ab-      | from, away negative, absent        | 27. endo-     | within                              |
| 3. ad-      | increase, toward                   | 28. epi-      | over, upper, upon                   |
| 4. an-      | without, not                       | 29. erythr/o  | red                                 |
| 5. ana-     | up, throughout                     | 30. eth/m-    | sieve                               |
| 6. ano-     | up                                 | 31. eti/o     | cause                               |
| 7. anti-    | opposed to, against, counteracting | 32. ex-; ex/o | out away from, completely           |
| 8. auto-    | self                               | 33. extra-    | beyond, outside                     |
| 9. bi-      | two, twice, double                 | 34. faci/a    | face, appearance                    |
| 10. bio-    | life                               | 35. fore-     | in front of                         |
| 11. brady-  | slow                               | 36. gene-     | origin, beget                       |
| 12. canth-  | corner of the eye                  | 37. hem/a/i   | blood                               |
| 13. circum- | around                             | 38. hepa-     | liver                               |
| 14. contra- | against, opposed                   | 39. homo-     | same                                |
| 15. de-     | from, lack of                      | 40. hydra-    | water                               |
| 16. demi-   | half                               | 41. hyo-      | U-shaped, horseshoe-shaped          |
| 17. dens-   | tooth                              | 42. hyper-    | above, excessive, beyond            |
| 18. dent-   | tooth, teeth,                      | 43. hypo-     | less than, below, under             |
| 19. derma-  | skin                               | 44. idio-     | peculiar, one's own                 |
| 20. di-     | twice double                       | 45. inter-    | in the midst, between               |
| 21. dia-    | complete, through                  | 46. intra-    | within                              |
| 22. dors-   | back                               | 47. infra-    | beneath, under, inferior            |
| 23. dys-    | bad, difficult, painful            | 48. leuk/o    | white                               |
| 24. e-/ec-  | out of, from                       | 49. macro-    | large                               |
| 25. ecto-   | external, outside                  | 50. mal-      | evil, sickness, disorder, bad, poor |
|             |                                    | 51. mesi/o    | middle                              |

52. mucos/a	mucus membrane	69. pyo-	pus
53. myel/o	spinal cord, bone marrow	70. re-	back, again
54. myo-	muscle	71. retro-	backwards
55. neo-	new	72. sub-	under, beneath, less normal
56. necr/a	death, dead	73. super-	above, superior, beyond
57. nephro	kidney	74. supra-	above, excessive
58. neuro-	nerve	75. syn-	together, union
59. nutri-	feed, nourish	76. tachy-	fast
60. pan-	all	77. tic-	relation, belonging to
61. para-	besides, beyond	78. trans-	across, over, beyond, through
62. peri-	around, about	79. tri-	three, trice, third
63. poly-	many, much	80. ventro-	body front
64. post-	behind, after	81. ultra-	beyond, excess
65. pre-	before, in front of	82. un-	not
66. pseudo-	false	83. uni-	one
67. ptery-	a wing		
68. ptya/l	spit, saliva		

### 3.02 Dental Root Words

A. List and define the following 56 dental root words.

1. alve/o	alveolus (tooth socket bone)	22. cyt	cell
2. amalg	soft mass	23. decidu	shedding
3. amel/o	tooth, enamel tissue	24. dens/t	tooth
4. angio	vessel	25. di	across, separate, apart
5. ankyl	anchored, crooked	26. diastem/a	space, interval
6. anter/o	before, in front of	27. dist/o	farthest from center
7. apic/o	apex of the root, tip	28. edem/a	swelling
8. brux/i/o	chew, grind	29. edentul/o	without teeth
9. bucc	cheek	30. erythr/o	red
10. calcul	small stone, limestone	31. fluor/o	fluoride
11. cardi/o	heart	32. foss/o	shallow depression
12. carcin/o	cancer	33. frene	frenum, connecting tissue
13. cari/es/o	rottenness, decay	34. gingiv	gingival, gum tissue
14. cephal/o	head	35. gloss/o	tongue
15. cheil/o	lip	36. halit/o	breath
16. clavi/o	a club	37. hem/a/o	blood
17. cocci	round, spherical, bacteria	38. incis/o	incisor tooth
18. colli	neck	39. infer/o	under, below
19. coron/a	crown	40. labi/o	lip area
20. cyan/o	blue	41. lacrim/o	tears
21. cyst	fluid filled sac	42. lingu/o	tongue

43. lip/i/o	fat	50. muc/o	tissue lining an orifice
44. lith/o	stone	51. my/o	muscle
45. mandibul/a	lower jaw	52. occlus/o	occlusion, jaw closing
46. mastic/o	chew	53. orth/o	straight, proper order
47. maxill/a/o	upper jaw	54. stoma	mouth
48. melan/o	black	55. tempor/o	temporal bone/joint
49. mesi/o	middle, mid-line		

### 3.03 Dental Suffixes

A. List and define the following 52 dental suffixes.

1. -ac, -ic, -ar	describes or shows relation to	26. -lith	stone
2. -al	used to indicate connection with	27. -logist	specialist
3. -algia/-esia	pain, suffering	28. -logy	study of
4. -ia	state of being	29. -lysis	destruction
5. -ase	enzyme	30. -nomy	science of
6. -cide	kill	31. -oid	like, resembling
7. -cise	cut into	32. -ology	study of
8. -cyte	cell	33. -oma	tumor, swelling
9. -dema	swelling	34. -orrhoea	flow, excessive flow
10. -ectomy	surgical removal	35. -otomy	cutting into, incision into
11. -emia	blood	36. -osis	abnormal, condition of
12. -eme/-tic/-sis	producing vomiting	37. -ous	pertaining to, full of
13. -esthesia	sensation	38. -path/o/y	disease
14. -eum	a place where	39. -phob	fear, dread
15. -graph/y	picture, recording of a picture	40. -plasty	surgical correction
16. -gram	graph, picture (used in radiology)	41. -pnea	breathing
17. -iama	medicine, remedy	42. -rrhage	excessive flow
18. -iasis	abnormal condition	43. -rrhea	excessive
19. -im	not, in, into	44. -scoli/o	twisted
20. -ism	state of, condition	45. -scopy	scan, visual exam
21. -ist	specialist in, superlative	46. -sis	the act of
22. -itis	inflammation of	47. -stalsis	constriction, contraction
23. -ium	small	48. -tic	pertaining to
24. -ize	take away, remove	49. -tome	cutting instrument
25. -lar	describing, about	50. -trophy	development, growth, nourishment
		51. -um	pertaining to
		52. -y	act, result of an act

## 4.0 Preventive Oral Health

### Intended Outcome

Given information about preventive dentistry, plaque removal, fluoride, and nutrition, the student will be able to perform the following tasks with 80% accuracy on the didactic examination.

### Tasks

Number of tasks to master = 62

#### 4.01 Comprehensive Preventive Dentistry

- A. Explain the goal of preventive dentistry to help all people attain optimal oral health for their entire lives.
- B. Describe the 5 parts of a comprehensive preventive dentistry program.
  - 1. Nutrition
  - 2. Patient education
  - 3. Plaque control
  - 4. Fluoride therapy
  - 5. Sealants

#### 4.02 4.02 Bacterial Plaque

- A. Explain the composition of plaque.
  - 1. Plaque consists of colonies of bacteria, food debris and saliva that attach to the teeth above and below the gum line. Plaque reforms within 24 hours of removal.
- B. List the 3 steps of plaque formation.
  - 1. Pellicle formation
  - 2. Bacteria attach to the pellicle
  - 3. Bacteria multiply and mature

#### 4.03 Dental Calculus

- A. Define dental calculus.
  - 1. Dental calculus: Mineralized bacterial plaque. It is a tenacious deposit that forms on the clinical crowns and roots of teeth.
- B. List the two types of dental calculus.
  - 1. Supragingival calculus
  - 2. Subgingival calculus

#### 4.04 Dental Caries

- A. List 5 steps that result in the development of caries.
  - 1. Cariogenic food, in the form of carbohydrates, is mixed in with the plaque.
  - 2. Plaque and bacteria mix together and the pH of the plaque becomes more acidic.
  - 3. Acid formation begins.
  - 4. Frequent exposure of tooth to acid begins demineralization of the tooth structure.
  - 5. Caries formation.
- B. Define cariogenic.
  - 1. Cariogenic: Producing or promoting tooth decay.
- C. List 3 factors that contribute to dental caries.
  - 1. Undisturbed plaque on teeth
  - 2. A diet high in cariogenic foods
  - 3. Frequent exposure to sucrose

#### 4.05 Periodontal Disease

- A. List the main contributing factor in periodontal disease.
  - 1. Bacterial plaque
- B. List 4 contributing factors in periodontal disease.
  - 1. Inadequate plaque control
  - 2. Lack of patient compliance
  - 3. Tobacco use
  - 4. Systemic diseases

#### 4.06 Patient Education

- A. Evaluation of patients.
  - 1. Oral health status and habits
  - 2. Use appropriate disclosing aides
  - 3. Provide individualized education plan
  - 4. Evaluate patients' progress
- B. List 4 factors in toothbrush selection.
  - 1. Soft bristles
  - 2. Easily cleaned
  - 3. Replaceable every 3 to 4 months
  - 4. Adapted to individual patient
- C. Describe 2 tooth brushing techniques.
  - 1. Bass or intrasulcular brushing technique
  - 2. Rolling or circular brushing technique
- D. List 3 flossing considerations.
  - 1. Floss every 24 hours
  - 2. Most effectively removes plaque between teeth
  - 3. Choice of type depends on individual patient needs

E. Identify 5 special interdental aids.

1. Floss holder
2. Floss threader
3. Stimulators
4. Interproximal brush
5. Oral irrigation device

## 4.07 Fluoride

A. Define 2 types of fluoride.

1. Systemic: Obtained by eating or drinking.
2. Topical: Applied as a gel, rinse, or varnish.

B. Identify 2 considerations concerning systemic fluoride.

1. 1 PPM optimum amount.
2. Obtained through fluoridated drinking water (added or natural), foods with fluoride, or through drops or tablets.

C. Define 4 types of topical fluoride.

1. 8-10% stannous fluoride: Applied every 6 to 8 months, is unstable, and may stain teeth.
2. 1.23% acidulated phosphate fluoride: Applied every 6 months by trays for 1 to 4 minutes. No food or drink for 30 minutes. Stored in plastic.
3. Neutral 2% sodium fluoride: Applied to newly erupted teeth at ages 3, 7, 10, 13. Application is for 3 minutes once a week for 4 weeks.
4. 5% sodium fluoride varnish: Applied to clean dry teeth. No food or brushing for two hours.

D. Explain the possible dangers of fluoride.

1. Dental fluorosis: Mottled or discolored enamel from too much systemic fluoride.
2. Overdose.

## 4.08 Nutrition

A. Define cariogenic foods.

1. Cariogenic foods: Sticky, sugary foods, refined carbohydrates.

B. Describe 3 effects cariogenic foods have on dental health

1. Promotes plaque formation
2. Promotes tooth decay
3. Promotes periodontal disease

C. List the components of a dietary analysis.

1. Patients prepare 3-day food diary
2. Review with patient using a dietary form
3. Suggest positive changes to patient

## 5.0 Infection Control

### Intended Outcome

Given information about disease transmission, infectious diseases, universal precautions, the treatment room, cleaning, sterilization, disinfecting, disinfectants, hazards, and instrument sterilization, the student will be able to perform the following tasks with 80% accuracy on the didactic examination.

### Tasks

Number of tasks to master = 214

As infection control policies and procedures can change more quickly than the texts, it is important to stay informed of the most current techniques. For the most current technologies visit the following websites often: <http://www.osap.org/> • <http://osha.gov/> • <http://www.cdc.gov/>

### 5.01 Disease Transmission

- A. Define pathogenic.
  - 1. Pathogenic: Disease causing microorganisms
- B. Define spore.
  - 1. Spore: Highly resistant form of bacteria that are able to remain inactive under unfavorable conditions and can become active when conditions are favorable.
- C. List 6 modes of disease transmission in a dental office.
  - 1. Direct transmission
  - 2. Indirect transmission
  - 3. Airborne transmission
    - a. Aerosol
    - b. Spray
    - c. Spatter
  - 4. Parenteral transmission
  - 5. Bloodborne transmission
  - 6. Water transmission

- D. Define 3 methods for airborne transmission.
1. Splatter: Large particles, such as tooth fragments and debris, are released into the air during cavity preparations.
  2. Mists: Droplets transported via coughing causing respiratory infections.
  3. Aerosols: Microorganisms are found in the aerosols created by ultrasonic scalers, high-speed handpieces, and the use of air-water syringes.
- E. Define cross-contamination.
1. Cross-contamination: The spread of microorganisms from one source to another source.
- F. List 5 methods in which cross-contamination can occur.
1. Patient to dental team
  2. Patient to patient
  3. Dental team to patient
  4. Dental office to community
  5. Community to dental office to patient
- G. List 3 ways to prevent cross-contamination.
1. Reduction of pathogenic microorganisms
  2. Breaking the chain of disease transmission
  3. Application of universal precautions

## 5.02 Infectious Diseases

- A. List and explain the 5 types of hepatitis and the route of transmission for each type.
1. Hepatitis A: Fecal and oral
  2. Hepatitis B (HBV): Blood, saliva and body fluids
  3. Hepatitis C: Percutaneous, blood, and contaminated needles
  4. Hepatitis D (Delta): Co-infection with hepatitis B, blood, sexual contact, and perinatal
  5. Hepatitis E: Fecal, oral, and contaminated water
- B. List 5 types of individuals at risk for contracting hepatitis B.
1. Patients with active or chronic liver disease
  2. Military populations stationed in countries with a high incidence of hepatitis B
  3. Infants born to HIV-infected mothers
  4. IV drug users
  5. Heterosexually active persons with multiple sexual partners
- C. Explain the time interval for administering the hepatitis B vaccine.
1. This is administered in 3 doses—the initial dose and then at 1 and 6 months.
- D. List 2 types of herpes viruses.
1. Herpes simplex virus-1
  2. Herpes simplex virus-2
- E. List 3 reasons to postpone treatment for a patient with an active herpetic lesion.

1. Contiguousness of the lesion
2. Transfer of the virus to other areas of the face
3. Irritation to the lesion from dental procedures can prolong healing

F. Define the term HIV.

1. HIV: Human immunodeficiency virus

G. List and explain 3 modes of transmission for HIV.

1. Perinatal: Transmission across the placenta, during delivery or breastfeeding
2. Sexual contact: Heterosexual or homosexual relations
3. IV drug users: Shared or contaminated needles

H. List 4 other diseases of concern to dental healthcare workers.

1. Tuberculosis
2. Tetanus
3. Legionnaires
4. Measles

### 5.03 Prevention of Disease Transmission

A. Define the 4 factors of disease transmission.

1. Virulence
2. Pathogenic organisms must be present in quantities and concentration sufficient to overtake the body defenses
3. A susceptible host must be present, one who cannot resist infection
4. Pathogens must have means of entering the body or a portal of entry

B. Explain 8 methods used to prevent disease transmission.

1. Eliminating or controlling the organisms found in the oral cavity by brushing teeth or rinsing with an antiseptic mouthwash.
2. Interruption of transmission of organisms by the use of rubber dam and high speed evacuation system.
3. Wearing protective eyewear, gloves and mask (universal precautions).
4. Sterilization of dental instruments by autoclaving.
5. Use of disposables when possible.
6. Immunization of dental personnel.
7. Avoid procedures on patients with lesions of communicable diseases.
8. Properly store all instruments and materials.

## 5.04 OSHA Bloodborne Pathogens Standard

- A. List the components required the OSHA bloodborne pathogen standards.
  - 1. Exposure control plan
  - 2. Standard and universal precaution
  - 3. Categorization of employees
  - 4. Post exposure management
  - 5. Employee training
  - 6. Hepatitis B immunization
  
- B. List OSHA bloodborne pathogens standard training requirements.
  - 1. Epidemiology, modes of transmission, and prevention of HBV and HIV
  - 2. Risks to the fetus from HBV and HIV
  - 3. Location and proper use of all protective equipment
  - 4. Proper work practices using universal precautions.
  - 5. Meaning of color codes, biohazard symbol, and precautions to following handling infectious waste.
  - 6. Procedures to follow if needlestick or other injury occurs.
  
- C. Describe management of an exposure incident.
  - 1. Document routes of exposure
  - 2. Document source
  - 3. Request blood screening of source
  - 4. Advise employee to be tested
  - 5. Provide prophylaxis treatment
  - 6. Provide appropriate counseling
  - 7. Evaluate post incident illness

## 5.05 Universal Precautions

- A. Define universal precautions.
  - 1. Universal precautions: Guidelines based on treating all human blood and body fluids including saliva as potentially infectious.
- B. Define standard precautions.
  - 1. Standard precautions: Standard of care designed to protect healthcare providers from pathogens that can spread by blood or other body fluid via excretion or secretion; expands upon the concept of universal precautions.
- C. List the 4 items of personal protective equipment (PPE).
  - 1. Protective clothing
  - 2. Face masks
  - 3. Eyewear
  - 4. Gloves
- D. List and explain 7 appropriate personal protective guidelines.
  - 1. Uniform tops should be closed at the neck, disposable or easily laundered, and have long-sleeves with fitted cuffs. Pants and socks should cover the legs and ankles.
  - 2. Clinic attire must not be worn in the staff lounge or outside the dental office. Clothing must be changed daily.
  - 3. Hair should be worn off the shoulders and away from the face. Facial hair should be covered with a face mask or shield.
  - 4. Face masks must have a high bacterial filtration efficiency rate. Masks should be changed after each patient or after becoming splattered and/or saturated.
  - 5. Protective eyewear should have wide side shields to protect the area around the eyes and shatterproof lenses that are made of sturdy plastic.
  - 6. Gloves should be impermeable to saliva, blood, and bacteria and fit snug over the cuffs of the uniform.
  - 7. Other barrier items such as dental dams
- E. Describe the 6 guidelines for use of gloves.
  - 1. Gloves must be worn by all dental staff during the patient's treatment.
  - 2. Torn or damaged gloves must be replaced immediately.
  - 3. Do not wear jewelry under gloves.
  - 4. Change gloves frequently, with each new patient or approximately every hour.
  - 5. Contaminated gloves should be removed before leaving the operatory during patient treatment.
  - 6. Hands must be washed after glove removal and before re-gloving.

F. List 3 types of gloves worn.

1. Overgloves
2. Utility gloves
3. Examination gloves

G. List 3 principles of effective hand washing.

1. Reduction of the bacterial flora on the skin
2. Removal of surface dirt and loosened debris
3. Provide disinfection with a long-acting antiseptic

H. List the 7 steps for washing and drying of hands.

1. Remove all jewelry
2. Wet hands with warm water
3. Apply an ample amount of antibacterial liquid soap
4. Vigorously rub hands together under a stream of water
5. Rub together for a minimum of 15 seconds
6. Rinse hands with cool water
7. Thoroughly dry your hands using a paper towel

I. State 3 guidelines for handling contaminated laundry.

1. Protective clothing should be laundered in the office and universal precautions are followed when handling the clothing.
2. Disposable gowns are discarded daily, more often if visibly soiled.
3. Contaminated clothing that is removed from the office must be in a leak proof bag that is labeled "Biohazard."

## 5.06 Management of Hazardous Materials

- A. List 3 organizations that regulate the profession of dentistry.
  - 1. Occupational Safety and Health Administration (OSHA)
  - 2. Centers for Disease Control (CDC)
  - 3. Environmental Protection Agency (EPA)
  
- B. List 4 classifications of waste.
  - 1. General waste
  - 2. Hazardous waste
  - 3. Contaminated waste
  - 4. Infectious or regulated waste
  
- C. List 4 methods for disposal of waste.
  - 1. Gloves, mask, and barriers contaminated with body fluids or blood should be discarded in impermeable plastic bags as general waste.
  - 2. Sharps should be placed in a puncture resistant, leak proof container and labeled as biohazard.
  - 3. Blood, blood soaked materials, tissue, and teeth should be placed in leak proof containers, labeled biohazard, and disposed of according to state guidelines for infectious waste.
  - 4. Proper disposal of liquid chemicals or solid chemicals may vary with local and state waste management agencies. Check with the local agencies in your area.
  
- D. List the 5 parts of the OSHA hazard communication standard.
  - 1. Written
  - 2. Chemical inventory
  - 3. MSDS sheets
  - 4. Container labeling
  - 5. Employee training
  
- E. List the general protection used against chemical hazards.
  - 1. Hand and eye protection
  - 2. Ventilation
  - 3. Handling and Storage
  - 4. Disposal

## 5.07 Cleaning /Pre-cleaning

- A. Define cleaning/pre-cleaning.
  - 1. Cleaning/pre-cleaning: Initial removal of debris and reduction of bio-burden.
  
- B. List 3 appropriate methods for cleaning instruments prior to sterilization.
  - 1. Ultrasonic cleaning
  - 2. Soaking instruments in a disinfectant solution
  - 3. Automatic washers
  
- C. Explain 3 advantages of an ultrasonic cleaner.
  - 1. Reduced risk to operator from contact with contaminated instruments
  - 2. Penetration into difficult areas of instruments where brushes cannot reach
  - 3. Improved effectiveness in removing debris and blood from instruments
  
- D. List the 4 steps for cleaning instruments manually.
  - 1. Wear heavy duty gloves, mask, and protective eyewear. Dismantle instruments if parts are detachable.
  - 2. Use detergent and scrub instruments with a brush under running water.
  - 3. Brush away from the body and avoid splashing the surrounding area.
  - 4. Rinse instruments thoroughly and dry on paper towels.

## 5.08 Disinfection

- A. Define disinfection.
1. Disinfection: Killing or inhibiting pathogens by chemical means. Spores are not killed by disinfection.
- B. Define the term disinfectant.
1. Disinfectant: Chemicals that are applied to inanimate objects (i.e., countertops) that cannot be sterilized.
- C. State the 3 types of disinfectants and their biocidal activity.
1. High level inactivates all forms of bacteria, fungi, spores, and viruses.
  2. Intermediate level inactivates all forms of microorganisms except spores.
  3. Low level inactivates vegetative bacteria and certain viruses, but does not destroy spores, tubercle bacilli, or non-lipid viruses.
- D. List 5 properties of an ideal disinfectant.
1. Broad spectrum
  2. Nontoxic
  3. Easy to use
  4. Fast acting
  5. Economical
- E. Define the 4 recommended chemical disinfectants.
1. Chlorines
    - a. Sodium hypochlorite is unstable, use distilled water to improve stability
    - b. Economical
    - c. Harmful to the eyes and skin
  2. Glutaraldehydes
    - a. Solution is activated when the 2 containers are mixed
    - b. Not used as a surface disinfectant
    - c. Toxic fumes
    - d. Caustic to skin and eye
  3. Iodophores:
    - a. Broad spectrum antimicrobial
    - b. Hard water inactivates iodophores
    - c. Widely used for surgical scrubs and liquid soaps
  4. Combination phenolics
    - a. Used as surface disinfectants
    - b. Broad spectrum with residual biocidal activity

## 5.09 Sterilization

- A. Define sterilization.
  - 1. Sterilization: A process, usually by heat, by which all forms of life, including spores, are completely destroyed.
  
- B. Explain the 4 approved methods for sterilization.
  - 1. Moist heat or steam under pressure: Sterilization is achieved by the action of heat and moisture. Pressure is used to reach high temperatures
  - 2. Dry heat: Sterilization is achieved by heat conducted from the exterior surface to the interior of the object.
  - 3. Chemical vapor steam: A combination of chemicals is heated under pressure which produces a gas-sterilizing agent.
  - 4. Ethylene oxide: Commonly used in hospitals. Gaseous sterilization using ethylene oxide.
  
- C. List 2 items that can be sterilized using dry heat.
  - 1. Metal instruments in containers
  - 2. Instruments that may corrode or rust if exposed to moisture
  
- D. Explain 2 advantages for using steam under pressure.
  - 1. All spores, microorganisms, and viruses are destroyed quickly.
  - 2. Economical method for sterilizing instruments.
  
- E. List the temperatures for dry heat, steam under pressure and chemical vapor:
  - 1. Dry heat
    - a. 320°F for 2 hours
    - b. 340°F for 1 hour
  - 2. Steam under pressure
    - a. 250°F at 15 pounds of pressure for 15 minutes and 30 minutes for heavy or large loads
  - 3. Chemical vapor
    - a. 260°F to 270°F at 20 to 40 pounds of pressure
    - b. Minimum of 20 minutes after the desired temperature and pressure is reached
  
- F. Define spore testing.
  - 1. Spore testing: The only way to determine whether sterilization has occurred and to confirm that all bacteria and endospores have been killed.
  
- G. Explain the frequency of spore testing.
  
- H. Explain heat process monitoring.

## 5.10 Instrument Processing

- A. List the 7 steps for instrument processing.
1. Transport
  2. Cleaning
  3. Packaging
  4. Sterilization
  5. Storage
  6. Delivery
  7. Quality assurance

## 5.11 Treatment Room

- A. List 6 features of an optimal treatment room.
1. Floor covering is easy to clean. No carpeting in treatment room.
  2. Stools and dental chairs have a smooth surface that is easily disinfected.
  3. Water faucets should be electronic or foot-operated.
  4. Dental chairs are foot operated.
  5. Hoses are straight and removable.
  6. Syringes and handpieces are autoclavable.
- B. List 4 objects that require barrier protection.
1. Dental light handles
  2. Head rest and dental chair
  3. Air/water syringe
  4. Saliva ejector and HVE handles
- C. Define the classification of surface categories for inanimate objects.
1. Critical: Penetrates soft tissue or bone, i.e., needles, dental instruments. Sterilize or dispose.
  2. Semi-critical: Touch intact mucous membranes and oral fluids, but does not penetrate, i.e., ultrasonic handpiece and probe. Sterilize or high level disinfectant.
  3. Non-critical: Does not touch mucous membranes. Intermediate level of disinfection.
  4. Environmental surfaces: No contact with patient. Intermediate to low level disinfection.
- D. List 6 steps in cleaning and preparing the treatment room.
1. Wear heavy-duty gloves and mask
  2. Flush handpieces
  3. Select appropriate disinfectant and prepare according to manufacturer
  4. Clean the surfaces with gauze soaked in a pre-cleaning disinfectant
  5. Scrub the disinfectant over the surface
  6. Wipe with disinfectant and leave the surfaces wet for the manufacturers' recommended time

## 5.12 Dental Unit Water Lines

- A. List 5 features of an optimal treatment room.
  - 1. Use water that meets EPA standards for drinking water.
  - 2. Consult dental manufacturer for methods to maintain quality of water.
  - 3. Follow manufacturer recommendations for monitoring quality of water.
  - 4. After each patient discharge air/water 20 to 30 seconds.
  - 5. Follow manufacturer recommendations for maintenance schedule.
  
- B. Methods to reduce bacterial contamination of dental unit waterlines.
  - 1. Flush waterlines for several minutes each morning.
  - 2. Use self-contained water system.
  - 3. Use periodic or continuous chemical germicides.
  - 4. Use sterile water for surgery.
  - 5. Purge water from surgery lines at end of day.
  - 6. Use microfilm cartridges.
  - 7. Use current techniques and technology.
  - 8. Follow manufacturer recommendations.

## 6.0 Patient Management

### Intended Outcome

Given information about utilizing effective communication skills, non-verbal communication, obtaining information and managing patient behavior the student will be able to answer 80% of the questions on the didactic exam.

### Tasks

Number of tasks to master = 66

### 6.01 Utilizing Effective Communication Skills

A. List 12 alternative terms to use in effective communication:

1. Pull a tooth/remove a tooth
2. Shot/needle/anesthetic
3. Pain/hurt/ discomfort
4. Plates/false teeth/dentures
5. Spit/rinse your mouth
6. Drugs/medication
7. Filling/restoration
8. Drill/prepare/handpiece
9. Yeah/yes
10. Cap/crown
11. Operatory/treatment area
12. Waiting room/reception area

B. List 3 rules of etiquette.

1. Do not use nicknames or terms of endearment in an office setting.
2. Compliment and praise.
3. Avoid the subjects of politics, religion, gender, ethnic, and off color jokes.

## 6.02 Non-Verbal Communication

- A. Identify 4 key steps for improving telephone communications.
1. Smile.
  2. Identify the office, yourself, and ask, "How may I help you?"
  3. Listen and be attentive.
  4. Take notes.
- B. Identify 7 items important to non-verbal communication.
1. Good grooming versus bad grooming
  2. Professional hair styles
  3. The use of fragrances and deodorants
  4. The appearance of hands and nails
  5. The effect of oral hygiene
  6. Professional attire
  7. Makeup and body ornamentation
- C. Identify 2 effects of body language and posture.
1. Slouching
  2. Crossed arms
- D. List 2 examples of patient non-verbal cues.
1. Facial expressions
  2. Body language

## 6.03 Greet the Patient

- A. List 8 items included in welcoming the patient as a guest.
1. Greet within 30 seconds
  2. Survey the reception area
  3. Sign in log
  4. Review the schedule
  5. Initiate the patient orientation
  6. Establish a relationship
  7. Use the patient's name
  8. Take notes
- B. List 2 areas of common courtesy and office etiquette that should be used when talking on the phone.
1. Common courtesy
  2. Say please and thank you
- C. Identify 2 steps in introductions.
1. Introduce self
  2. Identify others by name and title

## 6.04 Obtaining Information

- A. List 2 steps in obtaining information from a telephone call.
  - 1. Record all information on chart
  - 2. Record information in ink and initial
- B. List 3 patient forms to be completed by the patient before treatment.
  - 1. Patient registration
  - 2. Medical/dental history
  - 3. HIPPA

## 6.05 Managing Patient Behavior

- A. Identify 6 patient rights.
  - 1. To be treated without discrimination
  - 2. To be informed about treatment
  - 3. To be informed about fees
  - 4. Confidentiality
  - 5. To be taught how to maintain dental health
  - 6. To refuse treatment
- B. Identify 4 ways to comfort the anxious patient.
  - 1. Validate feelings
  - 2. Accommodate patient's concerns
  - 3. Be positive
  - 4. Be honest (i.e., "this will pinch for just a moment," instead of, "this won't hurt at all")
- C. Define the difference between the anxious and the phobic patient.
  - 1. Anxious: Normal with enhanced feelings of concern.
  - 2. Phobic: Irrational fears.
- D. List 2 methods of treating the phobic patient.
  - 1. Behavior modification
  - 2. Hospital dentistry general anesthesia
- E. List 5 steps to diffuse patient anger.
  - 1. Let the patient release anger.
  - 2. Do not second-guess.
  - 3. Do not respond until the patient has fully vented.
  - 4. Use the three F's:
    - a. Feel
    - b. Felt
    - c. Found
  - 5. Avoid the urge to argue.
- F. Identify 4 special patient management situations.
  - 1. Elderly
  - 2. Mentally/physically challenged
  - 3. Children
  - 4. Pregnant

## 7.0 Anatomy

### Intended Outcome

Given information about head and neck anatomy, oral anatomy, and dental anatomy, the student will be able to perform 80% of the following tasks with accuracy on the didactic examination.

### Tasks

Number of tasks to master = 108

### 7.01 Head and Neck Anatomy

- A. Locate and mark 5 bones or bony areas of the face and skull on the model or diagram provided.
- |   |                |
|---|----------------|
| 1. Calvarium (frontal, parietal, occipital bones) | 3. Maxilla     |
| 2. Zygoma   | 4. Mandible    |
|   | 5. Nasal bones |
- B. Locate 7 landmarks of the skull on the diagram or model provided.
- |                             |                                    |
|-----------------------------|------------------------------------|
| 1. External auditory meatus | 5. Mental foramen                  |
| 2. Nasal fossae             | 6. Mandibular foramen              |
| 3. Orbits of the eye        | 7. Temporal mandibular joint (TMJ) |
| 4. Styloid process          |                                    |
- C. Locate 4 sinuses on the model or diagram provided.
- |                      |             |
|----------------------|-------------|
| 1. Maxillary         | 3. Frontal  |
| 2. Ethmoid air cells | 4. Sphenoid |
- D. Locate and mark 8 muscles of mastication and facial expression.
- |                       |                     |
|-----------------------|---------------------|
| 1. Buccinator         | 5. Mentalis         |
| 2. External pterygoid | 6. Orbicularis oris |
| 3. Internal pterygoid | 7. Temporal         |
| 4. Masseter           | 8. Zygomatic major  |
- E. Identify the nerves that supply the oral cavity.
- |                                |               |
|--------------------------------|---------------|
| 1. Maxillary                   | 7. Buccal     |
| 2. Nasopalatine                | 8. Mandibular |
| 3. Anterior palatine           | 9. Lingual    |
| 4. Anterior superior alveolar  | 10. Mental    |
| 5. Middle superior alveolar    | 11. Incisive  |
| 6. Posterior superior alveolar |               |

## 7.02 Oral Anatomy

### A. Locate and label the landmarks of the face.

1. Ala of the nose
2. Commissure
3. Canthus of the eye
4. Vermillion border
5. Tragus of the ear
6. Philtrum

### B. Locate and label 18 structures of the oral cavity.

1. Maxillary arch
2. Mandibular arch
3. Lips
4. Mucosa (buccal, or labial)
5. The dental alveolus
6. Gingiva, attached and free
7. Floor of the mouth
8. Hard palate
9. Soft palate (rugae and incisive papilla)
10. Tongue
11. Tonsillar pillars
12. Tonsils
13. Pharyngeal walls
14. Retromolar pad
15. Maxillary tuberosity
16. Vestibules (buccal or labial)
17. Frenum
18. Teeth

### C. Locate 3 of the main salivary glands.

1. Parotid gland
2. Sublingual gland
3. Submandibular gland

### D. Locate and label 3 structures of the gingiva.

1. Gingival sulcus
2. Gingival papilla
3. Gingival margin

## 7.03 Dental Anatomy

### A. Define the following 8 dental anatomy terms.

1. Primary dentition: First 20 teeth erupting as children.
2. Permanent dentition 32 teeth erupting for adults.
3. Mixed dentition: Time when both primary and permanent teeth are present.
4. Anterior: Towards the front of the mouth (cupids and incisors).
5. Posterior: Towards the back (bicuspid and molars).
6. Contact: Place where teeth come together and touch.
7. Contour: Natural rounded shape of teeth.
8. Occlusion: How teeth fit together when biting down.

B. Identify the 4 kinds of teeth.

1. Incisors
2. Cuspid/canine
3. Bicuspids/premolars
4. Molars

C. Locate and label the 4 parts of a tooth.

1. Crown
2. Root
3. Neck
4. Apex

D. Locate and label 5 tissues of a tooth.

1. Enamel
2. Dentin
3. Pulp
4. Cementum
5. Periodontal ligament

E. Locate and label the 6 maxillary anterior teeth.

1. Maxillary central incisors (2)
2. Maxillary lateral incisors (2)
3. Maxillary canines (2)

F. Locate and identify the 10 maxillary posterior teeth.

1. Maxillary first premolar (2)
2. Maxillary second premolar (2)
3. Maxillary first molar (2)
4. Maxillary second molar (2)
5. Maxillary third molar (2)

G. Locate and identify the 6 mandibular anterior teeth.

1. Mandibular central incisors (2)
2. Mandibular lateral incisors (2)
3. Mandibular canine (2)

H. Locate and identify the 10 mandibular anterior teeth.

1. Mandibular first premolar (2)
2. Mandibular second premolar (2)
3. Mandibular first molar (2)
4. Mandibular second molar (2)
5. Mandibular third molar (2)

I. Locate the 6 surfaces of a tooth.

1. Mesial
2. Occlusal
3. Distal
4. Buccal
5. Lingual
6. Facial

## 8.0 Dental Equipment

### Intended Outcome

Given information about equipment identification and equipment uses, the student will be able to perform 80% of the following tasks the necessary information, instruction, and equipment the student will be able to perform 80% of the following tasks with accuracy on the didactic examination.

### Tasks

Number of tasks to master = 50

### 8.01 Equipment Identification

#### A. Describe 5 pieces of lab equipment.

1. Lathe
2. Handpiece/lab engine
3. Model trimmer
4. Vacuum adapter "The Machine"
5. Vibrator

#### B. Describe 13 pieces of equipment found in the treatment room.

1. Patient chair
2. Doctor and assistant stools (show footrest, indicate differences)
3. Treatment light
4. Cart/console
5. Handpieces (high speed/low speed)
6. High velocity evacuation (HVE)
7. Saliva ejector
8. Curing light
9. Air/water syringe
10. Rheostat/foot control
11. Computer
12. Amalgamator/triturator
13. Bleach machine

#### C. Identify 3 items found in the sterile area.

1. Ultrasonic instrument cleaner
2. Cold disinfectant/sterilant container
3. Autoclaves/sterilization equipment

#### D. Identify 5 items in the radiographic area.

1. Control panel
2. Conventional or intraoral x-ray head
3. Lead apron-thyroid x-ray head
4. Automatic processor-daylight
5. Extraoral equipment

## 8.02 Equipment Uses

- A. Give the uses of 5 lab equipment items.
1. Lathe: Polishes and grinds appliances.
  2. Handpiece/lab engine: Trims and smooth smaller items outside the mouth.
  3. Model trimmer: Trims plaster and stone models.
  4. Vacuum adapter: Heats and adapts a variety of plastics to models, i.e., bleaching trays, mouth guards.
  5. Vibrator: Used in pouring models to remove bubbles from mix and aid in pouring.
- B. Give the uses of 12 treatment room items of equipment.
1. Patient chair: Provides support and supine-seating for the patient.
  2. Stools
    - a. Doctor stool: Provides adjustable seating for the operator while performing dental treatment.
    - b. Assistant stool: Provides adjustable seating for the assistant while assisting in dental treatment.
  3. Treatment light: Provides illumination during dental treatment.
  4. Cart/console: Provides support supplies and easy access to equipment.
  5. Handpieces: Rotary instruments that are used intra-orally to cut and polish (see dental instruments).
  6. High velocity evacuation: Assistant controlled device that removes fluids and reduces aerosols (show tips).
  7. Saliva ejector: Low volume device for removing oral fluids (show tips).
  8. Curing light: Sets selected acrylic materials.
  9. Air/water syringe: Provides air/water spray.
  10. Rheostat-foot control: Controls the rotary handpieces.
  11. Computer: Used chairside to record and transmit data.
  12. Amalgamator/triturator: Mixes amalgam filling material.
- C. Give the uses for 3 sterile area items.
1. Ultrasonic instrument cleaner: Removes debris from contaminated instruments
  2. Cold disinfectant/sterilant container: Liquid for non-autoclavable items.
  3. Autoclaves/sterilization equipment: Sterilizes equipment and instruments.
- D. Give the uses of 5 pieces of radiographic equipment.
1. Control panel: Controls x-ray production.
  2. Conventional or intraoral x-ray head: Produces and directs x-rays.
  3. Lead apron: Provides patient protection during radiographs.
  4. Automatic processor: Processes x-ray film.
  5. Extraoral x-ray equipment: Takes x-rays outside the mouth.

## 9.0 Dental Instruments and Procedures

### Intended Outcome

Given information about hand/rotary instruments and dental procedures, the student will be able to perform 80% of the following tasks with accuracy on the didactic examination.

### Tasks

Number of tasks to master = 121

### 9.01 Hand Instruments

A. Define the term “hand instrument”.

B. Identify 4 components of hand instruments.

1. Handle/shaft
2. Shank
3. Blade
4. Double-ended instruments

C. Identify 6 basic tray setup instruments.

1. Mouth mirror
2. Explorer
3. Cotton pliers
4. Saliva ejector/high-volume evacuator
5. 3-way syringe tip
6. 2x2

D. Identify 17 restorative instruments.

1. Excavator/spoon excavator
2. Discoid-cleoid carver
3. Hollenback carver
4. Amalgam well
5. Amalgam carrier
6. Amalgam condenser/plugger
7. Plastic composite instrument
8. Burnisher
9. Mixing spatula
10. Matrix band
11. Tofflemire/matrix retainer
12. Wedge
13. Articulating paper
14. Articulating paper forceps
15. Cord packer
16. Hand cutting instruments
17. Decay locator

E. Identify 6 instruments of a rubber dam procedure.

1. Dental dam material
2. Dental dam frame
3. Dental dam hole punch
4. Dental dam clamp forceps
5. Dental dam clamps
6. Floss

F. Discuss 5 periodontal instruments.

1. Periodontal probe
2. Curette
3. Ultrasonic scaler
4. Scalers
5. Periodontal knives

G. Identify 15 endodontic instruments.

1. Gates glidden
2. Barbed broach
3. Endodontic files
4. Endodontic syringe
5. Paper points
6. Gutta-percha
7. Lentulo spirals
8. Endodontic spreader
9. Endodontic explorer
10. Endodontic condenser
11. Endodontic excavator
12. Millimeter measure
13. Rubber stoppers
14. Pulp tester
15. Apex locator

H. Identify 16 oral surgery instruments.

1. Elevator
2. Forceps
3. Surgical curette
4. Rongeur
5. Bone file
6. Bard-Parker handle
7. Blade
8. Hemostat
9. Needle holder
10. Surgical scissors
11. Tissue retractors
12. Surgical aspirator
13. Sutures
14. Bite blocks/mouth prop
15. Surgical chisel and mallet
16. Surgical hand piece/burs

## 9.02 Rotary Instruments

A. Identify 5 uses of rotary instruments.

1. Cavity preparations
2. Removing defective restorations
3. Crown preparations
4. Polishing teeth
5. Polishing and finishing restorations

B. Identify 3 parts of a dental bur.

1. Shank
2. Neck
3. Head

C. Identify 3 types of dental burs.

1. Carbide
2. Diamond stones
3. Steel burs

D. Identify the different rotary instruments

1. Round
2. Inverted cone
3. Fissures
4. Points
5. Stones
6. Mandrel
7. Rubber wheel
8. Rubber cup
9. Discs

- E. Identify 2 styles of dental handpieces.
  - 1. High speed
  - 2. Low speed attachments
    - a. Contra-angle
    - b. Prophy-angle
    - c. Straight
- F. Discuss handpiece placement and removal.
- G. Describe dental handpiece maintenance and sterilization as per manufacturers' recommendations.

### **9.03 Dental Procedures**

- A. List 10 common dental procedures.
  - 1. Exam
  - 2. Prophylaxis, non-surgical periodontal therapy
  - 3. Amalgam
  - 4. Composite
  - 5. Simple extraction
  - 6. Endodontic
  - 7. Crown and bridge preparation
  - 8. Crown and bridge cementation
  - 9. Implants
  - 10. Bleach

### **9.04 Lab Procedures**

- A. Define the following laboratory procedures:
  - 1. Fabricate diagnostic casts
  - 2. Trimming diagnostic casts
  - 3. Debride and polish fixed and removable appliances and prosthesis;
  - 4. Splints
  - 5. Fabricate custom impression trays, mouth/athletic guards, bleaching trays, acrylic temps, etc.

## 10.0 Clinical Records

### Intended Outcome

Given information about medical/dental histories, recording dental treatment and dental/radiographic chartings, the student will be able to perform 80% of the following tasks on the didactic examination.

### Tasks

Number of tasks to master = 84

### 10.01 Medical History

- A. List 6 purposes for obtaining a medical history from every patient.
  - 1. Provides information relevant to the etiology and diagnosis of oral conditions.
  - 2. Used in treatment planning.
  - 3. Reveals conditions, diseases, and drug therapy or reactions that may change treatment.
  - 4. Provides insight into the emotional and/or psychological factors and attitudes that may affect patient care.
  - 5. Provides baseline documentation for comparison at future appointments.
  - 6. Provides a basis for legal evidence should treatment ever be called into question.
  
- B. Describe 6 conditions that may limit the ability of dental personnel to gather required information from patients.
  - 1. Some patients either cannot or choose not to provide correct information when answering questions.
  - 2. Language barriers or comprehension may limit the information obtained.
  - 3. If there is a lack of privacy where the information is requested, the patient may be less than honest.
  - 4. If the patient does not see the relevance between certain diseases or conditions and dental treatment, information may be withheld.
  - 5. Medical conditions may be embarrassing to report.
  - 6. The patient may be fearful of having dental treatment refused.
  
- C. List 5 factors that must be explained to the patient.
  - 1. The need for obtaining and keeping an up-to-date medical history.
  - 2. Assurance that the information obtained will be kept in strict confidence.
  - 3. The relationship between general health and oral health.
  - 4. The relationship between medical health and dental care.
  - 5. The importance of following instructions on pre-medications, preventive dental care, and regular medical and dental care.

D. List the 5 components of the medical history that must be verified.

1. Recordings must be made in ink
2. Accuracy of all dates
3. Confirm all information
4. Medical alert codes
5. Patient signature verifying accuracy of all information

## **10.02 Dental History**

A. List 8 components of the dental history required.

1. Any immediate problem, discomfort, or pain reported by the patient.
2. Information about previous restorative, preventive and specialty dental care.
3. Attitudes regarding oral health.
4. Information about personal daily oral care.
5. Anesthetic history.
6. Medical and dental radiation history and current medications.
7. History of oral or facial injuries, past medical and dental procedures.
8. Oral habits.

### 10.03 Dental Charting and the Dental Exam

A. List the 9 parts of the dental exam.

1. Radiographs
2. Diagnostic models
3. Oral examination
4. Periodontal examination
5. Examination of the teeth
6. TMJ evaluation
7. Photography
8. Intra-oral imaging
9. Patients chief complaint

B. Identify 6 purposes of dental charting.

1. Provides a graphic representation of existing conditions
2. An assessment tool used to develop a patient treatment plan
3. Used during treatment to guide procedures performed
4. Evaluate treatment by comparing initial data with follow-up findings
5. Provides realistic evidence for legal documentation
6. Used in forensic investigations and/or identification

C. Identify Black's Classification of Cavities

1. Class I
2. Class II
3. Class III
4. Class IV
5. Class V
6. Class VI

D. Identify 2 types of tooth diagrams.

1. Anatomical
2. Geometric

E. Identify the universal tooth numbering system for teeth.

1. Universal
2. Palmer
3. FDI/ISO

F. Identify 7 dental conditions that are evaluated clinically by the dentist or dental hygienist and recorded on the dental chart.

1. Missing teeth
2. Teeth indicated for extraction
3. Occlusal caries
4. Mal-positioned teeth
5. Existing restorations (i.e., amalgam, composite, gold)
6. Sealants
7. Appliances

G. Identify 11 dental conditions to be charted from radiographs.

1. Missing teeth
2. Unerupted teeth
3. Impacted teeth
4. Endodontic restorations
5. Periapical abscesses
6. Retained primary teeth
7. Retained root tips
8. Proximal carious lesions
9. Recurrent carious lesions
10. Bone loss
11. Other deviations from normal

H. Identify 6 tooth surfaces where periodontal pocket readings are recorded on the periodontal chart.

1. Distofacial
2. Facial
3. Mesiofacial
4. Distolingual
5. Lingual
6. Mesiolingual

## 10.04 Recording Dental Treatment

A. Record all pertinent information.

1. Record in ink
2. One entry per line
3. Anesthetic used
4. Tooth treated
5. Types of materials used
6. Clear and concise
7. Sign/initial and date
8. Proper correction methods

## 11.0 Oral Pathology

### Intended Outcome

Given information about dental caries; attrition, abrasion, and soft tissue pathology the student will be able to perform 80% of the following tasks with accuracy on the didactic examination.

### Tasks

Number of tasks to master = 95

### 11.01 Dental Caries

#### A. Define Caries.

1. Caries: Tooth decay.

#### B. Identify 3 primary factors present to cause caries.

1. Susceptible tooth
2. Fermentable carbohydrate diet
3. Specific bacteria (i.e., Streptococcus Mutans and Lactobacilli)

#### C. List 4 contributing factors of caries.

1. Diet
2. Oral hygiene
3. Immune system
4. Personal habits

#### D. List stages of caries development.

1. Incipient
2. Cavitation
  - a. Rampant
  - b. Recurrent
  - c. Root caries

#### E. List 4 subcomponents of personal habits that contribute to caries formation.

1. Tobacco
2. Alcohol
3. Frequency of sugary drinks
4. Frequency of gum/candy

#### F. List 6 cavity Classifications for caries.

Class I Pit and fissures

Class II Interproximal posterior

Class III Interproximal anterior

Class IV Interproximal including incisal edge anterior

Class V Smooth surface

Class VI Occlusal wear (abbrasions)

## 11.02 Periodontal Disease

- A. Define the 2 types of periodontal disease.
1. Gingivitis
  2. Periodontitis
- B. List the 6 structures of the periodontum.
1. Gingiva
  2. Epithelial attachment
  3. Sulcus
  4. Periodontal ligaments
  5. Cementum
  6. Alveolar bone
- C. List systemic risk that may increase susceptibility to periodontal disease.
1. Cardiovascular disease
  2. Respiratory disease
  3. Diabetes
- D. Define Necrotizing Ulcerative Gingivitis/Periodontitis.
- E. Define a periodontal pocket.
1. Periodontal pocket: The disease causing the normal gingival sulcus to become deeper than normal forming a pocket. Periodontal depths greater or equal to 4mm.
- F. List 2 causes of periodontal disease.
1. Dental plaque
  2. Calculus

## 11.03 Attrition, Abrasion, and Erosion

- A. Define attrition.
1. Attrition: Normal wearing-away of tooth structure
- B. Identify the two primary cause of attrition.
1. Parafunctional habits
  2. Occurs with age
- C. Define abrasion.
1. Abrasion: The abnormal wearing-away of tooth structure.
- D. List 3 causes of abrasion.
1. Abrasive dentifrice
  2. Improper tooth brushing technique
  3. Use of a hard toothbrush
- E. List the primary cause of erosion.
1. Prolonged contact of acid with the tooth structure
- F. List 2 situations where prolonged acid contact may occur.
1. Bulimia
  2. Citrus habits

## 11.04 Soft Tissue Pathology

### A. Identify 5 conditions of the tongue.

1. Black hairy tongue
2. Geographic tongue
3. Fissured tongue
4. Glossitis
5. Pernicious anemia

### B. Identify 6 white lesions of the mouth.

1. Candidiasis (can appear white or as red patches)
2. Benign hyperkeratosis (leukoplakia)
3. Stomatitis nicotina (irritation from smoking)
4. Chemical burn (aspirin burn)
5. Trauma
6. Lichen planus

### C. Identify 3 oral lesions of the mouth.

1. Secondary herpetic lesion
2. Aphthous ulcer
3. Mucocele

### D. Identify 8 conditions of the mouth.

1. Xerostomia
2. Torus (exostosis)
3. Irritation fibroma
4. Cyst
5. Papilloma
6. Abscess (periapical or periodontal)
7. Angular cheilitis
8. Cellulitis

### E. Identify 9 development abnormalities in the mouth.

1. Cleft palate/lip
2. Super numerary
3. Enamel dysplasia
4. Ankylosis
5. Ankyloglossia
6. Macro/micro dontia
7. Ameliogenesis imperfecta
8. Dens in dente
9. Fusion

### F. Identify other conditions.

1. Piercings
2. Drug use, i.e., meth mouth

### G. Identify possible oral manifestations associated with HIV/AIDS

1. HIV gingivitis
2. HIV periodontitis
3. Cervical lymphadenopathy
4. Candidiasis
5. Lymphoma
6. Hairy leukoplakia
7. Kaposi's sarcoma
8. HPV lesions
9. Herpes lesions

H. Identify 3 things that increase risk of oral cancer.

1. Tobacco use
2. Alcohol use
3. HPV

I. Identify 3 types of oral cancer.

1. Carcinoma
2. Sarcoma
3. Leukemia

J. Identify 3 implications following cancer treatment.

1. Xerostomia
2. Osteonecrosis
3. Radiation caries due to xerostomia

## 12.0 Emergency Care

### Intended Outcome

Given information about medical emergencies the student will perform 80% of the following tasks with accuracy on the didactic exam.

### Tasks

Number of tasks to master = 62

### 12.01 Medical Emergency Care

- A. List 4 vital signs.
  - 1. Temperature
  - 2. Blood pressure
  - 3. Pulse
  - 4. Respiration
  
- B. List 4 aspects of blood pressure.
  - 1. Normal range 90-140/60-90
  - 2. Recommended technique to obtain blood pressure
  - 3. Define systolic versus diastolic
  - 4. Health risks associated with high or low blood pressure in dentistry
  
- C. List normal range of heart rate (pulse) in adults as 60-100
  
- D. List 3 aspects of respiration rate
  - 1. Normal range for adults is 12-20
  - 2. Methods for obtaining a reading
  - 3. Hyperventilation
  
- E. List 2 methods to obtain a temperature.
  - 1. Oral
  - 2. Tympanic
  
- F. Describe 5 ways to prevent emergencies.
  - 1. Obtain current and complete medical history.
  - 2. All dental personnel are competent in DANBY accepted CPR/AED course, abdominal thrusts, and first aid.
  - 3. Assess patient during treatment.
  - 4. Have an office emergency plan.
  - 5. Have emergency equipment ready.

- G. Identify 4 parts of the emergency preparedness plan.
1. Assigned roles
  2. Routine drills
  3. Emergency telephone numbers
  4. Emergency supplies
- H. Identify 5 signs of an impending emergency.
1. Change in patient breathing
  2. Change in patient level of consciousness
  3. Change in patient skin color
  4. Change in patient skin temperature
  5. Change in patient behavior
- I. Identify the sequence of action for performing CAB.
1. Compression
  2. Airway
  3. Breathing
  4. Defibrillation as soon as available
- J. Identify 3 signs that indicate it may be necessary to perform abdominal thrust.
1. The victim indicates they are choking
  2. The victim cannot cough
  3. The victim cannot breathe

## 12.02 Medical Emergencies

- A. Identify 7 possible emergency situations.
1. Allergic reaction
  2. Blood loss
  3. Cardiovascular or cerebrovascular irregularities
  4. Emergencies by metabolic or neurological disease
  5. Respiratory irregularities and obstructions
  6. Shock
  7. Transient unconsciousness
- B. Recognize signs and symptoms for medical emergencies.
- C. List emergency equipment and supplies.
1. Oxygen tank and mask
  2. Medical emergency drug kit
  3. AED

- D. Explain emergency responses.
- E. Describe documentation of emergency.
  - 1. Date
  - 2. Location
  - 3. Signs and symptoms
  - 4. Treatment
- F. Identify 2 most common emergencies in the dental office.
  - 1. Syncope
  - 2. Postural hypotension

### **12.03 Dental Emergency Care**

- A. List 4 steps in responding to an avulsed tooth that will assist in replantation.
  - 1. Recover tooth
  - 2. Gently rinse, do not scrub
  - 3. Wrap in moist gauze
  - 4. Go immediately to a dental office
- B. List 3 situations when a patient has fractured a tooth and must be treated in a dental office as soon as possible.
  - 1. There is blood present that appears to be coming from the tooth
  - 2. When the tooth is displaced
  - 3. When you are unable to calm the patient
- C. List 4 recommendations for patients experiencing minor dental pain.
  - 1. Take an over the counter analgesic
  - 2. Place oil of clove for an open cavity
  - 3. Alternate ice and heat packs 15 minutes on and 15 minutes off
  - 4. Rinse with warm salt water for soft tissue pain

## 13.0 Dental Anesthesia

### Intended Outcome

Given information about dental anesthesia, principles of anesthesia and drug interactions the student will perform 80% of the following tasks with accuracy on the didactic exam.

### Tasks

Number of tasks to master = 78

### 13.01 Dental Anesthesia Terminology

- A. Identify the following terms as they apply to dental anesthetic.
- |                            |                     |
|----------------------------|---------------------|
| 1. Anesthetic              | 9. Local anesthetic |
| 2. Analgesic               | 10. Nitrous oxide   |
| 3. Medical history         | 11. Dental syringe  |
| 4. Contraindication        | 12. Needle gauge    |
| 5. Epinephrine             | 13. Lumen           |
| 6. Infiltration anesthetic | 14. Diffusion       |
| 7. Block anesthetic        | 15. Vasoconstrictor |
| 8. Topical anesthetic      | 16. Anaphylaxis     |

### 13.02 Dental Anesthesia

- A. Identify the most commonly used application methods for pain and anxiety in the dental office.
- |                             |                       |
|-----------------------------|-----------------------|
| 1. Topical                  | 5. Sedation           |
| 2. Local                    | 6. General            |
| 3. Nitrous oxide            | 7. IV- conscious      |
| 4. Anti-anxiety medications | 8. General anesthesia |
- B. Identify 5 important reasons for checking a patients' medical history as it relates to dental anesthesia.
1. Informs staff of patients physical conditions
  2. Chronic conditions
  3. Allergies
  4. Medications the patient is taking
  5. Contraindications for dental anesthetics and nitrous oxide

- C. Identify 6 health conditions that can effect anesthetic choice.
1. Hypertension
  2. Cardiovascular disease
  3. Hyperthyroidism
  4. Liver disease
  5. Kidney disease
  6. Pregnancy
- D. Identify the parts of a dental syringe.
1. Thumb ring
  2. Barrel
  3. Piston rod/harpoon
  4. Threaded tip
  5. Finger grip
- E. Identify 4 parts of the dental anesthetic needle.
1. Plastic housing for needle
  2. Needle hub
  3. Injection end with beveled tip
  4. Cartridge end of needle
- F. Identify the 2 most common needle lengths and gauges.
1. 1 inch: 30 gauge short needle for infiltrations
  2. 1 and 5/8 inch: 27 gauge long needle for blocks
- G. Identify the 4 parts of anesthetic carpule.
1. Rubber stopper
  2. Glass cartridge
  3. Aluminum cap with rubber diaphragm
  4. Mylar band with color-coded strip for identification of type of anesthetic manufacturer and expiration date
- H. List the 6 items needed for giving a local anesthetic injection.
1. Topical anesthetic
  2. Sterile cotton tip applicator
  3. Sterile 2x2 gauze sponges
  4. Needle shield
  5. Sterile anesthetic syringe
  6. Anesthetic carpule
- I. List in order the 4 steps for topical anesthetic site preparation and delivery.
1. Place a small amount of topical on a cotton tip applicator
  2. Dry the proposed site with sterile 2x2 gauze
  3. Place the topical on site for approximately 2 to 5 minutes
  4. Remove the cotton tip and discard in designated receptacle
- J. List the 7 steps in loading an anesthetic syringe without the needle.
1. Select anesthetic indicated by the dentist and patient's health history.
  2. Hold the syringe in one hand and use thumb ring to pull back the plunger for insertion of the carpule.
  3. With the other hand load the carpule in the syringe barrel opening, the stopper end goes in first toward the harpoon.
  4. Release the thumb ring and allow the harpoon to engage in the rubber stopper.

5. Use the other hand to apply firm pressure or a gentle tapping on the thumb ring to engage the harpoon into the rubber stopper.
  6. Check to make sure the harpoon is securely engaged in the stopper.
  7. Gently pull back on the plunger to make sure the dentist can aspirate the anesthetic during injections.
- K. List the 5 steps for attaching the needle to the anesthetic syringe.
1. Break the seal on the needle and remove the protective cap.
  2. Carefully align the insertion end of the needle and screw the hub onto the dental syringe.
  3. Expel a small amount of anesthetic to confirm engagement.
  4. Gently pull back on the thumb ring to confirm aspiration.
  5. Place the re-capped syringe on the tray, ready for use, and out of patient sight.
- L. List 5 steps for safely passing the anesthetic syringe to the dentist.
1. Loosen the needle guard.
  2. Check the needle guard for stability.
  3. Place the thumb ring over the dentist's thumb. At the same time rotate the syringe barrel so the glass carpule is in full view for the dentist.
  4. Gently, carefully, and smoothly remove the loosened needle guard as the dentist takes the syringe.
  5. Put the needle guard in the holder. After injection the dentist will put the used syringe into the holder to safely re-cap the needle.
- M. List the 2 necessary steps needed for re-capping and discarding used anesthetic needles.
1. The dental assistant, hygienist, or dentist may recap the needle only by use of a needle guard or a one handed scoop. This is usually completed by the dentist for employee protection as required by OSHA regulations.
  2. The used anesthetic needle must be discarded in the sharps container.

## 14.0 Chairside Assisting

### Intended Outcome

Given information about dental ergonomics, principles of four handed dentistry and maintaining a clear operating field the student will perform 80% of the following tasks with accuracy on the didactic exam.

### Tasks

Number of tasks to master = 66

### 14.01 Dental Ergonomics

- A. Define the 5 classifications of motion.
  - 1. Class I: Movement of the fingers only, as when picking up a cotton roll.
  - 2. Class II: Fingers and wrist motion, as used when transferring an instrument to the operator.
  - 3. Class III: Fingers, wrist, and elbow motion, as when reaching for a handpiece.
  - 4. Class IV: Movement of the entire arm and shoulder, as when reaching into a supply tub or container.
  - 5. Class V: Movement of the entire torso, as when turning around to reach for equipment from a side or split delivery unit.
  
- B. List the 4 zones of activity.
  - 1. Operator's zone
  - 2. Assistant's zone
  - 3. Transfer zone
  - 4. Static zone
  
- C. Describe the activities of the above 4 zones.
  - 1. Operator's zone: Where the operator is positioned to access the oral cavity and have the best visibility.
  - 2. Assistant's zone: Where the assistant is positioned to easily assist the dentist and have access to instruments, the evacuator, etc., on the dental unit or cart without interference.
  - 3. Transfer zone: Where instruments and materials are passed and received.
  - 4. Static zone: Where rear delivery systems, dental instruments, mobile cart, and equipment can be found.
  
- D. Using the face of a clock, define each zone of activity for the right-handed dentist.
  - 1. Operator: 7 o'clock to 12 o'clock
  - 2. Static: 12 o'clock to 2 o'clock
  - 3. Assistant: 2 o'clock to 4 o'clock
  - 4. Transfer: 4 o'clock to 7 o'clock

- E. Using the face of a clock, define each zone of activity for the left-handed dentist.
1. Operator: 12 o'clock to 5 o'clock
  2. Transfer: 5 o'clock to 8 o'clock
  3. Assistant: 8 o'clock to 10 o'clock
  4. Static: 10 o'clock to 12 o'clock
- F. Define the 3 commonly used patient positions in general dentistry.
1. Upright position: The back of the chair is upright at a 90° angle. This position is used for patient entry and dismissal and while taking radiographs or impressions.
  2. Supine position: The back of the chair is lowered back until the patient's head and knees are at the same plane. Most dental treatment takes place in the supine position.
  3. Subsupine position: The back of the chair is lowered until the patient's head is lower than the feet. This position is only recommended in emergency situations.
- G. Describe 4 criteria for positioning the operator.
1. Back straight, feet on the floor, and thighs angled so that the knees are slightly lower than hip level.
  2. Elbows close to the sides with shoulders relaxed.
  3. Patient's oral cavity should be at elbow height.
  4. The operator should be facing forward with eyes focused downward.
- H. Describe 4 criteria for positioning the dental assistant.
1. Back straight with eye level approximately 4 to 6 inches higher than the operator.
  2. Torso centered on the stool with the stool as close to the patient as possible.
  3. Feet positioned on the ring or platform near the base of the stool.
  4. The assistant's body is facing toward the patient's head with hips and thighs level to the floor and parallel to the patient's shoulders.

## 14.02 Principles of Four-Handed Dentistry

- A. Define four-handed or sit-down dentistry.
1. The dentist and dental assistant are working together at the dental chair in an effort to provide a smooth and efficient transfer of instruments and materials during patient procedures.
- B. List 3 benefits of fourhanded dentistry.
1. Increased patient comfort and safety
  2. Decreased stress and fatigue for the operator and assistant
  3. Increased production with decreased chair time

C. List 6 general rules of transferring instruments.

1. Pass with the left hand for right handed operator.
2. Never pass instruments over the patient's face.
3. Avoid moving the operator's hand and eyes from the working site.
4. Always wait for a signal from the operator before exchanging instruments.
5. Keep the passing zone close to the face, a few inches below the chin.
6. Pass the instrument in the position of use.

D. Define the 3 types of instrument grasps.

1. Pen grasp: The instrument is held in the same manner as a pen.
2. Palm grasp: The instrument is held in the palm of the hand.
3. Palm-thumb grasp: The instrument is held in the palm of the hand and the thumb is used to stabilize the instrument.

E. Define the 2 most commonly used types of instrument transfers.

1. One-handed transfer: The assistant passes and receives the instrument with one hand allowing for the use of the evacuator or the air/water syringe at the same time.
2. Two-handed transfer: The assistant uses both hands for the transfer, one to pass and the other to receive.

## 14.03 Maintaining a Clear Operating Field

- A. List 6 responsibilities the dental assistant has in maintaining a clear operating field.
  - 1. Adjust the dental light so the light shines directly on the area where the operator is working.
  - 2. Use retraction techniques to keep tissues out of the operator's way.
  - 3. Use evacuator to remove water, saliva, and debris from the patient's mouth.
  - 4. Keep the operator's mirror clear during treatment.
  - 5. Rinse and dry the area where the operator is working.
  - 6. Help keep the patient's mouth open during the treatment.
  
- B. Identify 2 evacuation methods.
  - 1. Saliva ejector
  - 2. High volume evacuator (HVE)
  
- C. List 3 isolation techniques.
  - 1. Cotton rolls
  - 2. Dry-angles and other related aids
  - 3. Dental (rubber) dam
  
- D. List 2 grasps that an oral evacuator may be held in.
  - 1. Palm-thumb grasp
  - 2. Pen grasp
  
- E. Describe 10 guidelines for oral evacuation tip placement.
  - 1. Hold evacuator tip in right hand for right handed operator.
  - 2. Carefully place the evacuator tip in the patient's mouth. Avoid bumping the teeth, lips, or gingival.
  - 3. Place the evacuator tip approximately one tooth distal to the tooth being worked on.
  - 4. Hold the bevel of the evacuator tip parallel to the buccal or lingual surface of the tooth.
  - 5. The middle of the evacuator tip opening should be even with the occlusal surface and held still so that it does not draw the water coolant away from the bur.
  - 6. Keep the evacuator tip far enough away from the mucosal tissue to prevent it from being sucked into the tip.
  - 7. Place the evacuator tip approximately one tooth distal to the tooth being worked on.
  - 8. Hold the bevel of the evacuator tip parallel to the buccal or lingual surface of the tooth.
  - 9. The middle of the evacuator tip opening should be even with the occlusal surface and held still so that it does not draw the water coolant away from the bur.
  - 10. Keep the evacuator tip far enough away from the mucosal tissue to prevent it from being sucked into the tip.

## 15.0 Dental Materials

### Intended Outcome

Given information about the properties and different classifications of dental materials, the student will be able to perform 80% of the following tasks with accuracy on the didactic examination.

### Tasks

Number of tasks to master = 77

### 15.01 Properties and Classification of Dental Materials

- A. List the 4 properties a dental material must display to be used successfully to restore oral structures.
  1. Durability
  2. Corrosion resistance
  3. Non-toxicity
  4. Bio-compatibility
  
- B. List and define the 3 properties of dental materials listed below which are evaluated to determine the materials suitability for use in the mouth.
  1. Stress: The force, per unit body, within a body that resists an external force.
  2. Strain: The distortion within a body that results from an applied force.
  3. Strength: The maximum stress required to fracture a structure.
  
- C. List 6 classifications of dental materials.
  1. Metals
  2. Resins
  3. Impression materials
  4. Gypsums
  5. Cements and liners
  6. Porcelain and ceramics

## 15.02 Metals in Dentistry

- A. List 4 uses of metals in dentistry.
1. Crowns and bridge restorations
  2. Partial dentures
  3. Implants
  4. Amalgam restorations
- B. Explain 6 important information points about amalgam.
1. Amalgam is the most common and widely used dental restorative worldwide.
  2. The American Dental Association and various independent agencies have studied the mercury in amalgam and reported no adverse effects.
  3. Mercury is needed to make the material into a paste form, which allows it to be placed into the tooth preparation.
  4. The mercury is lost during condensation into the tooth and over the life of the restoration as mercury vapor. Use no touch technique.
  5. Amalgam breaks down by corrosion over time requiring replacement.
  6. Amalgam is an unusual alloy composed of silver, tin, copper, and mercury.

## 15.03 Resins and Bonding in Dentistry

- A. List and define 4 types of dental resins.
1. Acrylic resins: Primarily used for denture bases and provisional (temporary) crown and bridge restoration.
  2. Composite resins: Primarily used for restorations and cements.
  3. Glass ionomers: Used as cements, liners, bases, and restorations.
  4. Compomers: A combination of glass ionomer and composite that is used primarily as a restorative, particularly for pediatric dentistry because it inherently releases fluoride to the tooth structure once it is placed.
- B. List the 2 types of bonds that occur in the resin-to-tooth bond.
1. Mechanical
  2. Chemical
- C. Explain why phosphoric acid is used to etch the surface of the enamel and dentin.
1. This creates micro-crevasses that the liquid of the bonding agent enters into. When the bonding agent is set, it becomes a tiny finger that grabs onto microporosities and fissures in the tooth surface, increasing the mechanical bond.
- D. Explain when the chemical bond occurs.
1. When the etchant breaks down the enamel and dentin exposing the organic component of the structure. These are primarily collagen fibers. The bonding agent has a chemical affinity to collagen, so it attaches to it.

## 15.04 Impression Materials in Dentistry

- A. Explain how to prepare, mix and deliver 3 major types of impression materials.
  - 1. Wax
  - 2. Hydrocolloid
  - 3. Elastomer
  
- B. Explain the purpose of wax as an impression material.
  - 1. To take bite registrations
  
- C. List 2 forms of hydrocolloid impression material and state their use.
  - 1. Reversible: Crown and bridge impressions
  - 2. Irreversible (alginate): Study model impressions
  
- D. List the 4 forms of elastomeric impression materials.
  - 1. Polysulfide
  - 2. Polyether
  - 3. Addition reaction silicone, polyvinyl siloxane or vinyl polysiloxane (most commonly used)
  - 4. Condensation reaction silicone

## 15.05 Gypsums Materials in Dentistry

- A. Regarding gypsum materials, explain what will happen if the water-to-powder ratio varies from optimum.
1. The plaster will weaken
  2. The mixing and set time will change
- B. Describe gypsum products according to ADA Spec #, traditional name, liquid powder ratio and uses.

ADA Spec #	Traditional Name	Liquid/Powder Ratio	Uses
Type I	Impression plaster	60 ml water/ 100 grams powder	Impressions Not used anymore
Type II	Lab or model plaster	50 ml water/ 100 grams powder	Study models
Type III	Dental stone	30 ml water/ 100 grams powder	Working models to build appliances
Type IV	Die stone or improved dental stone	24 ml water/ 100 grams powder	Die models
Type V	High strength, high expansion dental stone	18-22 ml water/ 100 grams powder	Models for partial framework

## 15.06 Cements and Liners in Dentistry

- A. Identify 2 liners/varnishes.
1. Calcium hydroxide
  2. Cavity varnish
- B. List 4 uses of cements.
1. Permanent luting /cementation
  2. Temporary luting / cementation
  3. Temporary fillings
  4. Base fillings
- C. Identify 5 types of dental cements.
1. Glass ionomer
  2. Zinc phosphate
  3. Polycarboxylate
  4. Zinc oxide eugenol
  5. Composite resin

D. List 5 considerations when mixing cements.

1. Read and follow manufacturer's directions
2. Measure carefully
3. Avoid moisture contamination
4. Mix powder into liquid
5. Allow to set completely or according to directions

### **15.07 Porcelain and Ceramics in Dentistry**

A. List the 5 major uses of porcelain in the dental office.

1. Porcelain is used as a coating of porcelain fused to metal crowns.
2. Porcelain is used as a crown material that can be bonded directly to the tooth.
3. Porcelain is used as an inlay/onlay material that can be bonded directly into the tooth.
4. Porcelain is used as teeth in dentures.
5. Porcelain is often used as a veneering material that can be bonded to structure directly.

### **15.08 Other Dental Materials**

A. List and give the use of the following dental materials.

1. Sedative dressings: Soothing dressing placed to reduce inflammation.
2. Periodontal surgical dressings: Used to protect surgical site after periodontal surgery.
3. Bleaching agents: Used to whiten teeth.
4. Bonding agents: Used to increase the mechanical retention of materials to teeth.
5. Endodontic materials: Used to fill the root canals of teeth.
6. Etchants-acidic materials: Used to create surface irregularities for more surface to bond to.
7. Pit and fissure sealants: Resin introduced into the pits and fissures of occlusal surfaces to prevent decay.

## 16.0 Obtaining Alginate Impressions

### DIDACTIC EDUCATION

#### Intended Outcome

Given information about hydrocolloid impression materials, the armamentarium required to mix alginate, patient preparation, tray selection, preparing impression trays, spatulation technique, loading the mandibular alginate and maxillary impression tray, and seating the trays. The student must demonstrate at least an 80 % accuracy on the didactic examination.

#### Tasks

Number of tasks to master = 147

### 16.01 Hydrocolloid Impression Materials

- A. Define 2 types of hydrocolloid.
  - 1. Irreversible hydrocolloid: A material that has the ability to change from a liquid state (sol, solution) to a semisolid state (gel) but does not have the ability to change back to a liquid (sol) state.
  - 2. Reversible hydrocolloid: A material that has the ability to change from a solid state to a liquid state and back to a solid state by changing the temperature.
- B. List 4 characteristics of alginate impression material.
  - 1. Irreversible hydrocolloid
  - 2. Lacks dimensional stability
  - 3. Sensitive to heat and moisture
  - 4. Easy to use
- C. Define impression.
  - 1. Impression: A negative replication of a dental structure.
- D. Explain 4 reasons for taking alginate impressions.
  - 1. Study models
  - 2. Opposing models
  - 3. Construction of temporary crowns
  - 4. Working models to build custom trays, bleach trays etc.
- E. Name 2 factors that will affect gel strength.
  - 1. Water powder ratio
  - 2. Spatulation time

F. Name 2 factors that will affect setting time.

1. Manufacturer's properties
  - a. Fast set, 1 to 2 minutes
  - b. Slow set, 2 to 4.5 minutes
2. Water temperature (heat increases set time, cold decreases set time)

G. Identify 2 factors that affect dimensional stability.

1. Syneresis: Loss of water
2. Imbibition: Uptake of water

### 16.02 Armamentarium Required to Mix

A. Identify 7 items required to mix alginate.

1. Alginate material
2. Water measure
3. Powder scoop
4. Paper cup or paper towel
5. Room temperature water
6. Flexible bowl
7. Alginate spatula, flexible, and broad

### 16.03 Patient Preparation

A. List 5 steps in preparing the patient in order.

1. Review the health history
2. Explain the procedure
3. Instruct the patient
4. Inspect the mouth
5. Rinse the mouth

### 16.04 Tray Selection

A. Identify 3 purposes of an alginate tray.

1. Carry material
2. Control material
3. Confine material

B. List 5 techniques to reduce gagging the patient.

1. Take mandibular impressions first.
2. Have patient breathe through in and out through their nose.
3. Have the patient concentrate on an object in the operatory rather than the procedure (i.e., a spot on the wall), or have the patient lift his/her leg and hold it until the material sets.
4. An ice cube placed in the patient's mouth prior to taking the impression will have a numbing effect and may help prevent the gagging sensation.
5. Since nitrous oxide/oxygen inhalation sedation depresses the gag reflex, it can be used to relax the patient to reduce gagging during the taking of impression.

C. Identify 4 types of trays available.

1. Disposable Styrofoam
2. Perforated metal
3. Solid rim-lock metal
4. Plastic/perforated or solid

D. Identify 3 variations in alginate tray coverage.

1. Full arch, maxillary or mandibular
2. Anterior only
3. Right or left quadrant

E. List the steps in tray selection in order.

1. Put on PPE
2. Inspect the mouth
3. Try in tray
4. Use mirror to inspect fit
5. Ask patient about comfort
6. Evaluate fit

F. List 6 requirements in tray selection.

1. Clears tissue by 3mm
2. Long enough to clear the retromolar pad or the tuberosity (1-2mm) while not touching the incisors
3. The tray falls at least 1mm short of the peripheral turn
4. Incisors should sit in the deepest anterior portion of the tray
5. The tray sides do not grossly depress any frenum
6. The patient does not feel excessive pain or pressure

## 16.05 Preparing Impression Trays

A. Identify 3 reasons for applying beading wax.

1. Patient comfort
2. Molds periphery of the tray to the vestibule
3. Prevents the teeth from touching the tray

B. List 3 criteria for correctly placed beading wax.

1. Wax extended around the entire periphery of the tray
2. Wax does not interfere with tray fit
3. Three small wax squares placed in the occlusal anterior and posterior left and right

## 16.06 Spatulation Technique

A. List in order the 12 steps in mixing alginate.

1. Read the manufacturer's directions.
2. Measure required amount of room temperature water.
3. Pour water in bowl (or powder first as indicated by the manufacturer).
4. Fluff alginate powder.

5. Fill powder with scoop according to manufacturer's directions and place in a cup or on a paper towel. Repeat if required.
6. Replace alginate lid.
7. Combine water and powder as indicated by the manufacturer.
8. Stir the mix to wet all powder particles.
9. Begin spatulation in a stropping motion. Rotate the bowl. Spread the mix against the sides of the bowl.
10. Gather the mix after 20 seconds and repeat step 9.
11. Mix until the mix is creamy.
12. Gather the mass and load the tray. Total mixing time should not exceed 1 minute.

### **16.07 Loading the Mandibular Alginate Tray**

- A. List the 7 steps in loading the mandibular tray.
  1. Have a small cup of water available to smooth the alginate surface.
  2. Spatulate alginate according to instructions.
  3. Gather alginate on spatula.
  4. Wipe half into one side of the tray from the peripheral border and press into tray.
  5. Repeat by wiping the other half into the other side of the tray.
  6. Wet finger and smooth the surface of the alginate material.
    - a. Optional: Wipe small amount of alginate onto the occlusal surfaces of the mandibular teeth just prior to seating the tray to minimize trapping bubbles.
  7. Loading time should be less than 30 seconds.

### **16.08 Loading the Maxillary Impression Tray**

- A. List the 7 steps in loading the tray.
  1. Have a small cup of water ready for smoothing tray alginate.
  2. Spatulate alginate according to instructions.
  3. Remove alginate from the bowl in one mass.
  4. Load the tray from the posterior.
  5. Press the mass down with the spatula into the anterior. Make sure no voids are created.
  6. Wet fingers and smooth the surface of the alginate.
    - a. Optional: Wipe alginate onto the occlusal of the teeth to minimize bubbles.
    - b. Optional: Remove any unwanted material from the palate area to minimize gagging.
  7. Loading time should be less than 30 seconds.

### **16.09 Seating the Trays**

- A. List the 15 steps in taking the mandibular impression.
  1. Position yourself between 8 and 9 o'clock.
  2. The patient's shoulder should be at the same height as the operator's elbow.
  3. Instruct the patient to rinse just prior to taking the impression.

4. Mix and load the tray.
5. Insert the tray.
6. Hold the tray in one hand and, with the other hand retract the cheek.
7. Slide the tray in sideways until one-half of the tray is in the mouth then rotate the tray and center. The handle of the tray should be centered with the nose and perpendicular to the anterior teeth. The anterior portion of the tray must be positioned over the centrals to provide adequate material in the vestibule.
8. Ask the patient to close slightly.
9. Depress the tray, posterior to anterior.
10. Have the patient elevate the tongue then depress the tray more.
11. Ask the patient to relax the cheeks and lip.
12. Position the tray by pressing firmly on the occlusal with the index fingers; place the thumbs under the mandible.
13. Instruct the patient to breathe deeply through the nose.
14. When the material is set, run your fingers around the peripheral border to break the seal, protect the upper teeth with your index finger of your left hand and remove with one firm movement or snap.
15. Rinse the impression under water, inspect, spray with disinfectant, wrap in a moist paper towel, and place in a baggie.

B. List 11 steps in taking the maxillary impression.

1. The patient's shoulder should be positioned at the height of the operator's elbow.
2. The operator should be between 9 o'clock and 12 o'clock (for right-handed operators.)
3. Insert the loaded tray, holding the tray with one hand and retracting the cheek with the other.
4. Slide the tray in sideways until one-half of the tray is in the mouth, then rotate the tray and center. The handle of the tray should be centered with the nose and perpendicular to the anterior teeth. The anterior portion of the tray must be positioned over the centrals to provide adequate material in the vestibule.
5. Seat the posterior of the tray firmly first, this will expel the material forward, instead of down the throat.
6. Continue seating the anterior portion of the tray.
7. Lift the upper lip to free it from the tray. Have the patient relax cheek and lips. Lift the lip over tray to obtain an impression of vestibules and the frenum.
8. The patient's head should be tipped forward to prevent flow down the throat.
9. Instruct the patient to breathe deeply and slowly through the nose.
10. When the material is set, lift the cheeks to break the seal, protect the opposing teeth, separate with one firm, continuous motion.
11. Rinse the impression under water, inspect, spray with disinfectant, wrap in a moist paper towel, and place in a baggie.

- C. List the 7 steps in creating a tongue space on the mandibular.
1. Unwrap the mandibular alginate.
  2. Mix one scoop of alginate.
  3. Wipe it on the middle two fingers of your non-dominant hand.
  4. Place the mandibular alginate tray handle towards the heel of the hand, over the alginate. Use the heel of the hand to support the tray handle.
  5. Using moistened fingers of your dominant hand, join the alginate to the lingual borders of the impression, creating a smooth, flat floor.
  6. Hold the tray in place until set.
  7. Gently free the fingers, wrap and bag.

## 16.10 Evaluating the Alginate Impression

- A. List the 10 criteria for a completed satisfactory mandibular alginate impression.
1. The tray was seated so all detail is reproduced, including the teeth, the complete peripheral turn (vestibule and frenum) and a portion of the retromolar pads.
  2. The detail is sharp, not blurred or indistinct.
  3. The impression is free of voids in critical areas.
  4. The impression is free of large folds of alginate extending into the patient's throat.
  5. There are no areas where the alginate has pulled away from the tray.
  6. The impression is free of rips and tears, except in interproximal areas.
  7. The alginate covers the tray (no unwaxed tray is visible through the alginate).
  8. The alginate is free of bulges or depressions that indicate a sub-surface bubble.
  9. The alginate is smooth, not sponge-like or grainy.
  10. The tongue space is smooth, flat and does not overlap the impression.
- B. List the 10 criteria for a satisfactory maxillary impression.
1. The tray was seated so all detail is reproduced, including the teeth, the complete peripheral turn (vestibule and frenum) and all of the tuberosity.
  2. The detail is sharp, not blurred or indistinct.
  3. The impression is free of voids in critical areas.
  4. The impression is free of large folds of alginate extending down the throat.
  5. There are no areas where the alginate has pulled away from the tray.
  6. The impression is free of rips and tears, except in interproximal areas.
  7. The alginate covers the tray (no unwaxed tray is visible through the alginate).
  8. The alginate is free of bulges or depressions that indicate a sub-surface bubble.
  9. The alginate is smooth, not sponge-like or grainy.
  10. The palatal arch is complete.

# CLINICAL EDUCATION

## Intended Outcome

Given the necessary didactic instruction, supplies and equipment to obtain an alginate impression the student will perform the following tasks on 4 patients with 100 % accuracy. The student will perform the following tasks on 2 adult patients with at least 85% accuracy on the final clinical examination.

## **Tasks**

Number of tasks to master = 56

## **Preliminary Procedures**

1. Take universal precautions.
2. Assemble the alginate impression tray setup.
  - a. Alginate material
  - b. Water measure
  - c. Powder scoop
  - d. Paper cup
  - e. Water
  - f. Flexible bowl
  - g. Alginate spatula
3. Seat the patient and place patient bib.
4. Review patient's medical history. If patient is a minor, review medical history with the parent or guardian of the patient.
5. Explain the procedure to the patient.
6. Instruct the patient.
7. Inspect the mouth.
8. Rinse the mouth.
9. Select and prepare maxillary and mandibular trays.
10. Install the wax on the maxillary and mandibular trays.

## **Alginate Procedure**

1. Measure required amount of room temperature water for the mandibular impression.
2. Fluff alginate powder.
3. Measure powder as indicated by the manufacturer.
4. Fill powder with scoop, tap to eliminate air pockets, level and place in a bowl.

5. Replace alginate lid.
6. Combine water and powder as indicated by the manufacturer.
7. Mix until creamy. Total mixing time should not exceed one minute.
8. Gather the alginate on the spatula.
9. Load the mandibular tray from the sides in two increments. Wet finger and smooth the surface of the alginate material. Loading time should be approximately 30 seconds. Optional: Wipe small amount of alginate onto the occlusal surfaces of the mandibular teeth just prior to seating the tray to minimize trapping bubbles.
10. Instruct the patient to rinse just prior to taking the impression.
11. Position yourself between 8 and 9 o'clock.
12. The patient's shoulder should be at the same height as the operator's elbow.
13. Hold the tray in one hand and, with the other hand, retract the cheek.
14. Insert the loaded tray.
15. Ask the patient to raise their tongue.
16. Depress the tray, posterior to anterior.
17. Ask the patient to relax the cheeks and lip with the index fingers; place the thumbs under the mandible.
18. Instruct the patient to breathe deeply through their nose.
19. When the material is set, run your fingers around the peripheral border to break the seal, protect their upper teeth with your index finger of your left hand and remove with one firm movement or snap.
20. Rinse, inspect, disinfect, wrap, and bag the impression.
21. Measure required amount of room temperature water for maxillary impressions.
22. Fluff then measure powder as indicated by manufacturer.
23. Fill powder with scoop, tap to eliminate air pockets, level and place in bowl.
24. Replace alginate lid.
25. Combine water and powder as indicated by the manufacturer.
26. Mix until creamy. Total mixing time should not exceed 1 minute.
27. Gather the alginate on the spatula.
28. Load the maxillary tray from the back in one increment. Wet finger and smooth the surface of the alginate material. Loading time should be approximately 30 seconds. Optional: Wipe small amount of alginate on to the occlusal surfaces of the maxillary teeth just prior to seating the tray to minimize trapping bubbles.
29. The operator's elbow should be at the same height as the patient's shoulder.
30. Position yourself between 9 and 12 o'clock (right handed operators).
31. Hold the tray in one hand, and with the other hand retract the cheek as you seat the tray.

32. Seat the posterior of the tray firmly toward the maxillary teeth. This will expel the material forward instead of down the throat.
33. Continue seating the anterior portion of the tray, lifting the upper lip to free it from the tray (the patient should relax cheek and lips).
34. Instruct the patient to tip head forward to prevent flow down the throat.
35. When the material is set, lift the cheeks to break the seal, protect the opposing teeth, separate with one firm continuous motion.
36. Rinse, inspect, disinfect, wrap, and bag the impression.
37. Create a tongue space on the mandibular.
38. Mix one scoop of alginate.
39. Wipe it on the middle two fingers of your non-dominant hand.
40. Place the mandibular alginate tray; handle towards the heel of the hand, over the alginate. Use the heel of the hand to support the tray handle.
41. Using moistened fingers of your dominant hand, join the alginate to the lingual borders of the impression, creating a smooth, flat floor.
42. Hold the tray in place until set.
43. Gently free the fingers, wrap and bag.

### ***Evaluation and Charting***

1. Evaluate for a satisfactory mandibular and maxillary alginate impression.
  - a. The tray was seated so all detail is reproduced, including the teeth, the complete peripheral turn and a portion of the retromolar pads and maxillary tuberosity.
  - b. The detail is sharp, not blurred or indistinct.
  - c. The impression is free of voids in critical areas.
  - d. The impression is free of large folds of alginate extending into the patient's throat.
  - e. There are no areas where the alginate has pulled away from the tray.
  - f. The impression is free of rips and tears, except in interproximal areas.
  - g. The alginate covers the tray (no unwaxed tray is visible through the alginate).
  - h. The alginate is free of bulges or depressions that indicate a sub-surface bubble.
  - i. The alginate is smooth, not sponge-like or grainy.
  - j. The tongue space is smooth, flat and does not overlap the impression (mandibular only).
  - k. The palatal arch is visible (maxillary only).
2. The dated chart entry is recorded in ink.
3. Student signs record of services.
4. Instructor evaluates impressions and initials the record of services.

## COMPETENCY-BASED PRACTICE EVALUATION OBTAINING ALGINATE IMPRESSION PROCEDURE

Student Name: \_\_\_\_\_

Lab Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

CL Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

### Intended Outcome

Given the necessary didactic instruction, supplies and equipment to obtain an alginate impression, the student will perform the following tasks on 4 patients with 100% accuracy in a clinical setting. The student will perform the following tasks on 4 adult patients with at least 85% accuracy on the final clinical examination.

Time allotment: 60 minutes

	Tasks	Practice 1		Practice 2	
		Pass	Fail	Pass	Fail
1	Use universal precautions.				
2	Assemble the alginate impression tray setup. a. Alginate material b. Water measure c. Powder scoop d. Paper cup e. Water f. Flexible bowl g. Alginate spatula				
3	Seat the patient and place patient bib.				
4	Review patient's medical history. If patient is a minor, review medical history with the parent or guardian of the patient.				
5	Explain the procedure to the patient.				
6	Instruct the patient.				
7	Inspect the mouth.				
8	Rinse the mouth.				
	Select maxillary and mandibular trays.				
10	Install the wax on the maxillary and mandibular trays.				
11	Measure required amount of room temperature water for mandibular impression.				
12	Fluff alginate powder.				
13	Measure powder as indicated by the manufacturer.				
14	Fill powder with scoop, tap to eliminate air pockets, level and place in a bowl.				
15	Replace alginate lid.				
16	Combine water and powder as indicated by the manufacturer.				
17	Mix until creamy. Total mixing time should not exceed 1 minute.				
18	Gather the alginate on the spatula.				

		Practice 1		Practice 2	
	Tasks	Pass	Fail	Pass	Fail
19	Load tray from the sides in two increments. Wet finger and smooth the surface of the alginate material. Loading time should be approximately 30 seconds. Optional: Wipe small amount of alginate onto the occlusal surfaces of the mandibular teeth just prior to seating the tray to minimize trapping bubbles.				
20	Instruct the patient to rinse just prior to taking the impression.				
21	Position yourself between 8 and 9 o'clock.				
22	The patient's shoulder should be at the same height as the operator's elbow.				
23	Hold the tray in one hand and, with the other hand retract the cheek.				
24	Insert the loaded tray.				
25	Ask the patient to raise their tongue.				
26	Depress the tray, posterior to anterior.				
27	Ask the patient to relax the cheeks and lip with the index fingers; place the thumbs under the mandible.				
28	Instruct the patient to breathe deeply through their nose.				
29	When the material is set, run your fingers around the peripheral border to break the seal, protect their upper teeth with your index finger of your left hand and remove with one firm movement or snap.				
30	Rinse, disinfect, and bag impression.				
31	Measure required amount of room temperature water for maxillary impressions.				
32	Measure powder as indicated by manufacturer.				
33	Fill powder with scoop, tap to eliminate air pockets, level and place in bowl.				
34	Replace alginate lid.				
35	Combine water and powder as indicated by the manufacturer.				
36	Mix until creamy. Total mixing time should not exceed 1 minute.				
37	Gather the alginate on the spatula.				
38	Load the tray from the back in one or two increments. Wet finger and smooth the surface of the alginate material. Loading time should be approximately 30 seconds. Optional: Wipe small amount of alginate onto the occlusal surfaces of the maxillary teeth just prior to seating the tray to minimize trapping bubbles.				
39	The operator's elbow should be at the same height as the patient's shoulder.				
40	Position yourself between 9 and 12 o'clock (right handed operators).				
41	Hold the tray in one hand, and with the other hand retract the cheek as you seat the tray.				
42	Seat the posterior of the tray firmly toward the maxillary teeth. This will expel the material forward instead of down the throat.				
43	Continue seating the anterior portion of the tray, lifting the upper lip to free it from the tray (the patient should relax cheek and lips).				
44	Instruct the patient to tip head forward to prevent flow down the throat.				
45	When the material is set, lift the cheeks to break the seal, protect the opposing teeth, separate with one firm continuous motion.				
46	Rinse, disinfect, and bag impression.				
47	Create a tongue space on the mandibular.				
48	Mix one scoop of alginate.				
49	Wipe it on the middle two fingers of your non-dominant hand.				
50	Place the mandibular alginate tray; handle towards the heel of the hand, over the alginate. Use the heel of the hand to support the tray handle.				
51	Using moistened fingers of your dominant hand, join the alginate to the lingual borders of the impression, creating a smooth, flat floor.				
52	Hold the tray in place until set.				
53	Gently free the fingers, wrap, and bag.				
54	Check for a satisfactory maxillary and mandibular alginate impression.				

		Practice 1		Practice 2	
	Tasks	Pass	Fail	Pass	Fail
55	The dated chart entry is recorded in ink.				
56	Student signs record of services.				
57	Instructor initials the record of services.				
Comments:					

		Practice 3		Practice 4	
	Tasks	Pass	Fail	Pass	Fail
1	Use universal precautions.				
2	Assemble the alginate impression tray setup. <ul style="list-style-type: none"> <li>a. Alginate material</li> <li>b. Water measure</li> <li>c. Powder scoop</li> <li>d. Paper cup</li> <li>e. Water</li> <li>f. Flexible bowl</li> <li>g. Alginate spatula</li> </ul>				
3	Seat the patient and place patient bib.				
4	Review patient's medical history. If patient is a minor, review medical history with the parent or guardian of the patient.				
5	Explain the procedure to the patient.				
6	Instruct the patient.				
7	Inspect the mouth.				
8	Rinse the mouth.				
9	Select maxillary and mandibular trays.				
10	Install the wax on the maxillary and mandibular trays.				
11	Measure required amount of room temperature water for mandibular impression.				
12	Fluff alginate powder.				
13	Measure powder as indicated by the manufacturer.				
14	Fill powder with scoop, tap to eliminate air pockets, level and place in a bowl.				
15	Replace alginate lid.				
16	Combine water and powder as indicated by the manufacturer.				
17	Mix until creamy. Total mixing time should not exceed 1 minute.				
18	Gather the alginate on the spatula.				
19	Load tray from the sides in two increments. Wet finger and smooth the surface of the alginate material. Loading time should be approximately 30 seconds. Optional: Wipe small amount of alginate onto the occlusal surfaces of the mandibular teeth just prior to seating the tray to minimize trapping bubbles.				
20	Instruct the patient to rinse just prior to taking the impression.				
21	Position yourself between 8 and 9 o'clock.				
22	The patient's shoulder should be at the same height as the operator's elbow.				
23	Hold the tray in one hand and, with the other hand retract the cheek.				
24	Insert the loaded tray.				
25	Ask the patient to raise their tongue.				
26	Depress the tray, posterior to anterior.				
27	Ask the patient to relax the cheeks and lip with the index fingers; place the thumbs under the mandible.				
28	Instruct the patient to breathe deeply through their nose.				

		Practice 3		Practice 4	
	Tasks	Pass	Fail	Pass	Fail
29	When the material is set, run your fingers around the peripheral border to break the seal, protect their upper teeth with your index finger of your left hand and remove with one firm movement or snap.				
30	Rinse, disinfect, and bag impression.				
31	Measure required amount of room temperature water for maxillary impressions.				
32	Measure powder as indicated by manufacturer.				
33	Fill powder with scoop, tap to eliminate air pockets, level and place in bowl.				
34	Replace alginate lid.				
35	Combine water and powder as indicated by the manufacturer.				
36	Mix until creamy. Total mixing time should not exceed 1 minute.				
37	Gather the alginate on the spatula.				
38	Load the tray from the back in one or two increments. Wet finger and smooth the surface of the alginate material. Loading time should be approximately 30 seconds. Optional: Wipe small amount of alginate onto the occlusal surfaces of the maxillary teeth just prior to seating the tray to minimize trapping bubbles.				
39	The operator's elbow should be at the same height as the patient's shoulder.				
40	Position yourself between 9 and 12 o'clock (right handed operators).				
41	Hold the tray in one hand, and with the other hand retract the cheek as you seat the tray.				
42	Seat the posterior of the tray firmly toward the maxillary teeth. This will expel the material forward instead of down the throat.				
43	Continue seating the anterior portion of the tray, lifting the upper lip to free it from the tray (the patient should relax cheek and lips).				
44	Instruct the patient to tip head forward to prevent flow down the throat.				
45	When the material is set, lift the cheeks to break the seal, protect the opposing teeth, separate with one firm continuous motion.				
46	Rinse, disinfect, and bag impression.				
47	Create a tongue space on the mandibular.				
48	Mix one scoop of alginate.				
49	Wipe it on the middle two fingers of your non-dominant hand.				
50	Place the mandibular alginate tray; handle towards the heel of the hand, over the alginate. Use the heel of the hand to support the tray handle.				
51	Using moistened fingers of your dominant hand, join the alginate to the lingual borders of the impression, creating a smooth, flat floor.				
52	Hold the tray in place until set.				
53	Gently free the fingers, wrap, and bag.				
54	Check for a satisfactory maxillary and mandibular alginate impression.				
55	The dated chart entry is recorded in ink.				
56	Student signs record of services.				
57	Instructor initials the record of services.				
Comments:					

## CLINICAL REQUIREMENTS COMPLETED

### Taking Alginate Impressions for Study Casts

Each student is required to take 4 acceptable sets of alginate impressions. Consent/permission slip required.

	<b>Dentist Signature</b>	<b>Date</b>
1.		
2.		
3.		
4.		

**CLINIC REQUIREMENT FORMS TO BE SUBMITTED TO CLINICAL EXAMINER AT FINAL EXAMINATION**

# COMPETENCY-BASED CLINICAL FINAL EVALUATION

## Obtaining Alginate Impression - Product

Student Name: \_\_\_\_\_

Evaluator: \_\_\_\_\_ Grade:  Pass  Fail

### Intended Outcome

Given the necessary personnel, supplies and equipment to obtain alginate impressions, the student will perform the following tasks on 2 patients with 85% accuracy on the final examination (75 points out of 88).

Time allotment: 60 minutes

<b><u>Grading Criteria</u></b>			
	2 = Acceptable	1= Improvable	0 = Unacceptable
			0 - 2
			<b>Pt. #1</b> <b>Pt. #2</b>
<b>Mandibular</b>			
1	All teeth are clearly visible (required).		
2	Complete peripheral turn with labial and buccal frenum.		
3	Portion of retromolar pads.		
4	The detail is sharp, not blurred or indistinct.		
5	Impression is free of voids in critical areas.		
6	Impression is free of large folds of alginate.		
7	There are no areas where the alginate has pulled away from the tray.		
8	Alginate thoroughly covers the tray. No unwaxed tray is visible through the alginate.		
9	Impression is free of rips and tears except in interproximal areas.		
10	The alginate is smooth and sponge-like.		
11	The tongue space is smooth, flat and does not overlay the impression.		
<b>Maxillary</b>			
1	The teeth are clearly visible (required).		
2	Complete peripheral turn including labial and buccal frenum.		
3	Tuberosity.		
4	The complete palatal arch.		
5	The detail is sharp, not blurred or indistinct.		
6	Impression is free of voids in critical areas.		
7	Impression is free of large folds of alginate.		
8	There are no areas where the alginate has pulled away from the tray.		
9	Alginate thoroughly covers the tray, (no unwaxed tray is visible through the alginate).		
10	Impression is free of rips and tears except in interproximal areas.		
11	The alginate is smooth and sponge-like.		
<b>Total</b>			
<b>Comments:</b>			

## **17.0 Introduction to Dental Radiography**

### Intended Outcome

Given information about biological effects of ionizing radiation, health protection techniques, x-ray machines, dental film/sensors, radiographic landmarks, mounting radiographs and processing procedures, the student will be able to perform 80% of the following tasks with accuracy on the didactic examination.

### Tasks

Number of tasks to master = 159

### **17.01 Biological Effects of Ionizing Radiation**

- A. Define types of radiating effects.
  - 1. Somatic effects: Changes in non-reproductive cells resulting in illness such as cancer or cataracts.
  - 2. Genetic effects: Changes in reproductive cells resulting in genetic defects passed on to future generations.
  - 3. Cumulative effects: Increasing in effect with each successive additional dose.
  
- B. List 4 critical organs exposed to radiation during a dental x-ray.
  - 1. Bone marrow
  - 2. Lens of the eye
  - 3. Thyroid gland
  - 4. Skin
  
- C. List 10 tissues/cells in order from most to least sensitive to radiation.
  - 1. White blood cells
  - 2. Red blood cells
  - 3. Immature reproductive cells
  - 4. Epithelial cells
  - 5. Endothelial cells
  - 6. Connective tissue cells
  - 7. Bone cells
  - 8. Nerve cells
  - 9. Brain cells
  - 10. Muscles cells

## 17.02 Protection Techniques

- A. Define 4 types of radiation.
  - 1. Primary radiation: Initial radiation produced at the tungsten target that exits the tube head.
  - 2. Secondary radiation: Formed when the primary beam comes in contact with matter.
  - 3. Scatter radiation: Secondary radiation that occurs when the primary beam is deflected off of matter.
  - 4. Leakage radiation: Radiation that escapes out of the tube head.
  
- B. Define ALARA.
  - 1. ALARA: As Low As Reasonably Achievable
  
- C. Define maximum permissible dose (MPD).
  - 1. Maximum permissible dose: The dose equivalent of ionizing radiation that, in light of present knowledge, is not expected to cause detectable body damage to average person at any time during their lifetime
    - a. 50mSv per year for radiation workers
    - b. 5mSv per year for general public
  
- D. List the 6 methods of radiation protection for the patient.
  - 1. Use the fastest film speed available or digital, if available.
  - 2. Use open-ended, shielded, Position Indicating Devices no larger than 2.75 inches in diameter. Rectangular devices are superior.
  - 3. Use good technique including film holders to diminish the need for retaking films.
  - 4. Carefully follow manufacturer's directions for processing.
  - 5. Use lead aprons and thyroid collars to cover the patient.
  - 6. ALARA (as low as reasonably achievable).
  
- E. List 5 methods of operator protection from x-ray radiation.
  - 1. Stand behind the patient at a point between 90° and 135° from the source of the beam.
  - 2. Stand behind a wall or radiation-resistant barrier or at least 6 feet away from the radiation source.
  - 3. Have machine tested every 2 years.
  - 4. Never hold the film or PID for the patients during and exposure.
  - 5. Use of radiation monitoring devices, film badges, or dosimeters to measure exposure.

## 17.03 The X-Ray Machine

- A. List the 5 major components of the x-ray machine.
1. Tube
  2. Glass housing
  3. Tubehead
  4. Position Indicating Device (cone)
    - a. Collimation
    - b. Filtration
  5. Control panel adjustments
- B. Describe the 5 major components of the x-ray machine.
1. Tube: Contains negative (cathode) and the positive (anode) terminals that first create and then attract electrons to produce x-rays.
  2. Glass housing: Leaded glass that surrounds the tube.
  3. Tubehead: Heavy metal enclosure that surrounds the x-ray tube.
  4. Position Indicating Device (cone): Used to direct and contain the beam of radiation.
  5. Control panel adjustments:
    - a. The kilovolt peak (kVp) control adjusts the voltage or force of electricity in the tube between 70 and 90 (quality).
    - b. The milliamperage (mA) control adjusts the intensity of the current flow or number of electrons flowing through a circuit between 5 and 15 (quantity).
    - c. The time control or exposure button activates the x-ray machine and adjusts the amount of time that the stream of electrons is allowed to travel between the cathode and the anode can be either traditional or impulse driven.

## 17.04 Dental Film/Sensors

- A. List 4 types of dental films.
1. Intraoral
    - a. Film sizes: 0, 1, 2, 3, 4
  2. Extraoral
    - a. Film sizes: 5x7, 8x10, 5 or 6x12
  3. Duplicating
  4. Digital
    - a. Charge-coupled device (CCD)
    - b. Complementary metal oxide semiconductor/active pixel sensor (CMOS/APS)
    - c. Charge injection device (CID)
- B. Describe 5 types of dental radiographs.
1. Periapical: Intraoral film showing the entire tooth and surrounding tissue.
  2. Bitewing: Intraoral film showing the interproximal and bone height of the crowns of maxillary and mandibular teeth.
  3. Occlusal: Intraoral film showing the entire maxillary or mandibular arch.
  4. Panoramic: Extraoral film showing the entire maxillary and mandibular arches.
  5. Other: Extraoral, i.e. Cephalometric.
- C. Explain the 3 important film storage factors.
1. Optimum temperature for storage should be between 50° and 70° F.
  2. The relative humidity for film storage should be between 30% and 50%.
  3. Film should not be stored in areas where radiation exposures are made.
- D. List the parts of the film package.
1. Outer covering
  2. Black paper
  3. Lead foil
  4. Film
- E. List the layers of a dental film.
1. Plastic film base
  2. Adhesive layer
  3. Emulsion (gelatin and silver halide crystals)

## 17.05 Radiographic Techniques

- A. Define the paralleling technique.
  - 1. Paralleling technique: Uses a film holder to position the film parallel to the tooth and the PID perpendicular to the tooth and film.
- B. Define the bisecting angle technique.
  - 1. Bisecting angle technique: Positions the film close to the tooth forming an angle. That angle is bisected and the PID is angle perpendicular to the bisecting line.
- C. Define extra oral technique.
  - 1. Extra oral technique: The patient is positioned in the extra oral radiographic unit and the film is loaded into a cassette and placed on the unit. The x-ray head and the cassette rotate around each other when taking the film.

## 17.06 Radiographic Landmarks

- A. Identify 5 image characteristics used to identify landmarks visible in radiographic films.
  - 1. Radiopaque
  - 2. Radiolucent
  - 3. Density
  - 4. Contrast
  - 5. Sharpness
- B. Identify 6 landmarks visible in the maxillary molar film.
  - 1. Maxillary sinus
  - 2. Zygomatic process
  - 3. Zygomatic bone
  - 4. Hamulus
  - 5. Maxillary tuberosity
  - 6. Coronoid process of the mandible
- C. Identify 1 landmark visible in the maxillary premolar film.
  - 1. Maxillary sinus
- D. Identify 2 landmarks visible in the maxillary canine film.
  - 1. Maxillary sinus
  - 2. Junction of the maxillary sinus and nasal fossa
- E. Identify 5 landmarks visible in the maxillary incisor film.
  - 1. Incisive foramen
  - 2. Nasal septum
  - 3. Nasal fossa
  - 4. Anterior nasal spine
  - 5. Median palatine suture
- F. Identify 4 landmarks visible in the mandibular molar film.
  - 1. Mandibular canal
  - 2. Internal oblique line
  - 3. External oblique ridge
  - 4. Mylohyoid ridge

G. Identify 1 landmark visible in the mandibular premolar film.

1. Mental foramen

H. Identify 3 landmarks visible in the mandibular incisor film.

1. Lingual foramen
2. Mental ridge
3. Genial tubercles

## 17.07 Mounting Radiographs

A. Describe the 9 step procedure for mounting a full mouth set of radiographs.

1. Mark the mount with the patient name, age, and date.
2. Place a clean, dry paper towel on the countertop in front of a lighted viewbox.
3. With clean, dry hands, handle radiographs by edges only.
4. Place all radiographs on the paper towel with the embossed (raised) dot facing up.
5. Sort the radiographs into three groups: bitewings, posterior periapicals, and anterior periapicals.
6. Further arrange the radiographs by maxillary arch, posterior and anterior.
7. Further arrange the radiographs by mandibular arch, posterior and anterior.
8. Separate all films left from right and orient periapical films with maxillary roots pointing up and mandibular roots pointing down.
9. Begin mounting by inserting the bitewing radiographs into the mount, followed by the posterior periapicals, and finally the anterior periapicals.

## 17.08 Processing Radiographs

A. Describe the 6 steps required during film processing to assure proper infection control.

1. Wipe saliva from films.
2. Place films in a labeled disposable container.
3. Wash hands.
4. With non-powdered gloved hands in safelight conditions, open the film packets by pulling on their tabs.
5. Allow films to drop onto a clean paper towel or into a paper cup.
6. Remove contaminated gloves, rewash hands, and re-glove prior to processing. An alternative is to wear over gloves when opening film packets.

B. State the 10 steps required to hand process films.

1. Check solution levels
2. Maintain appropriate chemical temperatures: between 68° and 70°
3. Turn white lights off and safelight on
4. Remove films from packets using appropriate methods of infection control

5. Securely place films onto hanger
  6. Immerse film in developer and activate timer for 5 minutes
  7. Remove from developer and rinse by agitation for 30 seconds
  8. Immerse films in fixer and activate timer for 10 minutes
  9. Remove films and place in circulating water bath for 10 minutes
  10. Dry films in electric dryer or air-dry until films are no longer tacky
- C. State 4 principles of operation for automatic processing.
1. Manufacturer's recommendations must be followed precisely
  2. Rollers or tracks are used to transport the films through the processing chemicals
  3. Much higher temperatures are required for automatic processing
  4. Chemical concentrations are higher for automatic processing
- D. Describe 3 elements of caring for the automatic processor.
1. Special cleaning films must be run through the system daily.
  2. Depending on usage, the processor must be scoured with a nylon pad weekly or biweekly. Harsh cleansers should not be used.
  3. At the same time interval, the rollers should be removed from roller-type systems and soaked in warm water for 20 minutes then special cleaning solutions used.
- E. Describe the 3 principles for care of processing solutions.
1. Levels of the solutions must be checked regularly and replenished as required by manufacturer recommendation.
  2. If large films such as panoramic films are processed frequently, the solutions will need to be replenished more often.
  3. Solutions should be change at least every 4 weeks.
- F. Identify quality assurance procedures for processing.
1. Recording solution temperatures
  2. Dates of solution changes
  3. Test films
  4. Equipment maintenance
  5. Inspections

## 17.09 Evaluating Radiographs for Diagnostic Value

### A. Identify intraoral exposure errors.

1. Elongation
2. Foreshortening
3. Horizontal overlap
4. Cone cutting
5. Light image
6. Dark image
7. Film bending
8. Reverse film (herringbone effect)
9. Blurred image
10. Superimposed image
11. Double exposure
12. Film placement errors

### B. Identify processing errors and causes.

1. Spots on film
2. Fogging
3. Light and dark images
4. Clear (blank film)
5. Black film
6. Partial images
7. Stains
8. Discoloration
9. Overlapped films
10. White or black lines
11. Static electricity artifacts
12. Fingerprints

## **SECTION 2: Clinical Education**

## FUNDAMENTALS OF DENTAL ASSISTING

Educational parameters of the clinical/lab component of the Fundamentals of Dental Assisting Curriculum Procedures:

<b>Unit</b>	<b>Title</b>	<b>Number of Tasks</b>
1.0	Disclosing Procedure	5
2.0	Brushing Procedure	12
3.0	Flossing Procedure	7
4.0	Vital Signs Measurement Procedure	7
5.0	Personal Protective Equipment (PPE) Procedure	11
6.0	Mounting Radiographs Procedure	6
7.0	Acrylic Appliance/Disc Polishing Procedure	7
8.0	Diagnostic Cast Procedure (Working with Alginate and Dental Plaster Lab)	20
9.0	Treatment Room Breakdown Procedure	17
	Total	92

## 1.0 Disclosing Procedure

### Intended Outcome

Given disclosing tablets or disclosing solution, lip lubricant, safety glasses, gloves, mask, soap, paper towels, mouth mirror, hand mirror, cotton tip applicator, cup, water and a sink (if available), the student will perform the following tasks on a partner with 100% accuracy.

### Tasks

- A. Take standard/universal precautions. Don PPE.
- B. Apply lip lubricant on partner's lips.
- C. Refer to manufacturer's instructions prior to using the disclosing solution or tablets. If using disclosing tablets, have your partner chew one tablet thoroughly, swish with water and expectorate (spit) into a cup or sink. If using the disclosing solution, apply a small amount of solution on a cotton tip applicator and glide the applicator over all the surfaces of the teeth. Instruct your partner to rinse with water and expectorate into a cup or sink.
- D. Using a mouth mirror, look in your partner's mouth and identify the areas of plaque on the surfaces of the teeth. Holding a hand mirror, your partner will also look in the mouth and identify the areas of plaque on tooth surfaces. Areas where plaque is present on the teeth will stain a color.
- E. Disinfect the surface area where you are working. Your partner will follow the same procedures (1 through 4).

## 2.0 Bass Brushing Procedure

### Intended Outcome

Given a mouth mirror and soft bristle toothbrush the student will perform the following tasks with 100% accuracy.

### Tasks

- A. Grasp the toothbrush with a firm grip and utilize a hand mirror to assess tooth brushing technique.
- B. Begin on the maxillary buccal surfaces of the two most posterior teeth. Angle the toothbrush at a 45° angle to the long axis of the tooth.
- C. Choosing no more than two teeth at a time, gently move the toothbrush against the teeth and gums using small vibratory strokes. Brush for a count of 10.
- D. Continue around the mouth until all the buccal and facial surfaces have been brushed.
- E. Begin on the maxillary lingual surfaces of the two most posterior teeth and continue until all the lingual surfaces have been brushed.
- F. Begin on the mandibular quadrant on the buccal surfaces of the two most posterior teeth. Angle the toothbrush at a 45° angle to the long axis of the tooth.
- G. Choosing no more than two teeth at a time, gently move the toothbrush against the teeth and gums using small vibratory strokes. Brush for a count of 10.
- H. Continue around the mouth until all the buccal and facial tooth surfaces have been brushed.
- I. Continue on the mandibular lingual surfaces of the two most posterior teeth and continue until all the lingual surfaces have been brushed.
- J. Begin on the furthestmost tooth in a maxillary quadrant. Place the bristles on the chewing surface of the teeth and use a back-and-forth motion across the occlusal surfaces. Brush from the furthestmost tooth toward the premolars for a count of 10.
- K. Continue until all the occlusal surfaces have been brushed.
- L. Rinse to remove plaque and debris.

### **3.0 Flossing Procedure**

#### Intended Outcome

Using waxed or unwaxed dental floss, a hand mirror, and the assistance of a partner, the student will perform the following tasks on themselves with 100% accuracy.

#### Tasks

- A. Your partner will hold the hand mirror while you practice. Remove a piece of floss approximately 18 inches long.
- B. Wrap the ends of the floss around your middle fingers until the length of the floss is approximately two inches. Use your other fingers to help guide the floss.
- C. Beginning on the most posterior interproximal surface of a mandibular or maxillary tooth, glide the floss between the teeth using a back-and-forth motion. Avoid snapping the floss against the gum tissue.
- D. Curve the floss in a C-shape around the tooth. Guide the floss into the sulcus maintaining a C-shape. Gently floss the area 4 to 5 times using an up and down motion.
- E. Remove the floss from the sulcus area and curve the floss in a C shape around the opposing tooth. Glide the floss into the sulcus, maintaining a C-shape. Gently floss the area 4 to 5 times using an up and down motion.
- F. Remove the floss from the contact area with an upward gliding motion. Unwrap the floss from the fingers and wrap a new section of unused floss around the same fingers. Proceed to the next interproximal area.
- G. Continue in this manner until all the interproximal surfaces have been flossed.

## 4.0 Vital Signs Procedure

### Intended Outcome

Given the knowledge of vital statistics, a sphygmomanometer, a stethoscope, a thermometer, a timepiece, a chart, a writing instrument and a patient the student will perform the following tasks with 100% accuracy.

### Tasks

- A. Have the patient bare an arm without obstruction up to the shoulder.
- B. Place the sphygmomanometer around the upper arm between the shoulder and the elbow with the pressure gauge tubing lined up over the medial aspect of the antecubital fossa.
- C. Place the earpieces of the stethoscope in the ears and the tympanic piece over the brachial artery in the antecubital fossa.
- D. Inflate the cuff until there is not a pulse sound appreciated through the stethoscope, usually 160 to 180.
- E. As pressure is released from the cuff, record the pressure reading on the gauge when you first hear a pulse sound then again when the pulse sound is no longer heard.
- F. Place the pads of the index and middle fingers on the inner surface of the patient's wrist, between the radius and the tendon. Start counting with a zero for the first pulse; the next pulse felt will be counted as one and so on. Count the pulse for 30 seconds and then multiply by two to complete the rate for one full minute.
- G. Using a timepiece and watching the patient, count the number of breaths taken in a 20 second period, multiply this number by three, and then record the number.

## **5.0 Personal Protective Equipment (PPE) Procedure**

### Intended Outcome

Given the necessary personnel supplies (lab jacket, gloves, masks, and goggles) to don and take off personal protective equipment, the student will perform the following tasks with 100% accuracy.

### Tasks

#### **5.01 Don Personal Protective Equipment (PPE)**

- A. Put on fresh lab jacket and fasten properly.
- B. Put on protective eyewear.
- C. Place mask on face and fasten properly, adjust the nose area to fit snugly.
- D. Wash and dry hands then put on exam gloves.
- E. Tuck cuff of sleeves into the gloves.

#### **5.02 Removing Personal Protective Equipment**

- A. Grasp the cuff of the first glove and pull it off turning it inside out. As you do, keep this glove in the gloved hand.
- B. With the ungloved hand grasp the inside of the cuff of the other glove, pull the glove off turning it inside out, keeping the first glove inside. Throw the gloves in the proper waste receptacle.
- C. Grasp the elastic or ties of the mask and remove it from the face, being cautious not to touch the contaminated front area. Throw the mask away.
- D. Grasp the protective eyewear by the earpiece and remove from the face. Place by sink to clean and disinfect.
- E. Remove the lab jacket and place in the proper area.
- F. Wash hands.

## 6.0 Mounting Radiographs Procedure

### Intended Outcome

Given the knowledge of dental anatomy, eighteen developed radiographs, a mount, table surface, and a light source, the student will be able to perform the following tasks with 100% accuracy.

### Tasks

- A. Arrange all dental films with dimples facing up from table top.
- B. Group bitewings, anterior periapicals, and posterior periapicals.
- C. Separate maxillary from mandibular periapicals.
- D. Separate all films left and right with the dimple facing toward the reader, identify the teeth in the radiograph and place with teeth anteriorly to center of the mount.
- E. Insert each film into the appropriate slot on the x-ray mount with dimple facing up.
- F. Label the mounts with patient name and date.

## **7.0 Acrylic Appliance/Disc Polishing Procedure**

### Intended Outcome

Given the necessary didactic instruction, supplies, and equipment to perform polishing acrylic, the student will perform the following tasks on an acrylic appliance/disc with imperfections with 100% accuracy.

### Tasks

- A. Assemble acrylic appliance/disc polishing tray set up.
  - 1. Gloves
  - 2. Eyewear
  - 3. Acrylic appliance/disc
  - 4. Lathe
  - 5. Arbor band or latch-type acrylic bur
  - 6. Slow speed handpiece
  - 7. Wet-rag wheel
  - 8. Medium grit pumice
  - 9. Flour of pumice
- B. Take required safety precautions.
- C. Reduce the bulk with the arbor band on the lathe or an acrylic bur in the handpiece.
- D. Refine surface with an acrylic bur in the handpiece.
- E. Polish on low with a wet-rag wheel and medium pumice.
- F. Polish on low with a wet-rag wheel and flour of pumice.
- G. Rinse and evaluate disc.

## **8.0 Diagnostic Cast Procedure: Working with Alginate and Dental Plaster Laboratory**

### Intended Outcome

Given the necessary diagnostic casting equipment and supplies, the student will perform the following tasks with 100% accuracy.

### Tasks

- A. Assemble the diagnostic case procedure tray set up.
  - 1. Flexible mixing bowl
  - 2. Large mixing spatula
  - 3. Small mixing spatula
  - 4. Vibrator
  - 5. Dental model plaster
  - 6. Rubber model base formers
  - 7. Maxillary stock tray to fit the typodont model
  - 8. Mandibular stock tray to fit the typodont model
  - 9. Typodont model
  - 10. Sink for water and hand washing
  - 11. Paper towels
  - 12. Gloves
  
- B. Produce a diagnostic model of the dental arches by performing the following twenty tasks.
  - 1. Wash, dry, and glove hands.
  - 2. Select a tray that will fit the typodont model provided.
  - 3. Measure out the alginate powder.
  - 4. Measure out the correct amount of water.
  - 5. Pour the alginate into the mixing bowl.
  - 6. Pour the water into the mixing bowl.
  - 7. Mix the material until the mix is creamy, remembering to keep the amount of air incorporation to a minimum to prevent bubble formation.
  - 8. Load the mandibular tray.
  - 9. Place the loaded tray onto the mandibular teeth of the typodont in a manner that simulates insertion into an actual patient's mouth. This must be done remembering to seat the posterior section of the tray first and then rocking it onto the anterior teeth.
  - 10. Once the material is set remove the impression from the typodont and repeat the procedures for the upper arch.

11. Have the instructor check the impressions to ensure all the teeth are registered without excessive show-through on the occlusal, extensions of the impressions are appropriate (i.e., vestibules, palate, throat), and all the teeth are properly registered.
12. Proceed to pour-up the impressions by measuring the dental plaster into the flexible bowl.
13. Measure out the correct amount of water and pour it into the mixing bowl.
14. Mix the material with the intention of preventing a lot of air incorporation; check consistency, should be smooth and creamy with body; and use the vibrator to eliminate as much of the incorporated air as possible from the mix.
15. Pour the impressions by dipping a small amount of plaster out of the mix with a mixing spatula and running the mixture into the impression from one point using the vibrator to help the material slowly advance to each of the teeth and other features of the impression.
16. Lay the poured impression aside for a moment while a sufficient quantity of the mixed plaster is loaded into the rubber base former.
17. Invert the poured impression over the base former and seat without embedding the tray itself in the plaster.
18. Repeat these procedures with the other impression.
19. Once the plaster is set in 45 to 60 minutes, remove the impressions from the new model without breaking teeth.
20. Have the instructor inspect the study model to determine acceptability.

## 9.0 Treatment Room Breakdown Procedure

### Intended Outcome

Given the necessary didactic instruction, supplies and equipment to breakdown a dental treatment room the student will perform the following tasks with 100% accuracy.

### Tasks

- A. Remove mask and gloves following completion of the dental procedure. Leave safety glasses on.
- B. Complete chart entry.
- C. Walk patient out to the front desk.
- D. Return to treatment room.
- E. Put on utility gloves.
- F. Clear tray of disposables.
- G. Place items into the biobag at the unit.
- H. Run handpieces 30 seconds.
- I. Remove handpieces and place on tray.
- J. Strip barriers off of chair, stools, cart, and light.
- K. Wipe handpieces, HVE, a/w syringes with disinfectant.
- L. Lay handpieces, HVE, a/w syringes on a paper towel and spray them with an acceptable disinfectant.
- M. Take tray of contaminated items to the sterilization area and separate.
- N. Remove the barrier from the instrument tray.
- O. Return to the treatment room and spray glasses with disinfectant.
- P. Spray utility gloves with disinfectant.
- Q. Wash hands.

## **SECTION 3: Clinical Evaluation**

## FUNDAMENTALS OF DENTAL ASSISTING

Educational parameters of the clinical/lab component of the Fundamentals of Dental Assisting Curriculum Evaluation.

<b>Unit</b>	<b>Title</b>	<b>Number of Tasks</b>
1.0	Disclosing Procedure	5
2.0	Brushing Procedure	12
3.0	Flossing Procedure	7
4.0	Vital Signs Measurement Procedure	7
5.0	Personal Protective Equipment (PPE) Procedure	11
6.0	Mounting Radiographs Procedure	6
7.0	Acrylic Appliance/Disc Polishing Procedure	7
8.0	Diagnostic Cast Procedure (Working with Alginate and Dental Plaster Lab)	20
9.0	Treatment Room Breakdown Procedure	17
	Total	92

# COMPETENCY-BASED CLINICAL EVALUATION

## 1.0 Disclosing Procedure

Student Name: \_\_\_\_\_

Lab Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

CL Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

### Intended Outcome

Given disclosing tablets or disclosing solution lip lubricant, safety glasses, gloves, mask, soap, paper towels, mouth mirror, hand mirror, cotton tip applicator, cup, water, and a sink (if available), the student will perform the following tasks on themselves and their partner with 100% accuracy.

	Tasks	Pass	Fail
1.0	Take universal precautions.		
2.0	Apply lip lubricant on partner's lips.		
3.0	Refer to manufacturer's instruction prior to using the disclosing solution or tablets. If using tablets, have your partner chew one tablet thoroughly, swish with water and expectorate (spit) into a cup or sink. If using the disclosing solution, apply a small amount of solution on a cotton tip applicator and glide the applicator over all the surfaces of the teeth. Instruct your partner to rinse with water and expectorate into a cup or sink.		
4.0	Using a mouth mirror, look in your partner's mouth and identify the areas of plaque on the surface of the teeth. Holding a hand mirror, your partner will also look in the mouth and identify areas of plaque on tooth surfaces. (Note: Areas where plaque is present on the teeth will stain a color.)		
5.0	Disinfect the surface area where you are working. Your partner will follow the same procedure (steps 1-4 above)		
Comments:			

# COMPETENCY-BASED CLINICAL EVALUATION

## 2.0 Brushing Procedure

Student Name: \_\_\_\_\_

Lab Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

CL Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

### Intended Outcome

Given a mouth mirror and soft bristle toothbrush, the student will perform the following tasks with 100% accuracy.

	Tasks	Pass	Fail
1.0	Grasp the toothbrush with a firm grip and utilize a hand mirror to assess tooth brushing technique.		
2.0	Begin on the maxillary buccal surfaces of the two most posterior teeth. Angle the toothbrush at a 45° angle to the long axis of the tooth.		
3.0	Choosing no more than two teeth at a time, gently move the toothbrush against the teeth and gums using small vibratory strokes. Brush for a count of 10.		
4.0	Continue around the mouth until all the buccal and facial surfaces have been brushed.		
5.0	Begin on the maxillary lingual surfaces of the two most posterior teeth and continue until all the lingual surfaces have been brushed.		
6.0	Begin on the mandibular quadrant on the buccal surfaces of the two most posterior teeth. Angle the toothbrush at a 45° angle to the long axis of the tooth.		
7.0	Choosing no more than two teeth at a time, gently move the toothbrush against the teeth and gums using small vibratory strokes. Brush for a count of 10.		
8.0	Continue around the mouth until all the buccal and facial tooth surfaces have been brushed.		
9.0	Continue on the mandibular lingual surfaces of the two most posterior teeth and continue until all the lingual surfaces have been brushed.		
10.0	Begin on the furthestmost tooth in a maxillary quadrant. Place the bristles on the chewing surface of the teeth and use a back-and-forth motion across the occlusal surfaces. Brush from the furthestmost tooth toward the premolars for a count of 10.		
11.0	Continue until all the occlusal surfaces have been brushed.		
12.0	Rinse to remove plaque and debris.		
Comments:			

# COMPETENCY-BASED CLINICAL EVALUATION

## 3.0 Flossing Procedure

Student Name: \_\_\_\_\_

Lab Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

CL Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

### Intended Outcome

Using waxed or unwaxed dental floss, a hand mirror, and the assistance of a partner, the student will perform the following tasks on themselves with 100% accuracy.

	Tasks	Pass	Fail
1.0	Your partner will hold the hand mirror while you practice. Remove a piece of floss approximately 18 inches long.		
2.0	Wrap the ends of the floss around your middle fingers until the length of the floss is approximately two inches. Use your other fingers to help guide the floss.		
3.0	Beginning on the most posterior interproximal surface of a mandibular or maxillary tooth, glide the floss between the teeth using a back-and-forth motion. Avoid snapping the floss against the gum tissue.		
4.0	Curve the floss in a C-shape around the tooth. Guide the floss into the sulcus maintaining a C-shape. Gently floss the area four to five times using an up and down motion.		
5.0	Remove the floss from the sulcus area and curve the floss in a C-shape around the opposing tooth. Glide the floss into the sulcus, maintaining a C-shape. Gently floss the area four to five times using an up and down motion.		
6.0	Remove the floss from the contact area with an upward gliding motion. Unwrap the floss from the fingers and wrap a new section of unused floss around the same fingers. Proceed to the next interproximal area.		
7.0	Continue in this manner until all the interproximal surfaces have been flossed.		
Comments:			

# COMPETENCY-BASED CLINICAL EVALUATION

## 4.0 Vital Signs Procedure

Student Name: \_\_\_\_\_

Lab Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

CL Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

### Intended Outcome

Given the knowledge of vital statistics, a sphygmomanometer, a stethoscope, a thermometer, a timepiece, a chart, a writing instrument and a patient the student will perform the following tasks with 100% accuracy.

	Tasks	Pass	Fail
1.0	Have the patient bare an arm without obstruction up to the shoulder.		
2.0	Place the sphygmomanometer around the upper arm between the shoulder and the elbow, with the pressure gauge tubing lined up over the medial aspect of the antecubital fossa.		
3.0	Place the earpieces of the stethoscope in the ears and the tympanic piece over the brachial artery in the antecubital fossa.		
4.0	Inflate the cuff until there is not a pulse sound appreciated through the stethoscope. (Usually 160 to 180.)		
5.0	As pressure is released from the cuff, record the pressure reading on the gauge for when you first hear a pulse sound then again when the pulse sound is no longer heard.		
6.0	Place the pads of the index and middle fingers on the inner surface of the patient's wrist (between the radius and the tendon). Start counting with 0 for the first pulse; the next pulse felt will be counted as 1 and so on. Count the pulse for thirty seconds and then multiply by 2 to complete the rate for one full minute.		
7.0	Using a timepiece and watching the patient, count the number of breaths taken in a 20 second period, multiply this number by three, and then record the number.		

Comments:

## COMPETENCY-BASED CLINICAL EVALUATION

### 5.0 Personal Protective Equipment (PPE) Procedure

Student Name: \_\_\_\_\_

Lab Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

CL Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

#### Intended Outcome

Given the necessary personnel supplies (lab jacket, gloves, masks, and goggles) to don and take off personal protective equipment, the student will perform the following tasks with 100% accuracy.

	Tasks	Pass	Fail
<b>Don Personal Protective Equipment</b>			
1.0	Put on fresh lab jacket and fasten properly.		
2.0	Put on protective eyewear.		
3.0	Place mask on face and fasten properly, adjust nose area to fit snugly.		
4.0	Wash and dry hands then put on exam gloves.		
5.0	Tuck cuff of sleeves into the gloves.		
<b>Removing Personal Protective Equipment</b>			
1.0	Grasp the cuff of the first glove and pull it off turning it inside out. As you do, keep this glove in the gloved hand.		
2.0	With the ungloved hand grasp the inside of the cuff of the other glove and pull the glove off turning it inside out, keeping the first glove inside. Throw the gloves in the proper waste receptacle.		
3.0	Grasp the elastic or ties of the mask and remove it from the face, being cautious not to touch the contaminated front area. Throw the mask away.		
4.0	Grasp the protective eyewear by the earpiece and remove from the face. Place by sink to clean and disinfect.		
5.0	Remove the lab jacket and place in the proper area.		
6.0	Wash hands.		
Comments:			

# COMPETENCY-BASED CLINICAL EVALUATION

## 6.0 Mounting Radiographs Procedure

Student Name: \_\_\_\_\_

Lab Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

CL Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

### Intended Outcome

Given the knowledge of dental anatomy, eighteen developed radiographs, a mount, table surface, and a light source, the student will be able to perform the following tasks with 100% accuracy.

	Tasks	Pass	Fail
1.0	Arrange all dental films with dimples facing up from table top.		
2.0	Group bitewings, anterior periapicals, and posterior periapicals.		
3.0	Separate maxillary from mandibular periapicals.		
4.0	Separate all films left and right with the dimple facing toward the reader, identify the teeth in the radiograph and place with teeth anteriorly to center of the mount.		
5.0	Insert each film into the appropriate slot on the x-ray mount with dimple facing up.		
6.0	Label the mounts with patient name and date.		

Comments:

## COMPETENCY-BASED CLINICAL EVALUATION

### 7.0 Polishing Acrylic Material Procedure

Student Name: \_\_\_\_\_

Lab Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

CL Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

#### Intended Outcome

Given the necessary didactic instruction, supplies, and equipment to perform polishing acrylic, the student will perform the following tasks on an acrylic disc with imperfections with 100% accuracy.

	Tasks	Pass	Fail
1.0	Assemble acrylic polishing tray setup. a. Gloves b. Eyewear c. Rough acrylic material to polish d. Lathe e. Arbor band or latch-type acrylic bur f. Slow speed handpiece g. Wet-rag wheel h. Medium grit pumice i. Flour of pumice		
2.0	Take required safety precautions.		
3.0	Reduce the bulk with the arbor band on the lathe or an acrylic bur in the handpiece.		
4.0	Refine surface with an acrylic bur in the handpiece.		
5.0	Polish on low with a wet-rag wheel and medium pumice.		
6.0	Polish on low with a wet-rag wheel and flour of pumice.		
7.0	Rinse and evaluate acrylic material.		
Comments:			

# COMPETENCY-BASED CLINICAL EVALUATION

## 8.0 Diagnostic Cast Procedure

Student Name: \_\_\_\_\_

Lab Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

CL Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

### Intended Outcome

Given the necessary diagnostic casting equipment and supplies, the student will perform the following tasks with 100% accuracy.

	Tasks	Pass	Fail
1.0	Setup the workstation by assembling the following 12 materials: Flexible mixing bowl Large mixing spatula Small mixing spatula Vibrator Dental model plaster Rubber model base formers Maxillary stock tray to fit the typodont model Mandibular stock tray to fit the typodont model Typodont model Sink for water and hand washing Paper towels Gloves		
<b>Produce a diagnostic model of the dental arches by performing the following twenty tasks</b>			
1.0	Wash, dry, and glove hands.		
2.0	Select a tray that will fit the typodont model provided.		
3.0	Measure out the alginate powder.		
4.0	Measure out the correct amount of water.		
5.0	Pour the alginate into the mixing bowl.		
6.0	Pour the water into the mixing bowl.		
7.0	Mix the material until the mix is creamy, remembering to keep the amount of air incorporation to a minimum to prevent bubble formation.		
8.0	Load the mandibular tray.		
9.0	Place the loaded tray onto the mandibular teeth of the typodont in a manner that simulates insertion into an actual patient's mouth. This must be done remembering to seat the posterior section of the tray first and then rocking it onto the anterior teeth.		

	<b>Tasks</b>	<b>Pass</b>	<b>Fail</b>
10.0	Once the material is set the student will remove the impression from the typodont and repeat the procedures for the upper arch.		
11.0	Have the instructor check the impressions to ensure all the teeth are registered without excessive show-through on the occlusal, that the extensions of the impressions are appropriate, and that all the teeth are properly registered.		
12.0	Proceed to pour-up the impressions by measuring the dental plaster into the flexible bowl.		
13.0	Measure out the correct amount of water and pour it into the mixing bowl.		
14.0	Mix the material with the intention of preventing a lot of air incorporation and use the vibrator to eliminate as much of the incorporated air as possible from the mix. Determine correct consistency.		
15.0	Pour the impressions by dipping a small amount of plaster out of the mix with a mixing spatula and running the mixture into the impression from one point using the vibrator to help the material slowly advance to each of the teeth and other features of the impression.		
16.0	Lay the poured impression aside for a moment while a sufficient quantity of the mixed plaster is loaded into the rubber base former.		
17.0	Invert the poured impression over the base former and seat without embedding the tray itself in the plaster.		
18.0	Repeat the procedures with the other impression.		
19.0	Once the plaster is set (45-60 minutes), remove the impressions from the new model without breaking teeth.		
20.0	Have the instructor inspect the study model for acceptability.		
Comments:			

# COMPETENCY-BASED CLINICAL EVALUATION

## 9.0 Treatment Room Breakdown Procedure

Student Name: \_\_\_\_\_

Lab Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

CL Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_ Grade:  Pass  Fail

### Intended Outcome

Given the necessary didactic instruction, supplies and equipment to breakdown a dental treatment room the student will perform the following tasks with 100% accuracy.

	Tasks	Pass	Fail
1.0	Remove mask and gloves following completion of the dental procedure. Leave safety glasses on.		
2.0	Complete chart entry.		
3.0	Walk patient out to the front desk.		
4.0	Return to treatment room.		
5.0	Put on utility gloves.		
6.0	Clear tray of disposables.		
7.0	Place items into the biobag at the unit.		
8.0	Run handpieces for 30 seconds.		
9.0	Remove handpieces and place on tray.		
10.0	Strip barriers off of chair, stools, cart and light.		
11.0	Wipe handpieces, HVE, air/water syringes with disinfectant.		
12.0	Lay handpieces, HVE, syringes on a paper towel and spray them with an acceptable disinfectant.		
13.0	Take tray of contaminated items to the sterilization area and separate.		
14.0	Remove the barrier from the instrument tray.		
15.0	Return to the treatment room, remove glasses and spray with disinfectant.		
16.0	Spray utility gloves with disinfectant.		
17.0	Wash hands.		
Comments:			