Unit 312 Principles of infection control in the dental environment

**Level: 3**

**Credit value: 5**

**UAN number: L/502/7446**

**Unit aim**

The aim of this unit is to describe infectious diseases, their routes of transmission and methods of preventing cross infection.

**Learning outcomes**

There are **five** learning outcomes to this unit. The learner will:

1. understand the process of infection control
2. understand the significance of micro-organisms
3. understand the management of infectious conditions affecting dental patients
4. know the various methods of decontamination
5. understand relevant health & safety legislation, policies and guidelines

**Guided learning hours**

It is recommended that **20** hours should be allocated for this unit, although patterns of delivery are likely to vary.

**Details of the relationship between the unit and relevant national standards (if appropriate)**

This unit is linked to the Ensure your own actions reduce the risk to health & safety EMPNTO.

**Support of the unit by a sector or other appropriate body (if required)**

This unit is endorsed by Skills for Health.

**Assessment**

This unit will be assessed by:

* an assessment paper containing multiple-choice and short answer questions.

Outcome

**Assessment Criteria**

The learner can:

1. describe the causes of cross infection
2. describe the methods for preventing cross infection
3. explain the principles of Standard (Universal) **infection** control precautions.

**Range**

**Infection**

Transmission of infection, measures for preventing cross infection, management of blood and body fluid spillages, social, clinical and aseptic hand hygiene procedures, barrier techniques including zoning, importance of record keeping in relation to cross infection.

Outcome

**Assessment Criteria**

The learner can:

1. describe the main **micro-organisms** in potentially infectious conditions
2. explain the routes of transmission of **micro-organisms**
3. explain the significance of the terms pathogens and non-pathogens.

**Range**

**Micro-organisms**

Groups of micro organisms present in the oral cavity eg, bacteria, viruses, fungi, and spores, organisms capable of producing disease, routes of entry, direct/indirect contact.

Outcome

**Assessment Criteria**

The learner can:

1. describe infectious conditions which affect individuals within the dental environment
2. describe what actions to take to prevent the spread of **infectious diseases** in the dental environment
3. explain the importance of immunisation of **dental personnel**
4. describe how the potentially infectious conditionsaffect the body systems.

**Range**

**Infectious diseases**

Infections important in dentistry eg: Hepatitis B, HIV, Herpes Simplex

**Dental personnel**

Dentist, DCP personnel

Policies and records, eg Control of infection policy, Staff induction policy, Staff immunisation records. Relevance of staff and patient medical histories

Outcome

**Assessment Criteria**

The learner can:

1. describe the principles and methods of **clinical and industrial sterilisation**
2. describe the principles and methods of **disinfection**
3. explain the **preparation of a clinical area** to control cross infection
4. explain the procedures used to decontaminate a clinical environment after use
5. state the chemical names for decontaminantsand where they areused.

**Range**

**Clinical and industrial sterilisation**

Clinical equipment used in preparing items for sterilisation, eg washers, disinfectors, ultrasonic cleaners. Sterilisation equipment and methods, eg vacuum- and non-vacuum autoclaves, gamma radiation, measures for checking sterility, decontamination areas.

**Disinfection**

Difference between asepsis, sterilisation and disinfection, different types of disinfectants and their uses in clinical environments.

**Preparation of a clinical area**

Different methods used in maintaining the cleanliness of clinical surfaces, equipment, handpieces, instruments and hand hygiene.

Outcome

**Assessment Criteria**

The learner can:

1. identify **health and safety policies and guidelines** in relation to infection control
2. describe how to deal with a **sharps injury**
3. explain the use of personal protective equipment in the dental environment
4. describe ways of dealing with clinical and non-clinical waste.

**Range**

**Health and safety policies and guidelines**

Health & Safety at work Act, Control of Substances Hazardous to Health regulations (COSHH), Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), Special Waste and Hazardous Waste Regulations, Department of Health guidelines and regulations eg Decontamination in primary care dental practices, Care Quality Commission, Health & Safety Executive guidelines.

**Sharps injury**

Protocols for sharps disposal, clean and contaminated sharps injuries

Unit 313 Assessment of oral health and treatment planning

**Level: 3**

**Credit value: 3**

**UAN number: J/502/7459**

**Unit aim**

The aim of this unit is to understand the reasons and effective methods that can be used in oral health treatment planning.

**Learning outcomes**

There are **five** learning outcomes to this unit. The learner will:

1. understand the various methods of dental assessment
2. know the clinical assessments associated with orthodontics
3. understand the changes that may occur in the oral tissues
4. know the medical emergencies that may occur in the dental environment
5. know the basic structure and function of oral and dental anatomy

**Guided learning hours**

It is recommended that **15** hours should be allocated for this unit, although patterns of delivery are likely to vary.

**Details of the relationship between the unit and relevant national standards (if appropriate)**

This unit is linked to the Basic Life Support CHS36.

**Support of the unit by a sector or other appropriate body (if required)**

This unit is endorsed by Skills for Health.

**Assessment**

This unit will be assessed by:

* an assessment paper containing multiple-choice and short answer questions.

Outcome

**Assessment Criteria**

The learner can:

1. describe **methods** of recording soft tissue conditions
2. explain **methods** of recording periodontal conditions using **periodontal charts**
3. describe the reasons for taking radiographs and photographs during assessment and treatment planning (include reasons for the monitoring of dental practices)
4. describe the uses of the different materials used within dental assessment (include impression materials for study models)
5. describe the methods of measuring pulp vitality and their advantages and disadvantages
6. explain thelegislation and guidelines relating to patients’ records and confidentiality
7. explain the importance of informed consent and its relevance prior to any treatment undertaken
8. explain the workplace policies relating to complaints and your role throughout.

**Range**

**Methods**

Different methods of clinical assessment eg: types of probes, dyes, transillumination, vitality testing.

**Periodontal charts**

BPE, Full perio charting, definitions of both.

**Materials**

Impression materials, aids to assessing the function of teeth.

**Polices, Legislation and guidelines**

Data protection act, Department of Heath guidelines and regulations. GDC Standards for Dental Professionals.

Outcome

**Assessment Criteria**

The learner can:

1. describe the classifications of malocclusion
2. describe the types of **orthodontic appliances** in relation to treatment required
3. explain pre and post operative instructions for orthodontic procedures
4. explain the role of the dental nurse in providing support during orthodontic assessment and treatment.

**Range**

**Orthodontic appliances**

Function and uses of removable appliances eg: retainers/functional, function and uses of fixed appliances.

**Orthodontic procedures**

Care and maintenance of both removable and fixed appliances

Outcome

**Assessment Criteria**

The learner can:

1. explain diseases of the oral mucosa
2. describe the effects of ageing on the soft tissue
3. identify the medical conditions that may affect the oral tissues.

**Diseases**

including both malignant and potentially malignant lesions

**Medical conditions**

*Including* oral cancer, herpes, HIV, hepatitis, diabetes, epilepsy, eating or digestive disorders.

Outcome

**Assessment Criteria**

The learner can:

1. identify **medical emergencies** that may occur in the dental environment and how to deal with them.

**Range**

**Medical emergencies**

Fainting, diabetic coma, asthma attack, angina/myocardial infarction, epileptic seizure, respiratory arrest, cardiac arrest

Outcome

**Assessment Criteria**

The learner can:

1. describe the structure, morphology and eruption dates of the primary and secondary dentition
2. describe the structure and function of, gingivae and supporting tissue
3. describe the position and function of salivary glands and muscles of mastication
4. describe the structure of the maxilla and mandible and movements of the temporo-mandibular joint
5. describe nerve and blood supply to the teeth and supporting structures
6. describe the structure and function of teeth and gingivae including the number of roots
7. explain common oral diseases including both malignant and potentially malignant lesions and methods for their diagnosis, prevention and management
8. describe the diagnosis and management of diseases of the oral mucosa, of other soft tissues and the facial bones and joints.

**Diseases**

*including* oral cancer, lichen planus, oral candidiasis, herpes, glossitis, osteoporosis, salivary gland disorders.

Unit 314 Dental radiography

**Level: 3**

**Credit value: 4**

**UAN number: H/502/7503**

**Unit aim**

The aim of this unit is to understand current radiography legislation including the principles and techniques of taking and processing radiographs.

**Learning outcomes**

There are **four** learning outcomes to this unit. The learner will:

1. know the regulations and hazards associated with ionising radiation
2. know the different radiographic films and their uses
3. understand the imaging process and the different chemicals used
4. understand the importance for stock control of radiographic films

**Guided learning hours**

It is recommended that **15** hours should be allocated for this unit, although patterns of delivery are likely to vary.

**Details of the relationship between the unit and relevant national standards (if appropriate)**

This unit is linked to the Ensure your own actions reduce the risk to health & safety EMPNTO.

**Support of the unit by a sector or other appropriate body (if required)**

This unit is endorsed by Skills for Health.

**Assessment**

This unit will be assessed by:

* an assessment paper containing multiple-choice and short answer questions.

Outcome

**Assessment Criteria**

The learner can:

1. state the principles of the **IRMER regulations**
2. explain the safe use of x-ray equipment
3. explain the role of dental personnel when using ionising radiation in the dental environment
4. identify the hazards associated with ionising radiation
5. explain your organisation’s practices and policies relating to ionising radiations and the taking of dental images.

**Range**

**IRMER regulations**

Ionising radiation regulations 1999, ionising radiation (medical exposure) regulations 2000.

**Practices and policies**

Local rules, quality control systems, staff training records.

Outcome

**Assessment Criteria**

The learner can:

1. explain the uses of different **intra oral radiographs**
2. explain the uses of different **extra oral radiographs**
3. state the reasons for using digital radiography
4. explain the purpose of intensifying screens in dental radiography
5. explain the concerns that patients may have regarding dental imaging.

**Range**

**Intra oral radiographs**

The function and purpose of bitewing, periapical, occlusal radiographs.

**Extra oral radiographs**

The function and purpose of lateral oblique, cephalostats, orthopantomographs radiographs.

Outcome

**Assessment Criteria**

The learner can:

1. explain the manual, automatic and digital processing of radiographs
2. describe the faults that may occur during the taking and processing of radiographs
3. explain how x-ray chemicals should be handled, stored and disposed of safely
4. explain how a spillage of x-ray chemicals should be dealt with
5. explain what action to take in the event of **equipment** failure
6. explain why it is important to protect the processing environment from accidental intrusion including the use of safe lights.

**Range**

**Equipment**

X-Ray machine, automatic film processors.

**Faults**

Operator, processing and relevant corrective action needed.

Outcome

**Assessment Criteria**

The learner can:

1. explain the importance of rotating film stock
2. explain the methods of accurately mounting radiographs and the consequences of not mounting radiographs correctly
3. describe the storage of radiographs and why x-ray films should be stored away from ionising radiations
4. describe suitable quality control recording systems
5. explain why film stock that has deteriorated should not be used
6. explain the purpose of quality assuring dental radiographs.

Unit 315 Scientific principles in the management of oral health diseases and dental procedures

**Level: 3**

**Credit value: 5**

**UAN number: D/502/7581**

**Unit aim**

The aim of this unit is to understand the aetiology and progression of oral diseases, methods of prevention, dental procedures and restoration of the dentition.

**Learning outcomes**

There are **four** learning outcomes to this unit. The learner will:

1. know the common oral diseases
2. understand the methods for the prevention and management of oral diseases
3. know how to manage and handle materials and instruments during dental procedures
4. understand the purpose and stages of different dental procedures

**Guided learning hours**

It is recommended that **25** hours should be allocated for this unit, although patterns of delivery are likely to vary.

**Details of the relationship between the unit and relevant national standards (if appropriate)**

This unit is linked to the Ensure your own actions reduce the risk to health & safety EMPNTO.

**Support of the unit by a sector or other appropriate body (if required)**

This unit is endorsed by Skills for Health.

**Assessment**

This unit will be assessed by:

* an assessment paper containing multiple-choice and short answer questions.

Outcome

**Assessment Criteria**

The learner can:

1. describe the aetiology and progression of dental caries
2. describe the aetiology and progression of periodontal disease
3. explain the development of plaque and its composition
4. describe the inflammatory process and effects of the disease process.

Outcome

**Assessment Criteria**

The learner can:

1. describe the main types and causes of **oral disease**
2. explain the different **oral hygiene techniques** used to prevent oral diseases
3. describe how **diet** and **social factors** can affect oral health
4. explain the different forms of fluoride and its optimal level
5. explain the methods of communicating information about the prevention of oral diseases.

**Range**

**Oral disease**

Caries, gingivitis, periodontal disease, erosion, abrasion and attrition

**Oral hygiene techniques**

Fluoride, disclosing tablets, toothbrushing, inderdental aids, mouthwashes, dental health messages

**Diet**

Sugar – types – content and frequency, carbonated and non-carbonated acidic drinks

**Social factors**

Family background, cultural, environmental.

**Fluoride**

Methods of delivering fluoride both systemically and topically including advantages and disadvantages.

**Communication**

Verbal and non-verbal methods.

Outcome

**Assessment Criteria**

The learner can:

1. list and state the functions of different equipment, instruments and materials /medicaments used in:
	1. preparation, **restoration** and finishing of cavities
	2. periodontal therapy and their functions
	3. different stages of endodontic treatment
	4. crowns, bridges and veneers
	5. complete, partial and immediate dentures
	6. different stages of orthodontic treatment
2. describe the advantages/disadvantages and hazards associated with:
3. **restorative materials**
4. lining materials
5. different types of etchants
6. different types of bonding agents
7. curing lights
8. explain the uses, manipulation, disinfection and storage of different impression materials
9. explain the hazards associated with amalgam and how to deal with a mercury spillage
10. explain the importance of matrix systems and the equipment and instruments that may be used
11. describe the types of equipment used in the administration of local and regional anaesthesia.

**Range**

**Restoration**

Moisture control, handpieces and burs, hand instruments, additional equipment specific to preparing placement and finishing of restorative material.

**Restorative materials**

Composites, glass ionomer, amalgam, temporary restorative materials.

**Stages of fixed and removable prosthesis**

Preparation, impressions, fitting and adjustment

**Local and regional anaesthetic**

Eg topical, intrapupal, intraoesous, intraligamnetory, infiltration, block

Outcome

**Assessment Criteria**

The learner can:

1. explain the different stages in cavity preparation for:

 a) permanent teeth

 b) deciduous teeth

2. explain the purposes of permanent and temporary crowns, bridges and veneer techniques

1. explain the different **stages** in making complete and partial prostheses including advice and after care
2. list the different types of non-surgical endodontic treatment
3. explain which type of appliance may be used for the different orthodontic treatments
4. list the benefits of the **treatments** available for replacing missing teeth.

**Range**

**Stages**

Impressions, bite, try-in, fit, adjustment relines, obturators, tissue conditioners, additions.

**Treatments**

Implants, bridges, dentures.

**Type**

Removable, fixed, functional retainer