GUIDELINES FOR

COMMUNITY BASED DENTISTRY

Version 1

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Health Policies and Standards Department

Health Regulation Sector (2021)

INTRODUCTION

Dubai Health Authority (DHA) is the responsible entity for regulating, licensing and monitoring health facilities and healthcare professionals in the Emirate of Dubai. The Health Regulation Sector (HRS) is an integral part of DHA and was founded to fulfil the following overarching strategic objectives and program:

Objective #1: Position Dubai as a global medical destination by introducing a value-based, comprehensive, integrated and high quality service delivery system.

Objective #2: Direct resources to ensure healthy and safe environment for Dubai population.

Strategic Program #5: Oral and Dental Care- This program focuses on improving the oral health outcomes and ensure that all individuals have access to high quality treatments and effective prevention programs for dental care.

ACKNOWLEDGMENT

This document was developed by Dental Services Department, Primary Healthcare Services Sector (PHCSS). It has further been reviewed by the Health Policy and Standards Department (HPSD).

HRS would like to acknowledge and thank all parties that participated and worked toward developing these guidelines to ensure improving the quality and safety of healthcare services.

The Health Regulation Sector

Dubai Health Authority

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EXECUTIVE SUMMARY

Clinical guidelines to enhance the standard of care in health facilities are increasingly becoming part of current practice and will become more common over the next decade. These Clinical Guidelines aim to improve the quality and the level of healthcare provided to the clients. Healthcare providers can use these guidelines to answer specific questions in day-to-day practice and as an information source for continuing professional education.

This document presents a framework:

- To meet the increase in dental Implant treatment among patients aligned with current international standards of care to ensure increase in success rate and minimize complications.
- To answer specific questions in day-to-day practice and as an information source for continuing professional education.
- To function effectively within interdisciplinary healthcare teams and to reduce specialist appointments by minimizing the number of referrals from general dentist clinics to specialist clinics.
- To provide the optimum quality of preventive dental services to children in DHA licensed health facilities.
- To provide tailored direction around oral health care of women during pregnancy. To identify mothers with high levels of dental caries and poor oral health and educate them on the importance of their oral health and the future health of their unborn child to help change trajectory of oral diseases during the prenatal period.
- To provide optimum quality of Dental Service to Patients with Non-Communicable Diseases.

DEFINITIONS

Early Childhood Caries (ECC): is defined as the presence of one or more decayed (non cavitated or cavitated lesions), missing (due to caries), or filled tooth surfaces in any primary tooth in a child under the age of six.

Guardian: is a person who has the legal right and responsibility of taking care of someone who cannot take care of himself or herself, such as a child whose parents have died.

Hyperglycaemia: refers to high levels of sugar, or glucose, in the blood. It occurs when the body does not produce or use enough insulin, which is a hormone that absorbs glucose into cells for use as energy. High blood sugar is a leading indicator of diabetes

Mutans Streptococcus (MS): is the causal agent of dental caries in humans and is responsible for the formation and accumulation of plaques.

Paan: is a preparation combining betel leaf with areca nut widely consumed throughout Southeast Asia, East Asia (mainly Taiwan), and the Indian subcontinent. It is chewed for its stimulant and psychoactive effects

Perinatal: Pertaining to the period immediately before and after birth. Varies definitions have been put forth for this. It generally starts at the 20th to 28th week of gestation and ends 1 to 4 weeks after birth.

Pit and Fissure Sealant(s): are material placed as a preventive measure, covering the occlusal surface(s).

Prenatal: is the period before birth. It begins with fertilization of the oocyte and ends with delivery. Terms antenatal and prenatal are used synonymously.

Student: Is any individual who is or has been enrolled at an educational agency or institution and regarding whom the agency or institution maintains educational records.

Treated Teeth: are if the child has any fillings, crowns or any other signs of dental work indicating that they have seen a dentist or filling material may be permanent or temporary (silver or white) temporary restorations or crowns.

Untreated decay: is at least one area of cavitation that would accommodate a 0.5 mm-diameter (or larger) bur or ball burnisher.

Xerostomia: is dryness in the mouth, which may be associated with a change in the composition of saliva, or reduced salivary flow,

ABBREVIATIONS

ADA	:	American Dental Association
COPD	:	Chronic Obstructive Pulmonary Diseases
CVD	:	Cardio Vascular Diseases
DHA	:	Dubai Health Authority
ECC	:	Early Childhood Caries
HPSD	:	Health Policy and Standards Department
HRS	:	Health Regulation Sector
KPIs	:	Key Performance Indicators
MS	:	Mutans Streptococcus
NCDs	:	Non-Communicable Diseases
PHCSS	:	Primary Healthcare Services Sector
SHEU	:	School Health Educational Unit
TMJ	:	Tempro Mandibular Joint
UAE	:	United Arab Emirates
UNESCO	:	United Nations Educational, Scientific and Cultural Organization
UNICEF	:	United Nations Children's Fund
WHO	:	World Health Organization

A. GUIDELINES FOR MANAGEMENT OF ORAL HEALTH IN GERIATRIC PATIENTS

1. BACKGROUND

The demographic of older adults (i.e., 60 years of age and older) is escalating and likely to form a large part of dental practice in the years to come. Although better than the times in the past, the typical aging patient's baseline health state can be complicated by some comorbid conditions (e.g., hypertension, diabetes mellitus) and physiologic changes associated with aging. Potential physical, sensory and cognitive impairments associated with aging may make home oral health care and patient education/communications quite challenging.

Poor oral health significantly affects an older person's general health and quality of life in the following ways:

- Bad breath
- Bleeding gums, tooth decay and tooth loss
- Appearance, self-esteem and social interactions
- Speech and swallowing
- Ability to eat, nutritional status and weight loss
- Pain and discomfort
- Change in behaviour
- Aspiration pneumonia
- Chronic infection and bacteraemia
- Cardiovascular disease
- Complicate management of systemic illnesses.

2. SCOPE

2.1. Help general dental practitioners, community dentists and medical care providers to ensure preventive measures for geriatric patients.

2.2. Standardized management of geriatric patients requiring dental care.

3. PURPOSE

3.1. To emphasize the role of non-dental providers in oral health, procedure of systematic assessment of oral health of older adults.

3.2. To provide guidance for denture care, oral cancer screening and preventive clinical interventions for geriatric patients.

4. APPLICABILITY

4.1. DHA Licensed General Dentists

4.2. DHA Licensed Primary Care Dentists

4.3. DHA Licensed Dental Assistants

4.4. DHA Licensed Dental Hygienists.

5. RECOMMENDATION ONE: ROLE OF PRIMARY HEALTH CARE PROVIDER

5.1. General health providers (nurses and physicians) can contribute largely in oral health promotion for the elderly by the following:

5.1.1. Identification of common oral diseases including periodontal disease, dental caries, oral cancer and various oral abnormalities.

5.1.2. Familiarization with the adverse oral side effects of commonly used medications (details are outlined above) prescribed for chronic diseases of the elderly.

5.1.3. Referral to dental services as appropriate. A referral form as in **Appendix 1**.

5.2. Basic record of medical and dental history:

5.2.1. The minimum amount of information regarding oral health in individual care plans for the older people should include medical history, medication history which the patient may be having.

a. Whether the patient has natural teeth or not, or dentures, or neither or both.

b. The name and contact details of the patient's dentist and indicate when their next dental check-up is due.

c. It should indicate the appropriate daily oral hygiene practice required and reference the tooth brushing +/- denture cleaning information sheets as appropriate.

d. It should indicate if staff support is required to provide daily oral hygiene, and where this is necessary that this has been discussed and agreed with the patient or their family.

e. The care plan should be signed and dated by an appropriate member of the facility staff, the patient and/or their relative/representative.

6. **RECOMMENDATION TWO:** DENTURE CARE FOR THE ELDERLY

6.1. It is important to treat dentures like natural teeth as dental plaque continuously builds upon the surfaces of the denture, in the same way as it does on natural

teeth and can cause inflamed gums, bad breath, bacterial and/or fungal infections (e.g. Candida), or where there are remaining teeth, dental decay. Thus, it is important to clean dentures at least once daily.

6.2. Important considerations for denture care are:

6.2.1. All mouth care equipment (toothbrush, denture brush, denture cleaning paste, toothpaste, denture pot etc.) should be identified with the patient's name.

6.2.2. Home care advice should be given regarding oral health in elderly.

a. Brush gums, tongue and palate with a soft-bristled regular toothbrush to remove plaque and stimulate circulation.

b. Dentures should be removed overnight but where this is not possible then they should be removed for a short period during the day. This will allow the mouth to rest from the pressure of the dentures.

c. When out of the mouth (either at night or during the day) dentures should be stored in water as this helps to keep them from drying out and changing shape.

d. All dentures, both partial and complete, should be removed from the mouth for cleaning. Dentures are very delicate and can break easily if dropped. When handling dentures, always hold them over a towel or basin of water.

e. Rinse dentures thoroughly to remove loose food particles and brush immersed in warm water to prevent splatter. Hot water can warp dentures. Use denture cleaning paste or liquid soap on a toothbrush or denture brush. Avoid very stiff bristles as these may damage the denture. Toothpaste is not recommended as this can be abrasive and damage the denture.

6.2.3. Loose or ill-fitting dentures can cause problems such as ulceration; therefore a dental assessment may be appropriate.

6.2.4. Dentures should be clearly labelled with the individual's name.

6.2.5. Where the mouth looks very red or sore, or where there is 'thrush' the denture can be soaked in chlorhexidine solution for the recommended time and then rinsed thoroughly. Dental advice should also be sought.

7. **RECOMMENDATION THREE:** ORAL CANCER SCREENING

7.1. These recommendations are intended for use in the elderly patients; however, they do not apply to individuals with a personal history of oral cancer.

7.1.1. It is expected that a head, neck and oral soft tissue examination is completed on all patients at the time of the new patient examination and at general dental recall.

7.1.2. A standardized step-by-step approach to oral cancer screening and to the evaluation of any mucosal lesion suspected to be premalignant or malignant is recommended. For an example of an Oral Health Screening Form Refer to **Appendix 2**.

7.1.3. Based on present evidence and the potential for benefit, it is recommended that systematic oral cancer screening be offered.

7.1.4. Adjunctive screening tools may be of added value and could be considered in conjunction with the annual oral cancer screening examination or at the time of identification of any suspicious lesion.

7.2. The use of these adjunctive screening tools requires appropriate training and experience. Some common screening tools include but are not limited to- Toluidine Blue stain, biopsies, Direct Fluorescence Visualization.

8. **RECOMMENDATION FOUR:** PREVENTIVE CLINICAL RECOMMENDATION

8.1. For the active old age people

1. Topical application and mouth rinsing with fluorides and use of fluoride containing dentifrices is recommended to reduce the number of both coronal and root surface caries lesions.	**2. Rinsing with a chlorhexidine solution is recommended to reduce gingival inflammation, pocket depth, and incidence of denture stomatitis.**	**3. Chewing chlorhexidine acetate/xylitol gums reduce denture stomatitis and angular cheilitis prevalence.**	**4. Consideration should be given to incorporating additional time to review oral hygiene instructions, application of fluoride varnish, and to recommend strategies to address dry mouth. Salivary substitutes can be prescribed, if required.**

8.2. For frail and dependent older people or those who are at high risk of poor oral health

1. Strengthening of Teeth		
Rationale	**Protective Oral Healthcare**	**Recommendation**
High concentrations of fluoride can inhibit the growth of bacteria in dental plaque. Frail and dependent older people are considered at high risk of poor oral health.	Prescribe the use of a pea-size amount of high fluoride (5000 ppm) toothpaste when brushing teeth in the morning and at night.	Recommend use of a neutral high fluoride toothpaste 5000ppm (5mg/g). **Caution:** High fluoride is suitable only for people at high risk. Do not use chlorhexidine and toothpaste (containing sodium lauryl sulphate) within 2 hours of each other, as the product effectiveness is reduced.
2. Prevention of Gingivitis		
Rationale	**Protective Oral Health Care**	**Recommendation**
The long-term daily application of a low strength antibacterial product helps to reduce the incidence of gingivitis for persons considered at high risk of poor oral health, such as frail and dependent older people.	Use of a soft toothbrush to apply a pea-size amount of a low-strength chlorhexidine gel to gums daily after lunch is advisable.	Prescribe a low strength chlorhexidine (0.12%) product (Alcohol free and non-teeth staining). **Caution:** Do not use chlorhexidine and toothpaste (containing sodium lauryl sulphate) within 2 hours of each other, as the product effectiveness is reduced.
3. Additional Tooth Remineralisation		
Rationale	**Oral Health Care**	**Recommendation**
Amorphous calcium phosphate is used to increase remineralisation of decayed teeth.	After brushing teeth with high fluoride toothpaste morning and night, smearing the amorphous	Prescribe an amorphous calcium phosphate Product.

	calcium phosphate product over the teeth could be advised for patients at high risk of dental decay.	For example, GC Tooth Mousse Plus 900 ppm. **Caution:** This product is not suitable for people with a milk protein allergy.
4. Treatment of Xerostomia		
Rationale	**Oral Health Care**	**Recommendation**
Saliva substitutes are the preferred treatment for xerostomia.	Suggest the application of dry mouth products to oral tissues, teeth and the fitting surface of rinsed dentures: • Before bed • Upon awakening • Before eating • As required.	A dry mouth product best suited to the patient can be recommended. There are a variety of products available. For example: • Oral Balance gel or liquid • GC Dry Mouth gel • Hamilton Aquae mouth spray.
5. Ulcers and Sore Spots		
Rationale	**Oral Health Care**	**Recommendation**
Normal saline promotes healing and granulation of tissue.	Rinse or swab the mouth with warm normal saline and ask the patients repeat it three to four times a day until healed. Assess if the denture is the cause of irritation. If so, remove it until the oral tissue is healed.	Offer a warm normal saline mouth toilet. Prescribe oral pain relief medication For example: • Difflam mouth gel • Ora-sed Jel • Kenalog in Orabase (corticosteroid).
6. Fungal Infections - Glossitis, Thrush, Denture Stomatitis, Angular Cheilitis		
Rationale	**Oral Health Care**	**Recommendation**

Treat fungal infection and prevent re-infection.	Antifungal gel can be applied to the fitting surface of a rinsed denture. If the tongue is coated, advise brushing it with a soft toothbrush. Advice on replacing the toothbrush before treatment commences and again when treatment is completed. Disinfection of the denture and denture container daily is recommended.	The following may be prescribed. Local antifungal medication: • Miconazole gel • Amphotericin lozenges • Nystatin lozenges or drops • Systemic antifungal medication: • Fluconazole • Ketaconazole. Advise a water-based lip moisturizer. For example, KY Jelly, Oral Base Gel. **Caution:** Miconazole and warfarin interact with one another. Physician advice is recommended where any medication is prescribed Petroleum-based lip moisturizers may increase the risk of inflammation and aspiration pneumonia and are contraindicated during oxygen therapy
7. Oral Care and Changed Behaviour		
Rationale	**Oral Health Care**	**Recommendation**
Some behavioural changes in older people, particularly involving dementia, makes it difficult for the dental providers to provide oral health care.	Establish effective verbal and nonverbal communication. Develop strategies to manage changed behaviour.	Prescribe the use of a soft toothbrush suitable for bending. It should be a brightly coloured toothbrush. Use of mouth props can be recommended. Prescribe a chlorhexidine mouthwash (alcohol free and non-teeth staining)

9. RECOMMENDATION FIVE: CONCLUSION

9.1. The risk of poor oral health increases in older people as they become less able to self-manage due to issues of functional dependence, physical frailty, medical co-

morbidity, polypharmacy and cognitive impairment. Oral diseases highly impact on other areas of health and quality of life.

9.2. If a short inspection of the mouth and judicious referral is carried out by the general health providers and at the same time, a systemic risk assessment is performed by the dental providers routinely, it would greatly prevent exacerbation of both oral and systemic conditions and ensure a timely intervention. Further, effective denture care and screening and early detection of oral cancer are other compelling actions that significantly contribute to the optimum oral health for the elderly. Additionally, specific preventive clinical interventions for the geriatric population should form a routine norm and prescribed by all the dental professionals who provide care to the geriatric patients.

9.3. Simple oral health strategies involving a multi-disciplinary approach can effectively assist in promoting and maintaining good oral health for this section of the population.

B. GUIDELINES FOR MANAGEMENT OF ORAL HEALTH IN PEOPLE OF DETERMINATION

1. BACKGROUND

People of Determination are at increased risk of oral diseases. Oral diseases can have a direct and devastating impact on the health of those with certain systemic health problems or conditions. Patients with compromised conditions may be especially susceptible to the effects of oral diseases.

People of Determination include individuals who are disabled due to physical limitations, medical complications, developmental problems and cognitive impairments that do not have the ability to understand and assume responsibility for or cooperate with preventive oral health practices are susceptible to oral diseases. Oral health is an integral part of general health and well-being. Therefore, an appropriate assessment/screening, referral/follow-up and oral health education must be provided.

2. SCOPE

2.1. To provide the optimum quality of dental services to People of Determination patients attending DHA initiatives including both primary and preventive oral health care.

3. PURPOSE

3.1. To emphasize the role of non-dental providers in oral health, procedure of systematic assessment of oral health of older adults.

3.2. To provide guidance for denture care, oral cancer screening and preventive clinical interventions for geriatric patients.

4. APPLICABILITY

4.1. DHA Licensed General Dentists

4.2. DHA Licensed Primary Care Dentists

4.3. DHA Licensed Dental Assistants

4.4. DHA Licensed Dental Hygienists.

5. RECOMMENDATION ONE: CLINICAL STEPS

5.1. The identification procedure will be done by a family member for all special needs patients.

5.2. Identify physical barriers to the patients and provide a friendly and supportive environment with additional provisions of services (elevators, wheelchairs, people of determination car parking services and ramps).

5.3. A verbal or written informed consent should be obtained before every clinical session during the course of screening. In the case of underage or incompetent patients, the legally authorized representative will sign on behalf of the patient.

5.4. Assessment of patient medical history.

5.5. Detailed hard and soft tissue examination.

5.6. Arriving at the appropriate diagnosis.

5.7. Identifying and prioritizing the treatment and procedures which will meet the patient's individual needs to develop the treatment plan.

5.8. Provision to change treatment plan as a result of new information from routine reassessment.

5.9. Provision of oral hygiene counselling for parents, including the implications of the oral health of the caregiver.

5.10. Referral of the patient to appropriate dental specialty based on the treatment plan.

5.11. Proper documentation in patients' record.

5.12. Consult with the patient's physician as needed.

6. RECOMMENDATION TWO: ORAL HEALTH SCREENING FOR PEOPLE OF DETERMINATION

6.1. Informed Consent:

6.1.1. All patients and their legal representatives must be able to provide informed consent before dental treatment. This should be documented on the patient health records by signing an accompanied minor informed consent form.

6.2. Patient Assessment:

6.2.1. In all visits, a complete medical, dental and medications histories should be taken and recorded in the patient's file. The patient should be given a thorough and systemic extra-oral head and neck examination. In addition to the intraoral soft tissue examination which includes patients' teeth and gums. A screening form is attached in **Appendix 3.**

a. Extraoral Examination:

I. Asymmetries: compare one side of the head and neck to the other. Most people are not completely symmetrical, but significant asymmetries should be noted.

II. Lymph node examination: the lymph nodes in the head and neck area should be palpated gently to look for tenderness or enlargements. Normal lymph nodes are either not palpable, or you may feel a lymph node that is the size and shape of a small pea or lentil. These are mobile, and non-tender. Abnormal lymph nodes are generally larger, fixed and may be tender.

III. Tempro Mandibular Joint (TMJ) examination: Place fingertips over the TMJs with gentle pressure. Note any tenderness, swelling or redness at rest. Ask the patient to open and close slowly several times. Then ask the patient to slowly move the mandible from side to side in an open position. Record any tenderness, pain, clicking, crepitus, deviations, or limited opening.

IV. Cranium: Inspect for sores, flaking, inflammation, swelling & symmetry.

V. Neck: Thyroid gland-palpate/inspect for swelling.

VI. Musculature: inspect/palpate for suppleness.

VII. Hair: Inspect for thickness, colour, dryness, consistency.

VIII. Ears: Inspect for normal appearance, cartilaginous defects, pits and cutaneous lesions.

IX. Eyes: Eyeball: inspect for inflammation, deviation or exophthalmos. Eyelid: inspect for ptosis, inflammation.

X. Nose: Evaluate potency, note any discharge.

XI. Perioral: Inspect for inflammation, scarring, eruptions, ulcerations.

b. Intraoral soft tissue Examination:

I. Lips: Vermillion: look for even colouring, and symmetry, and sharp demarcation between the skin and the lip vermillion. Record if there are any abnormalities; such as hyperkeratosis (white patches), ulcers, or pigmentation. Check the corners of the mouth (lip commissures), where redness and small fissures may indicate angular cheilitis.

II. Labial mucosa: record any abnormalities of the labial mucosa, such as polyps, scars, or ulcers. Scars inside the lower lip are seen frequently because of trauma in children.

III. Buccal mucosa and vestibular mucosa: for any abnormalities, note the type of abnormality, size, colour, location, texture, and consistency. If there appears to be a swelling or mass, it is important to palpate the area. Soft swellings are more likely to be infections or cysts, while firm masses could be a tumour.

IV. Hard and soft palate: record any abnormalities, or variations of normal. A red velvety appearance of the palatal mucosa beneath a denture may indicate denture stomatitis. A bony swelling in the midline of the hard palate covered with normal mucosa is likely a palatine torus. A soft tissue swelling on one side of the hard palate may be an abscess or tumour. The shape, location, consistency, colour and duration will help with the diagnosis.

V. Oropharynx: with the patient's tongue in a resting position (not protruding), have the patient open widely, and say "ahhh". You should look at the two folds of tissue that lie on the sides of the throat. These folds are called the tonsillar pillars. Between these folds are the palatine tonsils (unless the tonsils have been surgically removed). The posterior pharynx wall and the uvula commonly may have slightly raised pale yellow areas. This is lymphoid tissue.

VI. Tongue: examine the dorsum of the tongue first. Have the patient protrude their tongue, and grasp the tip of the tongue with gauze. Gently stretch the tongue to one side and visually examine the lateral border of the tongue. The opposite side of the tongue should be examined in the same way. Remove the gauze from the tongue, and have the patient lift their tongue,

so that the ventral tongue can be seen. Prominent veins are often visible on the ventral tongue. Particular attention should be paid to the lateral borders of the tongue and the floor of mouth, as malignant disease develops in these mucosal sites more frequently than the dorsum of the tongue or the palate. Oral malignancies can have a variety of appearances including ulcers, masses, red areas, white areas or a combination of these.

VII. Floor of mouth: palpate the submandibular gland and move your fingers forward to palpate the sublingual gland and floor of mouth. The sublingual gland usually feels ropey or lobulated. A salivary stone in this area would feel hard. A salivary gland tumour would usually feel like a firm oval or round mass.

VIII. Gingiva and alveolar mucosa: Healthy gingiva is pink, and stippled. Abnormalities noted such as generalized or localized swelling, erythema, and ulceration or bleeding should be noted.

IX. The maxilla and mandible should be palpated to check for enlargements such as exostoses or tori. This examination may also reveal tenderness that could be the result of infection or inflammation.

7. **RECOMMENDATION THREE:** BEHAVIOR GUIDANCE

7.1. Patients with disabilities may exhibit resistant behaviors. These behaviors can interfere with the safe delivery of the dental service. With the parent/caregiver's assistance, most patients with physical and mental disabilities can be managed. Protective stabilization can be helpful in patients for whom traditional behavior guidance techniques are not adequate.

7.2. Partial or complete stabilization of the patient sometimes is necessary to protect the patient, practitioner, staff, or the parent from injury while providing dental care. Protective stabilization can be performed by the dentist, staff, or parent without the aid of restrictive devices. The dentist should always use the least restrictive, but safe and effective, protective stabilization. The use of a mouth prop in a compliant patient is not considered protective stabilization.

7.3. In the event of an unanticipated reaction to dental treatment, it is incumbent upon the practitioner to protect the patient and staff from harm.

7.4. Following immediate intervention to assure safety, if techniques must be altered to continue delivery of care, the dentist must have informed consent for the alternative methods. The patient's record must include:

7.4.1. Informed consent for stabilization

7.4.2. Indication for stabilization

7.4.3. Type of stabilization

7.4.4. Duration of application of stabilization

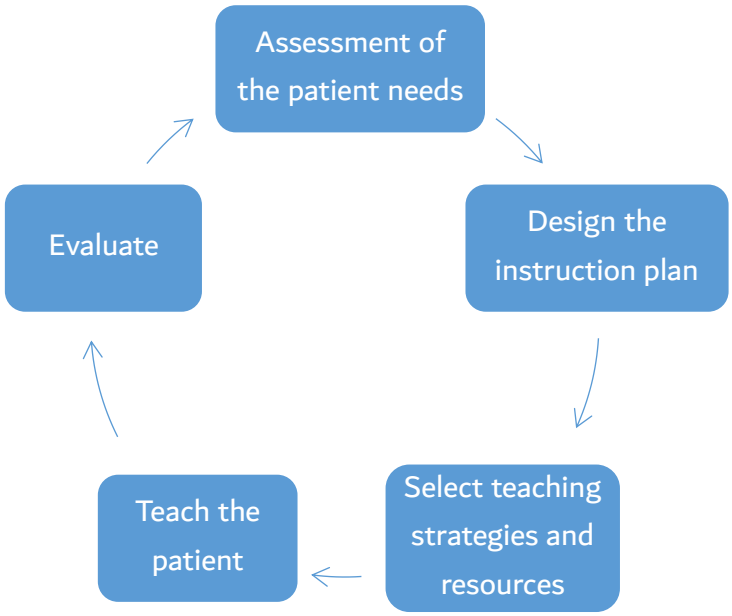
7.4.5. Frequency of stabilization evaluation and safety adjustments

7.4.6. Behaviour/evaluation rating during stabilization.

8. RECOMMENDATION FOUR: PREVENTIVE STRATEGIES

8.1. During each session, the healthcare provider needs to assess patient's/family education need.

8.2. Patient Education Steps:



8.3. Patient Education Steps:

8.3.1. Assessment of the Patient: Define patient and family needs and concerns; observe readiness to learn.

a. Motivation: Patients are motivated when they learn how their lives could improve. Focus on the benefits of education.

b. Attitude: Denial, fear, anger and anxiety. All could be barriers to education. Patient must know that he or she will make gains by learning new skills.

c. Outlook: A patient's beliefs about their situation could affect education. Let them know that learning new skills can help them feel better or slow disease progression.

8.3.2. Design of the instruction plan, set objectives with your patient; select materials.

a. Goals should focus on what is necessary/critical to patient survival first.

b. Pay attention to patient concerns, as they could stand in the way of progress.

c. Respect stated limits– if a patient has refused to do something, try to work around the problem and incorporate something new as best you can.

d. Help patients understands the need for changing behaviour.

8.3.3. Select a teaching strategies and resources: implement the plan; help patients along the way to reach the set objectives together.

a. Providing a good learning environment.

b. Tone of voice, eye contact and touch vary for all cultural backgrounds.

c. Use the knowledge you gained during assessment.

d. Mixing Education Media.

e. Choosing the right patient education materials.

8.3.4. Teach the patient: understand and adapt to barriers to learning

a. Begin with knowledge of patient's understanding of his/her disease, learning styles and motivation.

b. Understand and adapt to barriers to learning.

c. Present material in multiple formats, over multiple episodes and in coordination with other care team members.

8.3.5. Evaluate: evaluation is critical and should be continuous through all four steps.

a. Get feedback from the patient and family, which provides valuable perspective on the effectiveness of patient education. Consider surveys, documents for patients to sign, questionnaires.

8.3.6. Assess patients/family literacy and barriers to proper oral health care.

a. Verbal information needs to be reinforced with written materials/videos related to the patient's needs and consistent with patient's and family's learning preferences.

b. Care givers, as well as patients, should be educated about nutrition and preventive oral care so that optimal oral health can be achieved and maintained.

Note: for additional Educational Material refer to **Appendix 4**.

8.4. Patient Referral:

8.4.1. A patient may suffer progression of his/her oral disease if treatment is not provided because of age, behaviour, inability to cooperate,

disability, or medical status. Once the patient's needs are beyond the skills of the practitioner, the dentist should make necessary referrals in order to ensure the overall health of the patient. Coordinate care via consultation with the patient's other care providers including physicians, social workers and care takers **Appendix 5**.

8.5. Summary flowchart for oral health screening for the People of Determination

C. GUIDELINES FOR TREATMENT PLANNING

1. BACKGROUND

Treatment planning is the process of scheduling the needed procedures into a time frame. Patient comprehensive treatment in the dental clinics is rendered in an appropriately sequenced manner reflecting the phasing detailed in the treatment plan. Five phases are described below to be considered within a treatment plan, as follows:

- Urgent treatment
- Disease control
- Advanced pre-prosthetic treatment
- Definitive treatment
- Review and maintenance.

Proper sequencing is a crucial component of a successful treatment plan. Certain treatment must follow steps in a logical order, whereas other treatment may occur simultaneously and require coordination. Comprehensive treatment plans are sequenced in phases, including an urgent phase, a disease control phase, advanced phase, definitive phase and maintenance phase. The steps mentioned will guarantee delivering quality dental care and improve the treatment outcome for a healthy and happy population.

2. SCOPE

2.1. To answer specific questions in daily practice and as an information source for continuing professional education.

2.2. To effectively treat patients and to reduce specialist appointments by minimizing the number of referrals from general dentist clinics to specialist clinics.

3. PURPOSE

3.1. To address chief complains that need immediate attention in urgent phase.

3.2. To stabilize deteriorating conditions such as dental caries or periodontal disease by removing the etiological factors in the disease control phase.

3.3. To re-evaluate the response of the control phase and advanced procedures in preparation for the definitive phase.

3.4. To provide permanent restorations of form, function and aesthetic in definitive phase.

3.5. To create a plan that will maintain dental health, follow up and revaluation of risk factors in maintenance phase.

4. APPLICABILITY

4.1. DHA Licensed General Dentists

4.2. DHA Licensed Primary Care Dentists

4.3. DHA Licensed Dental Assistants

4.4. DHA Licensed Dental Hygienists.

5. RECOMMENDATION ONE: CLINICAL STEPS

5.1. Examination and diagnosis:

5.1.1. A complete assessment of patient medical, dental history and detailed extraoral and intraoral hard and soft tissue examination should be

recorded on the patient's file. The patient's reason for dental visit should be determined. Identifying and prioritizing the treatment and procedures which will meet the patient's individual needs to develop the treatment plan.

5.2. Urgent Treatment:

5.2.1. Manage intraoral soft tissue lesions of non-traumatic origin.

5.2.2. Treat patients with intraoral dental emergencies and infections.

5.2.3. Anticipate, diagnose and provide initial treatment and follow-up management for medical emergencies that may occur during dental treatment (e.g. acute pulpal or periodontal disease).

5.2.4. Treat intraoral hard and soft tissue lesions of traumatic origin.

5.2.5. Perform initial treatment and management of facial trauma.

5.3. Disease control:

5.3.1. Periodontal disease control

a. Oral hygiene instructions.

b. Initial cause-related therapy:

I. Supra- and sub gingival scaling.

II. Root debridement.

5.3.2. Extraction of non-restorable teeth

a. Possible provisional replacement of teeth.

5.3.3. Caries control:

a. Caries risk assessment.

b. Replace defective restorations, remove caries.

c. Provisional (temporary) restorations.

d. Definitive restorations (i.e. amalgam, composite, glass ionomers).

e. Replace defective restoration.

f. Controlling other contributing factors.

5.3.4. Reduce or eliminate parafunctional habits, identify smokers and provide advice on smoking cessation.

5.3.5. Endodontic therapy for pathologic pulpal or periapical conditions.

5.3.6. Stabilization of teeth with provisional or foundation restorations.

5.3.7. Post-treatment assessment (re-evaluation).

5.4. Advanced (pre-prosthetic) treatment:

5.4.1. Advanced periodontal therapy (e.g. soft tissue augmentation).

5.4.2. Alveoloplasty/crown lengthening or bone grafting.

5.4.3. Stabilize occlusion (occlusal adjustment, vertical dimension of occlusion, anterior guidance and plane of occlusion).

5.4.4. Orthodontics, orthognathic surgical treatment.

5.4.5. Definitive preparation of individual teeth.

a. For endodontically treated teeth (e.g. post and core).

b. For abutment teeth (e.g. seat preparation to receive a rest for partial denture).

5.4.6. Elective treatment of asymptomatic teeth (e.g. extraction, root canal treatment).

5.4.7. Dental implant placement and restoration.

5.5. Definitive Treatment:

5.5.1. Prosthodontic replacement of missing teeth

a. Indirect restorations (inlays, onlays, veneers).

b. Fixed prosthesis (crown, bridge, partial denture).

c. Removable prosthesis (partial dentures, complete dentures).

5.5.2. Post-treatment assessment **Appendix 6.**

6. RECOMMENDATION TWO: REVIEW AND MAINTENANCE

6.1. Periodic review and oral evaluation of treatment and progress of existing disease.

6.2. Periodontal maintenance.

D. GUIDELINES FOR PREVENTIVE ORAL HEALTH MEASURES IN CHILDREN

1. BACKGROUND

This guideline is developed to promote preventive dental health services in children, to reduce the likelihood of development of tooth decay and the need for more intensive treatment overtime. Schools and nurseries contribution substantially to a student's health and well-being. This has been increasingly recognized by many international initiatives including those from the World Health Organization (WHO), United Nations Children's Fund (UNICEF) and United Nations Educational, Scientific and Cultural Organization (UNESCO). Oral health messages reinforced in schools eventually reach the whole community. The early years of a child's life is the most influential time to reinforce habits and attitudes, therefore targeting children with proper oral health habits will have a lifelong effect.

Tooth decay is the most common chronic childhood disease. Untreated tooth decay can lead to pain and suffering; affecting a child's ability to eat, speak and focus in school, resulting in absenteeism and affecting the ability to learn. Screenings provides parents/guardians with information about their children's oral health and the importance of regular dental treatment. The data provided from such screening programs identify areas with high levels of dental disease.

Preventive interventions can then be implemented to improve the oral health of children resulting in healthier and more productive individuals in their community, having better quality of life with a potential to long term cost saving.

The first examination is recommended at the time of the eruption of the first tooth and no later than twelve (12) months of age. The developing dentition and occlusion should be monitored throughout eruption at regular intervals. Evidence based prevention and early detection and management of caries/oral conditions can improve a child's oral and general health, well-being and school readiness.

A preventive dental service is not limited to diagnosing the disease screening but includes oral health prevention and promotion modalities, as deemed appropriate, for a given age group. Preventive dental services including fluoride varnishes and pit and fissure sealants are provided by the general dentist. Patients needing comprehensive treatment would require to be referred to a specialty clinic. Oral Health education and relevant materials are made available to children and their parents/guardians.

This guideline has been based on benchmarking with international best practice and revised to suit the needs of the schools and nurseries in the Emirate of Dubai and in accordance with DHA requirements.

2. SCOPE

2.1. To provide the best possible quality of preventive dental services to children in DHA licensed health facilities.

3. PURPOSE

3.1. Increase early oral disease detection through oral health screening and early investigation among the population of children in the Emirate of Dubai.

3.2. Improve school oral health promotion and preventive services.

3.3. To provide parents with information about their children's oral health and the importance of regular dental treatment.

3.4. To identify children with high levels of dental disease.

3.5. To plan preventive interventions in high risk children.

4. APPLICABILITY

4.1. DHA Licensed General Dentists

4.2. DHA Licensed Primary Care Dentists

4.3. DHA Licensed Dental Assistants

4.4. DHA Licensed Dental Hygienists.

5. **RECOMENDATION ONE:** ORAL HEALTH SCREENING

5.1. All DHA licensed oral healthcare providers in the Emirate of Dubai are authorized to provide screening for school students provided they meet the requirements in this guideline.

5.2. The screenings described in this guideline can be performed by a trained DHA licensed dentist or allied oral health professional who has a training for oral health screening.

5.3. Screeners whether dentist or hygienists should all use the same screening protocol. They should have undergone proper training and calibration for their information to be valid.

5.4. Recorders who could be hygienists or dental nurses enter the information collected by the screeners for each child should also receive training on how to record findings, thereby avoiding incorrect entries.

5.5. Screening staff (trained dentists and allied oral health care professionals) should refer all students with positive screening results by sending a referral letter to parents and encouraging them to get follow up within a month provided the case is not urgent.

5.6. School nurses can organize and coordinate the dental screening programs within schools. School Education and Institute Health Unit and Dental Services Department, DHA can assist schools and private sector with setting up oral health school screening training and programs.

5.7. Prior to the screening day, parents should be notified that their child will have an oral health screening. Parents/guardians must have the opportunity to refuse school screening by notifying the school.

5.8. Calibration/standardization

5.8.1. Standardization of the screeners on the basis of defined criteria reduces the human nature of bias (which exists in part as a result of clinical education and experience), and it is the means by which we can help ensure that the results of the oral screening are valid (correctly categorizes persons into disease/no disease categories) and reliable (criteria have been applied consistently).

5.8.2. Standardization allows data from several sites to be combined. In order to meet the goal of providing an accurate, consistent assessment of the oral conditions observed, it is important that, individual professional

judgment should be set aside on whether, for instance, a tooth examined would represent decay in a clinical setting.

5.8.3. In oral screenings, a tooth is marked as decayed only if it has decay according to the case definition that has been established.

5.8.4. The ability to screen in a standardized way is not a measure of the health providers' clinical skill. Rather, by screening in this way, it will help in the accurate assessment of this population while still providing a valuable referral for oral conditions that need follow-up.

5.8.5. The shortest total time for each standardization training session is approximately 45 minutes (30 minutes for the presentation plus 15 minutes for the standardization exercise and the question and answer period).

5.8.6. It is recommended that every screener attend a training session that includes the following:

a. A presentation in which the trainer shows the case definitions and photos in the session.

b. A standardized exercise.

c. A question and answer period in which the standardization exercise is discussed.

5.8.7. All recorders should be trained in:

a. Screening form.

b. Screening procedures for recorders.

5.8.8. Tools required for the screening:

a. Mouth mirror

b. WHO ball ended probes

c. Light source (e.g. flashlight).

5.8.9. To assess each condition in a systemic cycle; a cycle is one visual tour of the mouth, starting from top right to left, then bottom left to right).

5.9. Obtaining Consent Form

5.9.1. Prior consent/authorization must be sought from the parent/guardian for the screening/treatment event **Appendix 7.**

5.10. Screening the Mouth

5.10.1. Assess each condition in a systemic cycle; a cycle is one visual tour of the mouth, starting from top right to left, then bottom left to right. Screening form available in **Appendix 8.**

5.11. Untreated decay

5.11.1. Observe all visible surfaces of the primary and permanent dentitions.

5.11.2. If you are not sure cavitation exists, consider the tooth sound and mark- **No**.

5.11.3. Decay that fits the definition is present on any surface of the tooth, including root surfaces.

5.11.4. Root tips remaining after severe caries have destroyed the rest of the tooth.

5.11.5. There are restorations with recurrent decay fitting the definition of decay.

5.11.6. There are fractured, unrestored teeth with decay fitting the definition of decay.

5.11.7. The following are not considered decay. Mark **No** if:

a. No teeth fit the definition of decay.

b. Decalcification exists without cavitation.

c. There are stained grooves without cavitation.

d. Fractured teeth are free of decay or have no obvious cavitation not fitting the definition.

e. If no cavitation exists or you are not sure, consider the tooth sound.

f. Rule of thumb; a tooth is considered decayed if there is a clear cavitation on any surface of the tooth.

5.12. Preventive Fillings (Pit and Fissure Sealants):

5.12.1. Mark **Yes** if, on at least one tooth the occlusal surface has been sealed or any part of the sealant remains covering the surface.

5.12.2. Mark **No** if, a preparation appears to have been cut for the placement of filling material or you are not sure that there is sealant material on the tooth.

5.13. Missing teeth:

5.13.1. Missing teeth due to decay.

5.13.2. Missing teeth due to any other reason.

5.13.3. Note: screeners should be familiar with exfoliation timings.

5.14. Screening results should be entered by the screeners into the screening database table. To maintain privacy when calling out conditions identified in the screening, it is best to use numbers only and avoid naming categories such as "Treated Decay" or "Untreated Decay."

5.14.1. Untreated Decay (1 = yes, 2 = no)

5.14.2. Treated Decay (1 = yes, 2 = no)

5.14.3. Sealants Present (1 = yes, 2 = no).

Treatment Recommendations codes, as appropriate.

5.15. Screening Procedure is as follows:

5.15.1. Ask the patient to step forward for the screening or to sit on the dental chair in the dental van. As the patient is coming forward observe the symmetry of the face and neck; inspect the extra oral tissue (lips, cheeks, and neck).

5.15.2. Ask the patient if anything in his/her mouth hurts or concerns them.

5.15.3. If the patient state, they have oral problems discuss with the patient the symptoms he/she has and the duration of the symptoms.

5.15.4. Inspect the intraoral tissues (lips, cheeks, teeth, tongue, palate and gums). Look for bleeding, decay, infection, redness, swelling, sores and/or lesions.

5.15.5. Determine the appropriate treatment urgency code for the patient using the Screening table provided. The treatment urgency code is the screening category that will be reported to the patient's parent/guardian **Appendix 9**.

5.15.6. Make sure the screening data is properly recorded on the forms available.

5.15.7. Strict patient confidentiality measures should be implemented during the screening process. All parents/guardians should be sent notification of their child's screening results **Appendix 10**.

5.15.8. Provide oral hygiene education/counselling for parents, including the implications of the oral health of the caregiver **Appendix 11** for assessment questionnaire for parents for oral health of children.

5.15.9. Education/counselling includes but not limited to:

a. Information on the appropriate tooth paste to be used (age related, fluoride doses, quantity).

b. Information on the appropriate toothbrush to be used (age related, convenient grip, replacement, cross infection).

c. Information on the tooth brushing technique (for the child and parent, position).

d. Also, provide age-appropriate injury prevention counselling for orofacial trauma, diet and nutrition and the importance of regular dental visits. Oral health education materials will be provided.

5.15.10. Assess the child's systemic and topical fluoride status (including type of infant formula used, if any, and exposure to fluoridated toothpaste) and provide counselling regarding fluoride.

5.15.11. Referral of the patient to appropriate dental specialty based on the treatment plan. Screenings identify the presence of decay, previous dental experience (fillings and/or sealants), infection, swelling and pain. Parents are notified of the screening results and those with dental treatment needs are referred to local dentists for care. A formal referral form can be provided **Appendix 12.**

5.15.12. Assessment of the behaviour of child.

5.15.13. Consult with the child's physician as needed.

5.15.14. Determine the interval for periodic re-evaluation.

5.15.15. School oral health screening data should be recorded in the student file

5.16. Post screening recommendation

5.16.1. Parents are notified of the screening results and those with dental treatment needs are referred to dentists for care **Appendix 10**.

5.16.2. It is recommended that school nurses monitor these referrals to ensure that children receive the care they need **Appendix 12.**

5.16.3. School screenings are not a substitute for an examination by a dental professional and it is recommended that all children have a dentist that provides regular, comprehensive dental care.

Procedure Guidelines of Oral Health Programs

Screen for early signs of caries or obvious cavities and pain	Screen all preschool and school-aged children for early signs of dental caries, e.g., demineralized white spots or obvious cavities and pain. Screen for dental pain. Recommend nonsteroidal anti-inflammatory medications (if not contraindicated) for tooth pain with or without localized swelling when dental therapy cannot be started immediately. Refer patient to a dentist. Consider antibiotic treatment only if signs of infection (e.g. swelling, redness, pain) suggestive of a dental abscess are present.
Refer patients	Refer patients with obvious dental disease to a pediatric or family dentist. Provide an active referral to a dentist rather than a passive or verbal recommendation (to increase the likelihood of follow-through by patients). Ensure children have a 'dental home' by age 1 year.
Application of fluoride varnish (by trained provider)	Consider application (or referral for application) of fluoride varnish to teeth of children at high risk for caries.
Recommend tooth brushing	Recommend tooth brushing twice daily with fluoridated toothpaste (as per age-appropriate guidelines).
Screen early feeding and later eating practices	Screen for high risk feeding habits and counsel caregivers against these: Infants: frequent night-time feedings, bottle/sippy cup in bed, addition of sugar or honey to feeds or pacifiers. Young children: bottle/sippy cup in bed, frequent snacking or milk bottles, sugar-containing drinks.

6. RECOMMENDATION TWO: PREVENTIVE INTERVENTION

6.1. Fluoride Varnish

6.1.1. Fluoride is a very safe material to use. Fluoride is a naturally occurring element and is present in some water supplies around the world.

Fluoride protects the teeth from acidic and bacterial attacks and strengthens the teeth to resist these attacks.

6.1.2. Appropriate dose for children under the age of 6 years is 0.25ml of varnish. For children over 6 years the recommended dose is 0.4 ml.

6.1.3. The toxic dose of fluoride would be 5 mg per Kg of child weight. Check any medical history with the parent, specifically check for allergy to sticking plaster or severe allergy or asthma that has required hospitalization.

6.1.4. Preparation

a. Place your equipment so that it is accessible for yourself but away from the child.

b. Dispense 0.25ml or 0.4ml of varnish and ensure that the remaining varnish remains inaccessible to the child.

c. Welcome each child and explain the procedure in simple terms.

d. Ensure you and the child are comfortable and the child is wearing safety glasses (if appropriate) and bib.

e. Apply your own safety glasses and follow local hand hygiene policies.

6.1.5. Application procedure

a. A systematic approach is more important than adopting a specific order or technique. However, the following represents one method, which could be followed:

I. If a child gets upset or protests during any part of the procedure, then the procedure should be abandoned.

II. Gently retract the right cheek with your finger or mirror and dry the upper right canine and molars with a cotton roll or gauze.

III. Lift the upper right buccal sulcus with you finger or a cotton role if possible.

IV. Holding the roll in place, apply a small amount of Fluoride Varnish to the buccal, palatal, approximal and occlusal surfaces of the molars.

V. Remove the cotton roll.

VI. Retract the upper lip with a finger. Dry the incisor teeth with a cotton roll or gauze.

VII. Apply varnish to the buccal, approximal and palatal surfaces of the canines and incisors.

VIII. Repeat for upper left.

IX. Repeat process for whole lower arch.

X. If there is insufficient varnish for full lower arch give priority to buccal, approximal and occlusal surfaces of molars on both sides of the mouth.

XI. Ensure all equipment is removed from the mouth. Count four cotton rolls (if used), one brush and gloves and place all disposable equipment in the clinical waste bag.

XII. Complete patient record (on paper or electronically). If any immediate allergic reaction, remove product by tooth brushing and rinsing and follow local protocol. Fill in the incident report and adverse drug reaction form available on file net. Note down on the patient file.

6.1.6. After care advice:

a. To make sure that the maximum benefit of the application is gained, parents or caregivers are given specific, simple and easy to follow instructions.

b. Child should not be given any form of systemic fluoride for two days after she/he receives the varnish application.

c. The child must not eat or drink for half an hour after the application.

d. Soft diet on the day of the application, which will help the fluoride to stay on the teeth for longer.

e. Inform the parent that the teeth may appear discoloured and that it is temporary. Ask the parent not to brush the teeth of the child on the day of application, but from the next day the tooth brushing should resume. Please reinforce on this information.

6.2. Pit and Fissure Sealants

6.2.1. Application of dental sealants can play a significant role in protecting teeth against decay. A dental sealant is a plastic film professionally applied to the pits and fissures of the back teeth. Often this area is difficult to clean efficiently because the toothbrush bristles are too thick to fit into the grooves or fissures of the teeth, allowing plaque to get trapped and create caries. The sealant assists in preventing access of plaque and plaque acids to the enamel surface of the teeth. Dental sealants are of value in the prevention of dental caries.

6.2.2. A good time to apply dental sealants is shortly after the first permanent molars appear at the age of six or seven years and the second molars around the age of 11 or 12 years.

6.2.3. Placement of sealants is not time consuming. It is a painless procedure and there is no need for injection or drilling. Sealants last on average two to seven years.

6.2.4. The seven steps to placement of sealants are as follows:

a. Step One: The tooth surface must be thoroughly cleaned prior to the placement of the sealant by a toothbrush, a prophy cup or brush, or a prophy jet. Products containing fluoride and/or glycerine are contraindicated and should not be used to clean the tooth. Pumice should not be used to clean pits and fissures as the particles of pumice can prevent the acid etch and the resin from

flowing into the fissure. After cleaning, the surface should be rinsed approximately 20 seconds. An explorer should then be used to examine the entire tooth surface for any remaining debris and previously undetected pathology. If debris remains, the tooth surface should be cleaned again. If pathology is detected, the decision to seal the tooth should be re-evaluated.

b. Step Two: Isolation is the most critical issue in the proper placement of sealants. If the surface of the etched tooth is contaminated by saliva, the resin material will not adhere because the remineralisation process begins as soon as saliva touches the etched surface. Sealant loss and immediate failure of retention are most often linked to moisture or salivary contamination. A rubber dam is the ideal method for tooth isolation for sealants, but it is not always possible or appropriate for young children. Cotton rolls, dry field pads, dry field kits, and single tooth isolation are all used with success. If you are using a glass ionomer product isolation will not be an issue since these products are not affected by saliva contamination.

c. Step Three: Etching the tooth surface with a 38% phosphoric acid. The etching time is approximately 20 seconds for both primary and permanent teeth. It is not required to use an etchant if you are using a glass-ionomer product.

d. Step Four: Rinse off the etchant with water to remove all the acid. It is very important that the surface should not be contaminated with saliva at this point, if so then it would be necessary to repeat the etching step again.

e. Step Five: Place a thin layer of the bonding agent and use the air syringe to thin out the layer and cure according to manufacture instruction.

f. Step Six: Place the sealant material from a syringe and light cure it. It is important not to place too much material as it will interfere with the occlusion. The material placed should be left to settle into the pits and fissures for 20 seconds, then a curing of 30 seconds is applied. The cure tip should be 3-5mm away from the surface.

g. Step Seven: Evaluation of the sealant should be done immediately after the curing. An explorer should be used to check for retention and any gaps. Things to keep into consideration are voids, bubbles or any portion of the material come out. If any of the above are present, it is necessary to repeat the process. Occlusion should be checked with an articulation paper, access material can be removed with a finishing bur.

h. Documentation of the procedure, time and surfaces sealed number of teeth and any follow instructions should be placed in

the patient's file. It is preferred annual check-ups of the sealant conditions.

7. **RECOMMENDATION THREE:** TOOTH BRUSHING IN EDUCATIONAL ESTABLISHMENTS

7.1. Tooth brushing with a proper strength of fluoride toothpaste is a proven and effective way to help reduce and prevent tooth decay. The prevention of dental caries in the student community is one of the major goals of the DHA strategic plans.

7.2. Organization: School based tooth brushing programs are effective preventive measures involving health and educational authority partnerships and are an integral part of health promoting activities in the schools and nurseries.

7.2.1. Children brush their teeth daily in their educational and academic settings.

7.2.2. All schools and nurseries must assign a lead person to follow up on the tooth-brushing program.

7.2.3. Support and information must be available to all these schools and nurseries

7.2.4. All tooth brushing leads and tooth-brushing supervisors must have appropriate oral health training.

7.2.5. Appropriate monitoring is established twice a year by a member of the School Health Educational Unit (SHEU).

7.2.6. Appropriate consents are in place and records are maintained.

7.3. Effective preventive practice: Students should use appropriate toothbrushes; tooth paste and tooth brushing technique.

7.3.1. Toothbrushes and brushing techniques should be appropriate to the age and ability of the child.

7.3.2. Appropriate replacement of toothbrushes either once every three months or when the toothbrush bristles are splayed.

7.3.3. Toothpaste should contain 1000 ppm (parts per million) fluoride.

7.3.4. Appropriate quantity of toothpaste should be used based on the age of the child (pea-sized amount for children 3 years and above and smear layer for children under 3 years).

7.3.5. Where there is a shared tube of toothpaste, a supervisor dispenses the required amount in a clean surface such as a paper plate with enough space between each amount to prevent cross contamination during collecting it with a toothbrush.

7.3.6. Children who have individual toothpaste tubes should be supervised to have the appropriate quantity on the toothbrush.

7.4. Implementation of the tooth-brushing program:

7.4.1. The tooth brushing program follows one of the two models outlined in the **Appendices 13, 14 and 15.**

7.4.2. Children can brush their teeth either standing or sitting.

7.4.3. Children should be supervised when brushing.

7.4.4. Children can brush their teeth in groups or individually, preferably after eating.

7.5. Prevention and control of infection:

7.5.1. Toothbrushes should be stored in appropriate storage systems with the following criteria:

a. Toothbrushes must be able to stand in upright position.

b. Storage should enable to have enough distance between each toothbrush to prevent cross contamination.

c. Storage system should have clear symbols or names to allow individual identification of toothbrushes.

d. Storage systems in washrooms should have covers or lids and are stored within adult height or in a suitable trolley.

e. Storage systems should not be placed directly next to the children while they are brushing.

7.6. Cleaning procedures for storage systems and toothbrushes as follows:

7.6.1. Toothbrushes should be rinsed thoroughly with running water after each use and placed in the storage system to be air dried. Toothbrushes should not be soaked in any chemical cleaners or detergent. Toothpaste tubes could be wiped clean with paper towels.

7.6.2. Storage systems should be cleaned and maintained according to manufacturer's specifications.

7.6.3. Appropriate gloves should be worn when cleaning the storage systems.

7.6.4. Storage systems should be cleaned, rinsed and dried at least every week by the assigned person or more if visibly soiled.

7.6.5. Storage systems should not be cleaned with harsh chemicals and sprays. Warm water and household detergent can remove harmful microorganisms.

7.6.6. Precautions should be taken to ensure that toothbrushes do not cross contaminate when being removed from or replaced in the storage systems.

7.6.7. Any toothbrush that falls on the floor should be replaced immediately.

7.6.8. Storage systems should be replaced if it shows any signs of damage or cracks.

E. GUIDELINES FOR MANAGEMENT OF ORAL HEALTH DURING PREGNANCY

1. BACKGROUND

Oral health is an essential component of the overall health status for pregnant women and women of reproductive age. Physiologic changes occurring during pregnancy can place a tremendous strain on a woman's body, including the mouth. Poor oral health of the mother, including dental decay and periodontal disease before and during pregnancy, has been linked to poor birth and pregnancy outcomes such as pre-term birth and low birthweight. However, there are many myths surrounding pregnancy. For example, many women believe they should not go to the dentist during pregnancy and that dental imaging should never be done while they are pregnant. Nevertheless, encouragement and oral health promotion by an obstetric provider of healthy behaviours increases a pregnant woman's likeliness to practise the healthy behaviour. Identifying mothers with high levels of dental caries and poor oral health and educating them on the importance of their own oral health and the future health of their unborn child can help change their trajectory of oral diseases during the prenatal period.

2. SCOPE

2.1. This guideline addresses both the dental and maternal health providers and provides tailored direction around oral health care of women during pregnancy.

3. PURPOSE

3.1. To highlight the role of maternal health care providers in oral care for the pregnant women.

3.2. To emphasize on the interdisciplinary collaborative approach towards maternal oral health.

3.3. To outline the implications for the safe use of medications during pregnancy.

3.4. To lay down the special considerations for dental treatments during pregnancy.

3.5. To provide a brief outline on oral hygiene and preventive care for pregnant women and new-borns.

4. APPLICABILITY

4.1. DHA Licensed General Dentists

4.2. DHA Licensed Primary Care Dentists

4.3. DHA Licensed Dental Assistants

4.4. DHA Licensed Dental Hygienists.

5. **RECOMMENDATION ONE**: COMPREHENSIVE ORAL HEALTHCARE FOR PREGNANT WOMEN

5.1. Overarching general recommendations for both maternal health and dental providers:

5.1.1. As recommended by the American Congress of Obstetricians and Gynaecologists, a thorough oral clinical examination must be conducted in each trimester of pregnancy to identify any oral health problems and treat them at the earliest before giving way to complications which might require complex treatment, if left untreated.

5.1.2. Routine professional dental care for the mother can help optimize oral health for the fetus.

5.1.3. Removal of active caries, with subsequent restoration of remaining tooth structure, in the mothers, suppresses the Mutans Streptococcus (MS) reservoir and minimizes the transfer of MS to the infant, thereby decreasing the infant's risk of developing Early Childhood Caries (ECC).

5.1.4. Additionally, since periodontal disease is present in approximately 40% of all pregnant women, best practice suggests that periodontal care should be provided during pregnancy.

6. **RECOMMENDATION TWO**: MEDICINES TO BE USED DURING THE PREGNANCY

During pregnancy it is vital to use the safest medication possible with consideration of drug contraindications and side effects.

6.1. The safest local anesthetics are etidocaine and lidocaine.

6.2. Aspirin and non-steroidal anti-inflammatory medications should be avoided especially during the third trimester since this will increase the risk of ductus arteriosus constriction and postpartum haemorrhage, as well as delayed labor.

6.3. Opioids should not be used during pregnancy either due to respiratory depression of the mother, which will cause hypoxia in the fetus, and associated congenital abnormalities.

6.4. During pregnancy safe choices of antibiotics, are clindamycin, azithromycin, and penicillin/cephalosporin.

6.5. Details of implications for Drugs usage during Pregnancy:

Anesthetics	**Consult with a prenatal care health professional before using intravenous sedation or general anesthesia. Limit duration of exposure to less than 3 hours in pregnant women in the third trimester.**
Local anesthetics with epinephrine (e.g., Bupivacaine, Lidocaine, Mepivacaine)	May be used during pregnancy.
Nitrous oxide (30%)	May be used during pregnancy when topical or local anesthetics are inadequate. Pregnant women require lower levels of nitrous oxide to achieve sedation; consult with prenatal care health professional.
Antimicrobials	**Use alcohol-free products during pregnancy.**
Cetylpyridinium chloride mouth rinse	May be used during pregnancy.
Chlorhexidine mouth rinse	
Xylitol	
Analgesics	
Acetaminophen	May be used during pregnancy. Oral pain can often be managed with non- opioid medication. If opioids are used, prescribe the lowest dose for the shortest duration (usually less than 3 days), and avoid issuing refills to reduce risk for dependency.
Acetaminophen with Codeine, Hydrocodone, or Oxycodone	
Codeine	
Meperidine	
Morphine	
Aspirin	May be used in short duration during pregnancy; 48 to 72 hours. Avoid in 1st and 3rd trimesters.
Ibuprofen	
Naproxen	
Antibiotics	
Amoxicillin	May be used during pregnancy.
Cephalosporin	
Clindamycin	
Metronidazole	
Penicillin	
Ciprofloxacin	Avoid during pregnancy.
Clarithromycin	

Levofloxacin	
Moxifloxacin	
Tetracycline	Never use during pregnancy

7. **RECOMMENDATION THREE:** MATERNAL HEALTHCARE PROVIDERS

7.1. Advise women that oral health care improves a woman's general health and may also reduce the transmission of potentially caries producing oral bacteria from mothers to their infants.

7.2. Conduct a brief oral health assessment during the prenatal visits.

7.3. Reassure patients that prevention, diagnosis, and treatment of oral conditions; including dental X-rays (with shielding of the abdomen and thyroid) and local anesthesia (lidocaine with or without epinephrine) are safe during pregnancy.

7.4. Inform women that conditions that require immediate treatment, such as extractions, root canals and restoration (amalgam or composite) of untreated caries, may be managed at any time during pregnancy. Delaying treatment may result in more complex problems.

7.5. Develop a working relationship with the dentists. Refer patients for oral health care with the help of the referral form attached here as **Appendix 16**.

7.6. Reinforce routine oral health maintenance, such as limiting sugary foods and drinks, brushing twice a day with fluoridated toothpaste, flossing once daily and dental visits twice a year.

7.7. Key Oral Health Messages for Pregnant Women:

7.7.1. Brush teeth twice daily with a fluoride toothpaste and floss daily.

7.7.2. Limit foods containing sugar to mealtimes only

7.7.3. Choose water or low-fat milk as a beverage

7.7.4. Avoid carbonated beverages during pregnancy

7.7.5. Choose fruit rather than fruit juice to meet the recommended daily fruit intake

7.7.6. Dental care during pregnancy is safe and effective and is essential for the pregnant woman and her foetus.

7.8. Oral health assessment and referral

Steps to a basic oral health screening:

7.8.1. While wearing gloves, using an adequate light source, and utilizing a tongue depressor or disposable mouth mirror:

a. Check all teeth for visible decay areas or broken teeth.

b. Check gum tissues for redness, swelling, bumps and plaque or food build-up.

c. Check the cheek, tongue, the floor of the mouth and palatal tissues for irregularities.

d. Look down the throat for abnormalities.

Note: for Oral Health Screening Form for Pregnant Women refer to **Appendix 17.**

7.9. During the first visit and as necessary throughout pregnancy:

7.9.1. Advise pregnant women that oral health care is safe during pregnancy and that a healthy mouth is a crucial component of a healthy pregnancy.

7.9.2. Ask the patient: when did you last see the dentist, and did they discover any issues?

a. Facilitate a dental referral if necessary.

7.9.3. Do you have swollen or bleeding gums, a toothache, problems eating or chewing food, or other problems in your mouth?

a. Facilitate a dental referral if necessary, by means of the referral form.

7.9.4. Since becoming pregnant, have you been vomiting? If so, how often?

a. Advise the patient that after vomiting, it is best to rinse with water and a baking soda solution or use of antacids instead of immediately brushing your teeth.

7.9.5. How often do you brush and floss?

a. Emphasize brushing and flossing twice a day and changing a toothbrush every trimester.

7.10. During the last post-partum visit:

7.10.1. Re-emphasize the importance of continued appropriate and timely oral health care for the mother and her entire family.

a. Facilitate a dental referral if necessary.

7.10.2. Advise mothers to swab the inside of their babies' mouth with a soft cloth or gauze after every feeding.

7.10.3. Stress the importance of the first dental visit at eruption of the first tooth or at age one.

8. RECOMMENDATION FOUR: DENTAL PROVIDERS

8.1. Work in collaboration with maternity healthcare professionals.

8.1.1. Establish relationships with prenatal care health professionals in the community. Develop a formal referral process whereby the prenatal care health professional agrees to see the referred individual in a timely manner.

8.1.2. Share pertinent information about pregnant women with maternal health care health professionals, and coordinate care with prenatal care health professionals as appropriate.

8.1.3. Consult with maternal health care health professionals, as necessary; for example, when considering the following:

a. Co-morbid conditions that may affect management of oral problems (e.g., diabetes, hypertension, pulmonary or cardiac disease, bleeding disorders).

b. The use of intravenous sedation or general anesthesia.

c. The use of nitrous oxide as an adjunctive analgesic to local anesthetics.

d. Prescription of medications.

8.2. Oral health assessment:

8.2.1. A clinical oral examination for pregnant women should be an extensive evaluation, recording all extraoral and intraoral tissues as well as dental health indicators, including periodontal status.

8.2.2. The key component of the clinical exam is a complete periodontal probing, which measures the crevice depth around each tooth.

8.2.3. If it is determined that treatment is needed, several key factors need to be considered in the development of a treatment plan as follows:

a. Chief complaint (if any)

b. Medical history

c. History of tobacco, alcohol or other substance abuse

d. Findings from the clinical evaluation, including the gingival and periodontal examination

e. Findings from radiographs when needed

f. Restorative dental service options

g. Safe administration of drugs.

8.3. Management of oral problems for pregnant women in a dental setting

8.3.1. Some general dental procedures can be done for pregnant patients like any other patient, while in certain other circumstances minor changes must be made in the treatment protocol to cater to the needs of pregnant patients.

8.3.2. The American Dental Association (ADA) positions the following special precautions for managing pregnant patients in each trimester.

First trimester	Second trimester	Third trimester
• **If the pregnant patient is experiencing nausea, vomiting, then it is essential to check her teeth for erosion and counsel her on good oral health after vomiting.** • **It is important to allow for restroom breaks and try to keep appointments as brief and comfortable as possible.** • **It is essential to promptly treat oral infections and pain.** • **Non-emergency dental work and irradiation should be postponed until later.** • **If dental radiographic dental imaging is necessary for diagnosis and treatment, the exposure should be minimized as much as possible.**	• Elective dental care can be given during the second trimester and the first half of the third trimester. • Pregnant patients should be advised to have a healthy snack and plenty of fluids about one hour prior to their dental appointment. • If dental imaging is required during pregnancy, then this can be safely done in the second trimester. • Dental staff should follow the as low as reasonable achievable rule to minimize exposure, via lead apron and thyroid collar, high-speed film, and focused dental imaging.	• A supportive and calming environment is very helpful during this time of increased anticipation and anxiety. • Postural hypotension may still occur in the third trimester; therefore, the patient should change positions more slowly and/or lean towards the left side while in the dental chair. • Conservative treatments and short appointments are essential.

8.4. Tips for managing pregnant patients in a dental setting:

8.4.1. Provide emergency care at any time during pregnancy as indicated by dental condition.

8.4.2. Develop, discuss with women, and provide a comprehensive care plan that includes prevention, treatment and maintenance throughout pregnancy.

8.4.3. Provide the pregnant patient with appropriate educational material related to oral health and oral hygiene, good practices and healthy eating habits. Refer to **Appendix 18** for samples of educational material.

8.4.4. Use standard practice when placing restorative materials.

8.4.5. Use a rubber dam during restorative and endodontic procedures.

8.4.6. Position pregnant women appropriately:

a. Keep head higher than feet.

b. Place women in semi-reclining position and allow frequent position changes.

c. Place a small pillow under right hip or have woman turn slightly to the left as needed to avoid dizziness or nausea from hypotension.

d. Follow up with pregnant women to determine whether care has been effective.

8.5. Use of conscious sedation in pregnancy:

8.5.1. Higher anxiety levels associated with pregnancy are not uncommon and may intensify the stress of a dental appointment for a pregnant woman, consequently nitrous oxide may be regarded as the sedation agent of choice. The judicious use of nitrous oxide for a single appointment for non-elective dental treatment of a pregnant patient is acceptable. However, prolonged dental treatments and nitrous oxide exposure should be avoided if possible.

8.5.2. Nitrous oxide is the safest choice of anxiolytics if used in 2nd or 3rd trimester for less than 30 minutes while delivering 50% oxygen throughout procedure.

8.5.3. Any issues, such as gestational diabetes, pre-eclampsia, or history of premature labor, which classify the pregnancy as high risk may lead to deferral of dental treatment until after delivery.

8.5.4. Regular maintenance of oral hygiene during pregnancy.

9. **RECOMMENDATION FIVE:** SUMMARY


Common recommendations for maternal health and dental providers
Medication usage during pregnancy
Oral Health Messages for Pregnant Women
Recommendations for maternal health providers
Oral health assessment and referral
Arrange Routine Dental Care
Recommendations for dental providers
Collaboration with Maternal Health Providers
Oral health assessment of pregnant women
Managment of pregnant patients in a dental setting

F. GUIDELINES FOR ORAL HEALTH IN PATIENTS WITH NON-COMUNICABLE DISEASE

1. BACKGROUND

Major oral diseases and Non-Communicable Diseases (NCDs) are closely linked. The four major NCDs (cardiovascular disease, cancer, chronic obstructive pulmonary diseases and diabetes) account for the vast majority of disease burden and premature mortality in the Region. In UAE, NCDs account for nearly 65% of all deaths and the probability of dying between ages 30 and 70 years from the 4 main NCDs is 81.4%, putting increasing strain on health systems, economic development and the well-being of large parts of the population, in particular people over 50 years of age .(1) Intervention against oral diseases and non-communicable diseases must therefore become integrated. Thus, the purpose of the guidelines is to improve the health of those living with chronic diseases through improved oral health. In addition, the guideline is to be used for professional education and it can facilitate the more efficient use of health care resources.

2. SCOPE

2.1. Appropriate assessment/screening; referral/follow-up and oral health education will be provided by the DHA.

3. PURPOSE

3.1. To provide the optimum quality of Dental care to Patients with Non-Communicable Diseases thus, lessening the impact of NCD on oral health and vice versa.

3.2. To implement oral health screening programs, including oral health education as part of routine NCD's care.

3.3. To improve clinical non-dental staff knowledge and skills on the relation between oral and systemic health and on patient's assessment and referrals.

3.4. To improve and mainstream the referrals between Dental and NCD departments.

3.5. To improve the effectiveness of dental staff in assessing NCDs risk factors and refer accordingly.

4. **RECOMMENDATION ONE:** CLINICAL STEPS

4.1. Oral health screening for non-dental health care providers.

4.1.1. A member of the primary care team will conduct a brief (around two-minute) oral exam to assess the adequacy of salivary flow, obvious signs of poor oral hygiene, white spots or cavities, gum recession or periodontal inflammation, and examination of the oral mucosa and tongue for signs of disease. Oral health training toolkit for non-dental clinical staff is attached in **Appendix 19.**

4.1.2. A referral to a dental provider is made in case of presence of obvious oral disease. A referral form is attached in **Appendix 20.**

4.2. Oral screening by dental providers:

4.2.1. The oral systemic health connection is a two-way process. Making non-dental providers aware of oral disease is important, at the same time, having dental providers screen for systemic conditions is vital

as well. Streamlining referrals both ways not only improves patient outcomes but leads to a healthier happier community over time.

4.2.2. A medical history may be an initial step towards being aware of a patient's systemic condition. However, as a health provider, a dentist should be competent enough to look for obvious signs and symptoms of systemic disease in their patients and make appropriate referrals. A referral form for dental patients having systemic disease, to be seen by a non-dental provider is also provided in **Appendix 21.**

4.2.3. Thorough oral health screening involves not only talking with the patient but touching and exploring the mouth.

a. Personal Protective equipment: The first step in preparing for the oral health screening is to follow proper infection control measures.

b. Extraoral exam: Next, observe the face and neck, which can provide clues to oral findings. Ask the patient to open and close his or her mouth and note any related discomfort. Note any unusual swelling in the head and neck region. Palpate the lymph nodes bilaterally under the jaw, behind the ear, and down the neck.

c. Before beginning the intraoral examination, ask the patient to remove any removable dental appliances.

d. Intraoral exam: Examine the mouth systematically. Observe the lips and corners of the mouth, buccal mucosa, gums (gingivae around the teeth and the vestibular mucosa) or ridges if there are no teeth. Look at the roof of the mouth (both hard and soft palate), noting any abnormal or discoloured tissue. Using a piece of gauze, grasp the tip of the tongue to facilitate full protrusion and examination of the tongue. Lift the tongue and examine the floor of the mouth and the ventral surface of the tongue.

e. Note changes in the teeth. Remember that complete dentition usually includes 28 teeth; most people are missing all four third molars.

f. The final step of the oral examination process is to identify specific steps to be taken by the dietitian/nutritionist to correct related dietary problems and to formulate plans for consultation and/or referrals.

g. Screening form for documenting the oral health status is available as **Appendix 22.**

5. **RECOMMENDATION TWO:** NCD HEALTH SCREENING FOR PATIENTS ATTENDING DENTAL CLINICS

5.1. Patients attending the dental clinics will be assessed for the risk factors for common NCD's by the dental providers and thereafter respective advice on the lifestyle modification and/or referrals will be made.

5.2. A risk factor assessment form for common non-communicable diseases (NCD) has also been developed that covers the procedure of identification of common risk factors amongst the adult patients by the dental providers, places the patients into respective categories and enlists the series of actions to be taken thereafter. Following are simple clinical steps in brief that the dental provider must keep in mind when they have a patient affected by the any of the following NCDs **Appendix 23.**

5.3. Education materials for each disease condition mentioned below are also added as **Appendix 24.**

5.3.1. **Diabetes**

a. Review the patient's medical history, take vital signs, and evaluate for oral signs and symptoms of inadequately controlled diabetes, which may be common.

b. Oral manifestations of uncontrolled diabetes can include: xerostomia (dry mouth); burning sensation in the mouth; impaired/delayed wound healing; increased incidence and severity of infections; secondary infection with candidiasis;

parotid salivary gland enlargement; gingivitis; and/or periodontitis.

c. The Hyperglycaemic state weakens the immune function which protects the body from bacterial infection, leading to easy development and progression of periodontal disease.

d. Education patients with diabetes should include explanation of the implications of diabetes, particularly poorly controlled diabetes, for oral health, especially gum diseases.

e. Emergency Management: staff should be trained to recognize the signs and treat patients who have hypoglycaemia. In case of loss of consciousness occurs, a glucometer should be used to test patient blood glucose levels, followed by a protocol for managing hypoglycaemia in both conscious and unconscious patients.

f. If a patient has not been seen by a medical provider recently and has obvious signs and symptoms of Diabetes (more intense than usual), a referral to the relevant medical department is required.

5.3.2. **Cancer**

a. Obtain updated medical, social, and dental history including symptoms of oral pain or discomfort. Oral habits and

lifestyle, with particular reference to quantity, frequency and duration of tobacco, alcohol consumption or chewing paan.

b. Perform visual screening examination including extra oral examination by inspecting the head and neck region for asymmetry, tenderness or swelling.

c. Palpate the submandibular, neck and supraclavicular regions for lymph nodes, paying particular attention to size, number, tenderness and mobility.

d. Intraoral examination: Systematically inspect and palpate all oral soft tissues, paying particular attention to the high-risk sites for the development of oral cancer including the lateral and ventral aspects of the tongue, floor of mouth and the soft palate complex.

e. Lesion inspection: Evaluate the specific characteristics of each lesion with particular attention to size, colour, texture and outline. Particular attention to predominantly white, red and white, ulcerated and/or indurated lesions is indicated.

f. Immediate referral of the patient to an oral surgeon in case of suspicious lesions.

g. Documentation: At the time of initial assessment, it is recommended that an image of any clinically visible lesion be

obtained, taking into account patient confidentiality and appropriate consent.

5.3.3. **Cardiovascular (Heart) Disease (CVD)**

a. Review the patient's medical history, take vital signs, and check the blood pressure.

b. Record current medications which the patient is taking and allergies to any drugs and also any potential drug interactions and side effects.

c. Risk factors assessment including high blood pressure, smoking, high cholesterol, limited physical activity, and obesity.

d. Educate patients who are at risk about the association between CVD and periodontal disease, have early assessment to identify risk factors, and receive early dental and medical evaluations.

e. If a patient has not been seen recently by a medical provider and has obvious signs and symptoms of aggravated CVD, a referral to the relevant medical department is required.

5.3.4. **Chronic Obstructive Pulmonary Disease COPD/Asthma**

a. Assessment of patient medical history including a list of current medications and medication allergies.

b. Assessment of oral manifestations of drugs used COPD/Asthma including xerostomia, and risk factors assessment including smoking.

c. People suffering from certain respiratory diseases may be using anti-inflammatory medications, which means they can experience dry mouth, increase in plaque and gingivitis development, and be more susceptible to yeast and fungal infections.

d. Use shorter visits and upright chair position.

e. Patient education includes strategy to help a patient quit smoking.

f. If a patient has not been seen by a medical provider recently and has obvious aggravated signs and symptoms of COPD, a referral to the relevant medical department may be required.

KEY PERFORMANCE INDICATORS (KPIs)

1. Patient Happiness: Overall Assessment	
DHA Pillar	Patient Happiness
Indicator Name	Overall Assessment
Measure Type	Outcome
Data Source	Survey data
Measure Description	People who had a very favorable overall assessment of the facility during measurement period
Measure Denominator	All survey respondents who meet inclusion criteria
Measure Numerator	Survey respondent whose overall assessment of the facility was very high - patients with the highest possible score (scale has 2-7 options) or the two highest options (scale has 8+ options)
Measure Inclusion Criteria	Total number of valid responses to surveys that ask a patient to give their overall assessment of a facility
Measure Exclusion Criteria	None
Source	DHA
International Benchmark	None: Dubai facility surveys are not sufficiently uniform to allow benchmarking
Higher is Better	Yes
Risk Adjust This Measure	No

2. Patient Happiness: Recommendation to Others	
DHA Pillar	Patient Happiness
Indicator Name	Recommendation to Others
Measure Type	Outcome
Data Source	Survey data
Measure Description	Percentage of patients who were very likely to recommend the facility to other people during measurement period
Measure Denominator	All survey respondents who meet inclusion criteria
Measure Numerator	Survey respondent whose recommendation was very high - patients with the highest possible score (scale has 2-7 options) or the two highest options (scale has 8+ options)
Measure Inclusion Criteria	Total number of valid responses to surveys that ask whether the patient would recommend the facility to others
Measure Exclusion Criteria	None
Source	DHA
International Benchmark	None: Dubai facility surveys are not sufficiently uniform to allow benchmarking
Higher is Better	Yes
Risk Adjust This Measure	No

3. Patient Happiness: Doctors Made Sure Patient Understood All Information	
DHA Pillar	Patient Happiness
Indicator Name	Doctors Made Sure Patient Understood All Information
Measure Type	Outcome
Data Source	Survey data
Measure Description	Percentage of patients who answered favorably ('yes') that doctors made sure he/she understood all information
Measure Denominator	All survey respondents who met inclusion criteria
Measure Numerator	Survey respondent indicated 'yes,' doctors made sure that the patient understood all information
Measure Inclusion Criteria	Valid response to the survey question ('yes' or 'no')
Measure Exclusion Criteria	None
Source	DHA
International Benchmark	None: Dubai facility surveys are not sufficiently uniform to allow benchmarking
Higher is Better	Yes
Risk Adjust This Measure	No

4. Patient Safety: Rate of Medication Error	
DHA Pillar	Patient Safety
Indicator Name	Rate of Medication Error
Measure Type	Outcome
Data Source	Internal facility records, reports, or survey data
Measure Description	Rate of prescriptions per 100,000 with a dispensing error during measurement period
Measure Denominator	Number of medication prescriptions during measurement period
Measure Numerator	Number of prescriptions in which a medication error occurs (e.g. dispensing error, prescribing error, administering and preparing error, patient compliance error, vaccine error, administering a medicine for a known allergy patient, dose-related adverse drug reaction)
Measure Inclusion Criteria	All filled prescriptions
Measure Exclusion Criteria	Unsafe condition and near miss incident, adverse drug reactions
Source	TEC required measures http://apps.who.int/iris/bitstream/10665/252274/1/9789241511643-eng.pdf
International Benchmark	2.28 Per 100,000 (in the U.S.) Source: https://www.nationwidechildrens.org/newsroom/news-releases/2017/07/study-finds-rate-of-medication-errors-resulting-in-serious-medical-outcomes-rising . One medication error occurs for every five doses given in US hospitals and 1-2% of patients admitted to US hospitals are harmed by medication errors. Source: http://stateclaims.ie/wp-content/uploads/2017/11/Medication-Incidents-Report-2016.pdf
Higher is Better	No

Risk Adjust This Measure	No
5. Patient Safety: Rate of Medical Error	
DHA Pillar	Patient Safety
Indicator Name	Rate of Medical Error
Measure Type	Outcome
Data Source	Internal facility records, reports, or survey data
Measure Description	Rate of medical errors (errors in diagnosis, medication, surgery, equipment use, lab findings interpretation) per 100,000 patients in measurement period
Measure Denominator	All qualifying patients in measurement period
Measure Numerator	Medical errors as defined through proven reports (e-medical systems) during measurement period
Measure Inclusion Criteria	All patients with at least one medical encounter in measurement year
Measure Exclusion Criteria	None
Source	TEC required measures http://apps.who.int/iris/bitstream/10665/252274/1/9789241511643-eng.pdf
International Benchmark	To be discussed with DHA
Higher is Better	No
Risk Adjust This Measure	No

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APPENDICES

APPENDIX 1: DENTAL REFERRAL FORM FOR THE ELDERLY

Patient Name: First: _____ Last: _____

Age: _____

Insurance ID #: _____ Date: _____

Medical History: _____

Social history (tobacco/smoking/alcohol): _____

Medications: _____

Oral Health Assessment Questions:

1.	Do you have any of your natural teeth?	☐
2.	Have you had pain in your mouth while chewing?	☐
3.	Have you lost any fillings, or do you need a dental visit for any other reason?	☐
4.	Have you avoided laughing or smiling?	☐
5.	Have you had to interrupt meals?	☐
6.	Have you had difficulty relaxing?	☐

APPENDIX 2: ORAL HEALTH SCREENING FORM FOR THE ELDERLY

Patient ID: _____

Patient Name: First: _____ Last:_____

Age: _____

Health Insurance ID #: _____ Date: _____

Medical History: _____

Social history (tobacco/smoking/alcohol): _____

Medications: _____

Dentures:

Complete			
Upper arch	☐	Lower arch	☐
Partial			
Upper arch	☐	Lower arch	☐

Chart for program use (**D** = decayed, **F** = filled, **M** = missing due to disease, **N** = no treatment recommended, **Mo**= mobile tooth, **Fu**=furcation involvement, **I** =implants

			18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
Dentition status	Root																	
	Crown	O																
		M																
		D																
		B																
		L/P																
Treatment																		

			48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
Dentition status	Root																	
	Crown	O																
		M																
		D																
		B																
		L/P																
Treatment																		

Note: mobile tooth can be defined as the one with more than 2 mm mobility.

Calculus index

16	11	26
46	**31**	**36**

Bleeding on probing

16	11	26
46	**31**	**36**

Note: Please use second molar if first is absent or has been extracted.

Scores	Criteria
0	No calculus present.
1	Supragingival calculus covering not more than third of the exposed tooth surface.
2	Supragingival calculus covering more than one third but not more than two thirds of the exposed tooth surface or the presence of individual flecks of sub gingival calculus around the cervical portion of the tooth or both.
3	Supragingival calculus covering more than two third of the exposed tooth surface or a continuous heavy band of sub gingival calculus around the cervical portion of the tooth or both.

Periodontal pockets

16	11	26
46	**31**	**36**

Gingival recession

16	11	26
46	**31**	**36**

Note: Please use second molar if first is absent or has been extracted

Criteria for examination and recording of the pockets:

2: pocket ≥ 5 mm

1: pocket 4-5 mm

Oral Hygiene	Good ☐ Fair ☐ Poor ☐
Halitosis	☐
Alveolar ridge resorption	Upper arch ☐ Lower arch ☐
Soft tissue lesions	☐
Tooth wear	Abrasion ☐ Attrition ☐ Erosion ☐ Abfraction ☐

Diagnosis:

_____

_____

Treatment advised:

_____

_____

Any comments:

_____

_____

Signature of the GP:

_____

APPENDIX 3: ORAL HEALTH SCREENING FORM FOR PEOPLE OF DETERMINATION

Medical History (to be asked from the caregiver)

Notable Issues			
Physical or sensory impairment	☐ Sight	☐ Hearing	☐ Physical
Intellectual impairment	☐ Learning	☐ Behaviour	
Adaptive aids	☐ Yes	☐ No	
Communication method	☐ Sign Language	☐ Verbal	☐ Non-verbal
	☐ Blinking	☐ Communication board	☐ Electronic device
Swallowing problem	☐ Modified diet	☐ Thickened drinks	☐ Supported feeding
Falls risk	☐ Yes	☐ No	
Medications	☐ Prescribed	☐ Self-administered	
Allergies/ADR	☐ Allergies	☐ Adverse Drug Reaction	☐ others
Other significant risks	☐ Yes	☐ No	

Intraoral Screening		
Edentulous	☐ Yes	☐ No
Untreated Decay	☐ Yes • Anterior(s) • Premolar(s) Molar(s)	☐ No
Erosion	☐ Yes	☐ No
Filled Teeth	☐ Yes	☐ No
Missing Teeth	☐ Yes	☐ No
Oral Injury	☐ Yes	☐ No
Fluorosis	☐ Yes	☐ No

Developmental anomalies (Delayed eruption and malocclusion)	☐ Yes	☐ No
Dental History		
1. How often do you clean your mouth?	☐ Once or more a day ☐ 2 to 6 times per week ☐ Once per week ☐ Less than once per week ☐ Not sure	
2. Home Care Effectiveness	☐ Good ☐ Fair ☐ Poor	
3. Do you have pain inside your mouth?	☐ Yes ☐ No • Teeth Others_____	

Initial Periodontal Exam			
Gingival Inflammation	☐ Slight	☐ Moderate	☐ Severe
Soft Plaque Build-up	☐ Slight	☐ Moderate	☐ Heavy
Hard Calculus Build-up	☐ Light	☐ Moderate	☐ Heavy
Stains	☐ Light	☐ Moderate	☐ Heavy
Periodontal condition	☐ Good	☐ Fair	☐ Poor

This Section to be filled when the patient is cooperative and allows comprehensive exam

OCCLUSION:	☐ Class 1	☐ Class II	☐ Class III	
T.M.J. EXAM:	☐ Pain	☐ Popping	☐ Deviation	☐ Tooth Wear

Presence of any extraoral anomalies: ☐ Yes ☐ No

If yes, please report----------

Mucogingival defects: ☐ Yes ☐ No

Gingival Bleeding Index	
SCORE	**CRITERIA**
+	Appearance of bleeding within 10 seconds of probing gingival crevice gently with a periodontal probe
-	Absence of bleeding.

Bleeding on probing

16	11	26
46	31	36

Calculus

16	11	26
46	31	36

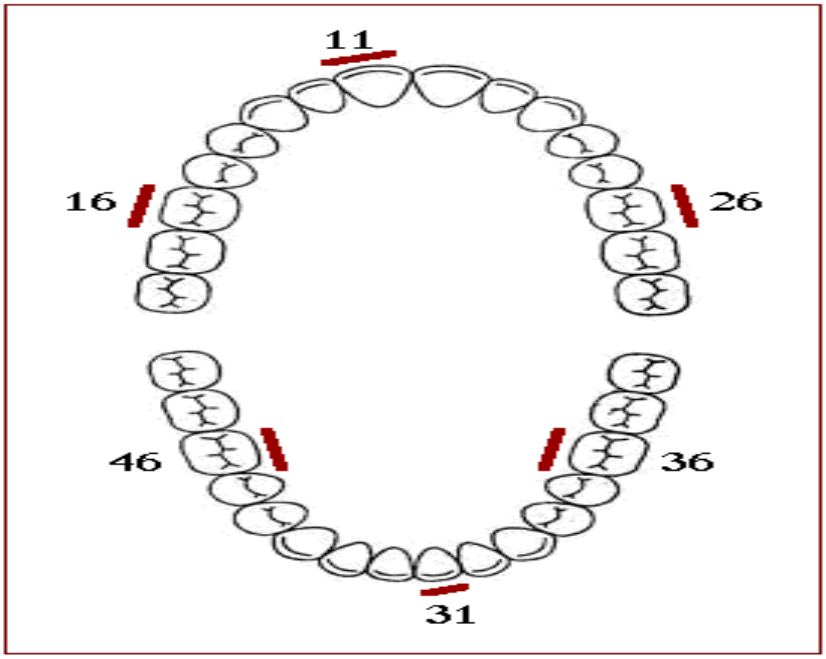


Chart for program use (**D** = decayed, **F** = filled, **M** = missing due to disease, **S** = sealant present, **PS** = prescribe sealant, **R** = Simple restoration, **N** = no treatment recommended, **U**= un-erupted)

				55	**54**	**53**	**52**	**51**	**61**	**62**	**63**	**64**	**65**			
	18	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**
Dentition status																
Treatment																

				85	**84**	**83**	**82**	**81**	**71**	**72**	**73**	**74**	**75**			
	48	**47**	**46**	**45**	**44**	**43**	**42**	**41**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**
Dentition status																
Treatment																

Plaque/Debris

16	11	26
46	31	36

SCORES	CRITERIA
0	No calculus present
1	Supragingival calculus covering not more than third of the exposed tooth surface.
2	Supragingival calculus covering more than one third but not more than two thirds of the exposed tooth surface.
3	Supragingival calculus covering more than two third of the exposed tooth surface.
SCORES	**CRITERIA**

0	No plaque
1	A film of plaque/debris adhering to the free gingival margin and adjacent area of the tooth. The plaque may be seen in situ only after application of disclosing solution or by using the probe on the tooth surface.
2	Moderate accumulation of soft deposit s within the gingival pocket, or the tooth and gingival margin which can be seen with the naked eye.
3	Abundance of soft matter within the gingival pocket and/or on the tooth and gingival margin.

APPENDIX 4: DENTAL SERVICES REFERRAL FORM FOR PEOPLE OF DETERMINATION

Dental services referral form – for people of determination					
Date:					
Title:	**Surname**	**Given name**	**Date of birth:**	**Address**	**Contact no.**

Referring Physician

Provider's Name: _____

Specialty: _____

Entity: _____

Phone: _____ **Fax:** _____

Email: _____

Address: _____

City: _____ **State:** _____ **Zip Code:** _____

Provider's Signature: _____ **Date:** _____

CLINICAL DIAGNOSIS

REASON FOR REFERRAL

☐ Consultation/Dental clearance

☐ Poor oral hygiene

☐ Bruxism

☐ High risk for dental/oral trauma

☐ Decay

☐ Gum problems

☐ Other please specify----------

Medications			
List of all current medications and herbal supplements.			
Attach for more			
Name:	**Dose: (mg)**	**Frequency:**	**For what condition?**

1. Any drug allergies? ☐ No ☐ Yes
   If yes, please explain: _____
2. Patient's Mobility Status: ☐ Ambulant ☐ Stretcher/Bed Patient ☐ Wheelchair
3. What is your medical evaluation with regard to the patient's ability to undergo oral health care that may include dental cleaning, restorations, root canals, and/or oral surgery under local anesthesia? (may include use of nitrous oxide)
4. Do you anticipate the patient needing oral sedation/IV sedation for dental treatment? ☐ No ☐ Yes
5. Do you recommend antibiotic pre-medication prior to dental treatment? ☐ No ☐ Yes
   If yes, please explain the condition, reason, type, and dosage: _____
6. Does the patient have a legal guardian or medical power of attorney? ☐ No ☐ Yes
   If yes, please provide legal guardian/representative's name and attach any supporting documentation on file:

APPENDIX 5: EDUCATIONAL MATERIALS FOR PEOPLE OF DETERMINATION

DUBAI HEALTH AUTHORITY

Oral Health Care for People of Determination

Prevention of oral diseases (tooth decay and gum problems) for care-recipients is a challenging problem for caregivers and dental professionals and requires good teamwork. Providing dental care to patients with disabilities is important and may require modifications to the traditional treatment plan. Without access to professional dental care, patients with special needs are at risk of oral disease and a reduced quality of life.

Dental Health Care Checklist

- ✓ Eat a healthy diet; **limit sugary food and drink.**
- ✓ **Brush twice a day** with fluoride toothpaste and soft brush.
- ✓ **Look for early signs of gum disease:**
  - Gums that bleed easily.
  - Persistent bad breath.
  - Trouble chewing.
- ✓ **Drink water after meals** to rinse mouth.
- ✓ Be sure to **remove all plaque** on and between the teeth, and at the gum line. **Flossing is important.**
- ✓ **Waterpiks and electric toothbrushes** are also known to reduce plaque.
- ✓ **Clean dentures (false teeth) after each meal** with soap using a toothbrush and leave them in water overnight.
- ✓ **Look for any changes** in the mouth or behavior when brushing teeth or at meal times.
- ✓ **Visit the dentist regularly;** sooner if any changes in the mouth or behavior are noted.
- ✓ Ensure your dentist is aware of your **medical history and any medication you're taking** at and each dental visit (including over-the-counter medications).
- ✓ **Infection and trauma cases should be managed** as soon as possible.

Figure 1
Mouth prop formed by taping tongue depressors together

Figure 2
Toothbrush handle bent to create a better angle

Dental Health Care Checklist

- Work in pairs.
- Use mouth props to keep the mouth open (Figure 1).
- Adapt the toothbrush handle to create a better angle to clean the inner surfaces of the lower front teeth (Figure 2 & Figure 3).
- The mouth must be cleaned after each meal or dose of medicine by sweeping the mouth with a finger wrapped in gauze or using a disposable swab.

Figure 3
Examples of toothbrushes with adapted handles

DUBAI HEALTH AUTHORITY

Toothbrushing Positions for People of Determination

There are several positions you can use to clean a person's teeth. Remember that supporting the head, being able to see properly inside the mouth and ease of manipulation are important. Work with your dental professional to find the safest, most comfortable position for you and the person you are caring for.

In a Wheelchair

For individuals in a wheelchair there are two very simple positions that will greatly improve your ability to brush his or her teeth.

Method 1

- Stand behind the wheelchair.
- Support his or her head against your body. You can even use a pillow to improve comfort.

Method 2

- Sit in a chair behind the care-recipient's wheelchair.
- Lock the wheels of the wheelchair.
- Tilt the wheelchair back so that the care-recipient's head is resting in your lap.

Using a Beanbag Chair

- For a position that is most relaxing for the care-recipient you can place them on a beanbag chair.
- You can sit on a chair or floor so that their head is on your lap.
- Use your arm to support their head and shoulders.
- Have another person hold down his or her arms or legs if they tend to move around a lot.

DUBAI HEALTH AUTHORITY

Toothbrushing Positions for People of Determination

Using the Floor

- Place the care-recipient on the floor laying down.
- Place his or her head on a pillow.
- Kneel behind the care-recipient and support the head using your arm.
- Have another person hold down his or her arms or legs if they tend to move around a lot.

Using a Sofa or Bed

- Place the care-recipient on a bed or sofa where they can lay down with his or her head in your lap.
- Use your arm to support their head and shoulders.
- Have another person hold down his or her arms or legs if they tend to move around a lot.

Sitting in a Chair

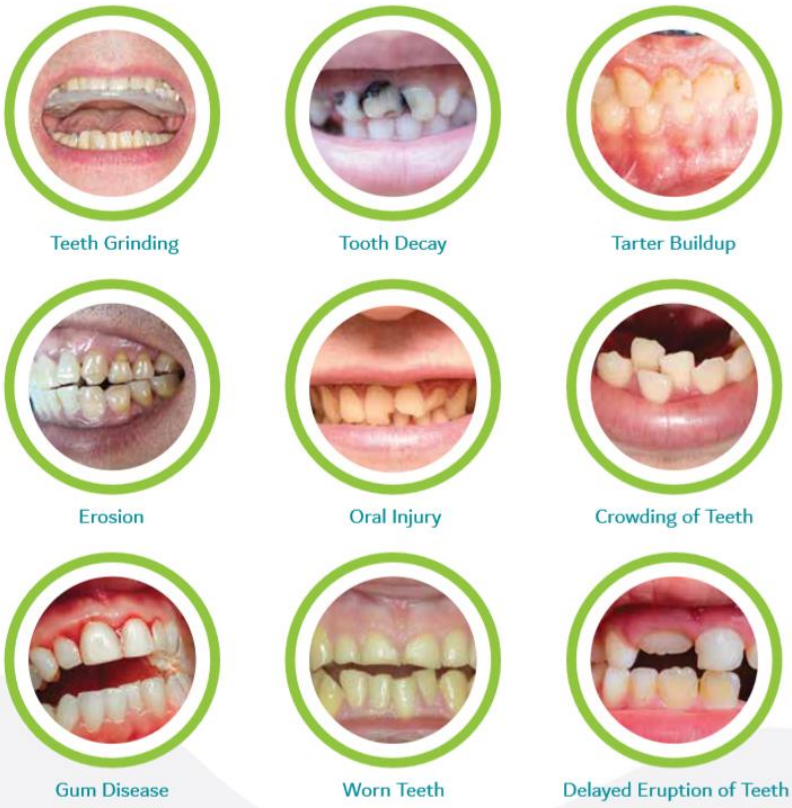
- Sit on a chair and place the care-recipient on the floor.
- Place their head against your knees.
- Have another person hold down his or her arms or legs if they tend to move around a lot.

Oral Health Care for People of Determination

Individuals with special health care needs report poorer oral hygiene and periodontal status, more untreated caries and fewer remaining teeth. Poor oral hygiene may be due to difficulty in performing self-care or take medications that cause negative oral health side effects.

Common Oral Health Conditions

There are many common conditions in the disabled population. Not every disability will have the same problems regarding oral health. There are different concerns that are specific to certain disabilities. For instance, grinding teeth (Bruxism) is very common in people with cerebral palsy. Below are examples of common oral health conditions among individuals with disabilities.



APPENDIX 6: TREATMENT PLANNING FOR DENTAL GENERAL PRACTITIONERS

Guidelines on Setup of Treatment Planning for Dental General Practitioners				
Examination and Diagnosis (Common for all restorative specialties)	▪ Medical history (new or update), ▪ Chief complaint ▪ Intraoral/extraoral Examination, ▪ Dental charting (caries extent and activity, non-carious) ▪ Periodontal charting (probing depth, clinical attachment level, bleeding on probing, plaque index, mobility, furcation involvement)	▪ Risk assessment (caries, diet analyses, oral hygiène routine, habits, motivation … etc.) ▪ Diagnostic tests (sensibility tests, percussion, palpation) ▪ Radiographic investigation ▪ occlusal analysis	▪ Pulpal diagnosis ▪ Caries diagnosis ▪ Restorability ▪ Periodontal diagnosis ▪ Prosthodontic diagnosis	▪ Treatment planning
Phase	**Examples in Periodontology**	**Examples in Restorative Dentistry**	**Examples in Endodontics**	**Examples in Prosthodontics**
Immediate phase (Urgent Phase)	▪ Extraction of a third-degree mobile tooth	▪ Fractured anterior tooth/restoration ▪ Cracked tooth syndrome ▪ ▪	▪ Pulp extirpation of acute symptoms of pulpitis or apical periodontitis ▪	▪ Lost anterior crown, ▪ Cracked or broken anterior tooth, ▪ Fractured removable prosthesis.
Disease Control phase	▪ Oral hygiene instructions ▪ Supra gingival scaling and polishing ▪ Sub gingival scaling ▪ Root debridement	▪ Partial or complete Removal of carious lesions and defective restorations, followed by provisional	▪ Vital pulp therapy (direct ▪ and indirect pulp capping) ▪ Medication and waiting for	▪ Re-contouring and polishing of over-contoured restorations ▪ Constructing fixed or removable

		restoration (caries control procedures) ▪ Dietary/habit modification ▪ Oral hygiene measures ▪ Non-surgical caries management*	▪ symptoms to subside ▪ Endodontic-Periodontal lesions ▪ (stabilization) ▪ Obturation and temporization	provisional restorations ▪ Changes to occlusion and vertical occlusal dimension
Advanced phase	▪ Revaluation (motivation, risk re-assessment) ▪ Surgical periodontal therapy ▪ Orthodontics	▪ Revaluation (motivation, risk re-assessment) ▪ Surgical periodontal therapy ▪ Orthodontics	▪ Revaluation (motivation, risk re-assessment) ▪ Endodontic surgery	▪ Revaluation (motivation, risk re-assessment) ▪ Oral surgical procedures (strategic extractions) are scheduled first, ▪ Pre-prosthetic surgery
Definitive phase		▪ Direct and indirect permanent restorations		▪ Fixed and/or removable prosthodontics ▪ Implant-supported prosthesis
Review and Maintenance phase	▪ Oral hygiene re-evaluation and motivation, ▪ Periodontal charting, ▪ Scaling and polishing	▪ Oral hygiene re-evaluation and motivation, ▪ Dental charting ▪ Bitewings* ▪ Revaluation of restorations	▪ Radiographic follow-up	▪ Oral hygiene re-evaluation and motivation ▪ Revaluation of restoration

APPENDIX 7: PARENT/GUARDIAN CONSENT FORM (ENGLISH/ARABIC)

Dear Parent/ Guardian,

Oral health is an important part of children's overall health and is a critical component in the child's ability to learn and succeed in school. Dental Services Department, Dubai Health Authority will be providing a dental check-up. Fluoride topical application, preventive, and curative treatments may also be undertaken in compliance with DHA and WHO regulations. If you do/not wish your child to participate, please fill out and return this form to your child's school. If your child does participate, a copy of the results of the screening will be sent home with the child.

Thank you for your cooperation!

Sincerely,

Name of Dentist:

_____

I **agree** to have my child participate in:

☐ Dental check-up ☐ Fluoride varnish ☐ Pit and fissure sealant (preventive filling)

☐ Tooth filling

☐ **I do not agree** to have my child participate in the dental check-up

Name of Student: _____Grade: _____

Name of Parent/Guardian: _____ Phone: _____

Parent/Guardian signature: _____Date: _____

موافقة ولي الامر

ولي امر الطالب/ الطالبة،

تحية طيبة وبعد .....

صحة الفم والأسنان جزء هام من الصحة العامة للأطفال، وهو عنصر اساسي في قدرة الطفل على التعلم والنجاح في المدرسة.

تقوم ادارة خدمات طب الأسنان بهيئة الصحة في دبي بفحص الأسنان، ووضع الفلوريد الموضعي الوقائي والقيام بحشوات وقائية وعلاجية للطلاب المسجلين في المدرسة، متبعين المعايير العالمية لصحة الفم والاسنان. وسيتم الكشف على جميع الطلاب ما لم يكن ولي الأمر لا يرغب بمشاركة ابنه/ ابنته

إذا كنت ترغب / لا ترغب مشاركة ابنك/ ابنتك، يرجى ملء وإعادة النموذج في أسفل الصفحة.

إذا كان طفلك سيشارك، سيتم إرسال نسخة من نتائج فحص مع الطفل.

شكرا لتعاونكم،

ادارة خدمات طب الاسنان

هيئة الصحة بدبي

أنا **اوافق** أن يشارك طفلي في:

☐ فحص الأسنان ☐وضع مادة الفلورايد على الاسنان ☐الحشوات الوقائية ☐ حشوات علاجية

☐ لا أوافق على مشاركة طفلي في فحص الأسنان

اسم الطالب/ الطالبة: _____ المرحلة الدراسية:_____

اسم ولي الامر:_____ رقم الهاتف:_____

توقيع ولي الامر: _____

التاريخ: _____

APPENDIX 8: ORAL HEALTH SCREENING FORM FOR CHILDREN

Patient Details	
School:	
First Name:	**Last Name:**
Age:	
Insurance ID #:	**Date:**
Medical History if relevant:	

Chart for program use (**D** = decayed, **F** = filled, **M** = missing due to disease, **S** = sealant present, **PS** = prescribe sealant, **R** = Simple restoration, **N** = no treatment recommended, **U**= un-erupted)

				55	**54**	**53**	**52**	**51**	**61**	**62**	**63**	**64**	**65**			
	18	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**
Dentition status																
Treatment																

				85	**84**	**83**	**82**	**81**	**71**	**72**	**73**	**74**	**75**			
	48	**47**	**46**	**45**	**44**	**43**	**42**	**41**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**
Dentition status																
Treatment																

Plaque	
UR	UL
LR	LL

Calculus	
UR	UL
LR	LL

SCORES	CRITERIA
0	No calculus present
1	Supragingival calculus covering not more than third of the exposed tooth surface.
2	Supragingival calculus covering more than one third but not more than two thirds of the exposed tooth surface.
3	Supragingival calculus covering more than two third of the exposed tooth surface.

SCORES	CRITERIA
0	No plaque
1	A film of plaque adhering to the free gingival margin and adjacent area of the tooth. The plaque may be seen in situ only after application of disclosing solution or by using the probe on the tooth surface.
2	Moderate accumulation of soft deposit s within the gingival pocket, or the tooth and gingival margin which can be seen with the naked eye.
3	Abundance of soft matter within the gingival pocket and/or on the tooth and gingival margin.

Oral Hygiene: ☐ Good ☐ Fair ☐ Poor	
Malocclusion: ☐ Present ☐ Not present	
Dental Trauma: ☐ Present ☐ Not present	
Indicate tooth number if present:_____	
Soft tissue lesions: ☐ Present ☐ Not present	
Referral: None -T0/T1 Not urgent-T2 Urgent-T3	

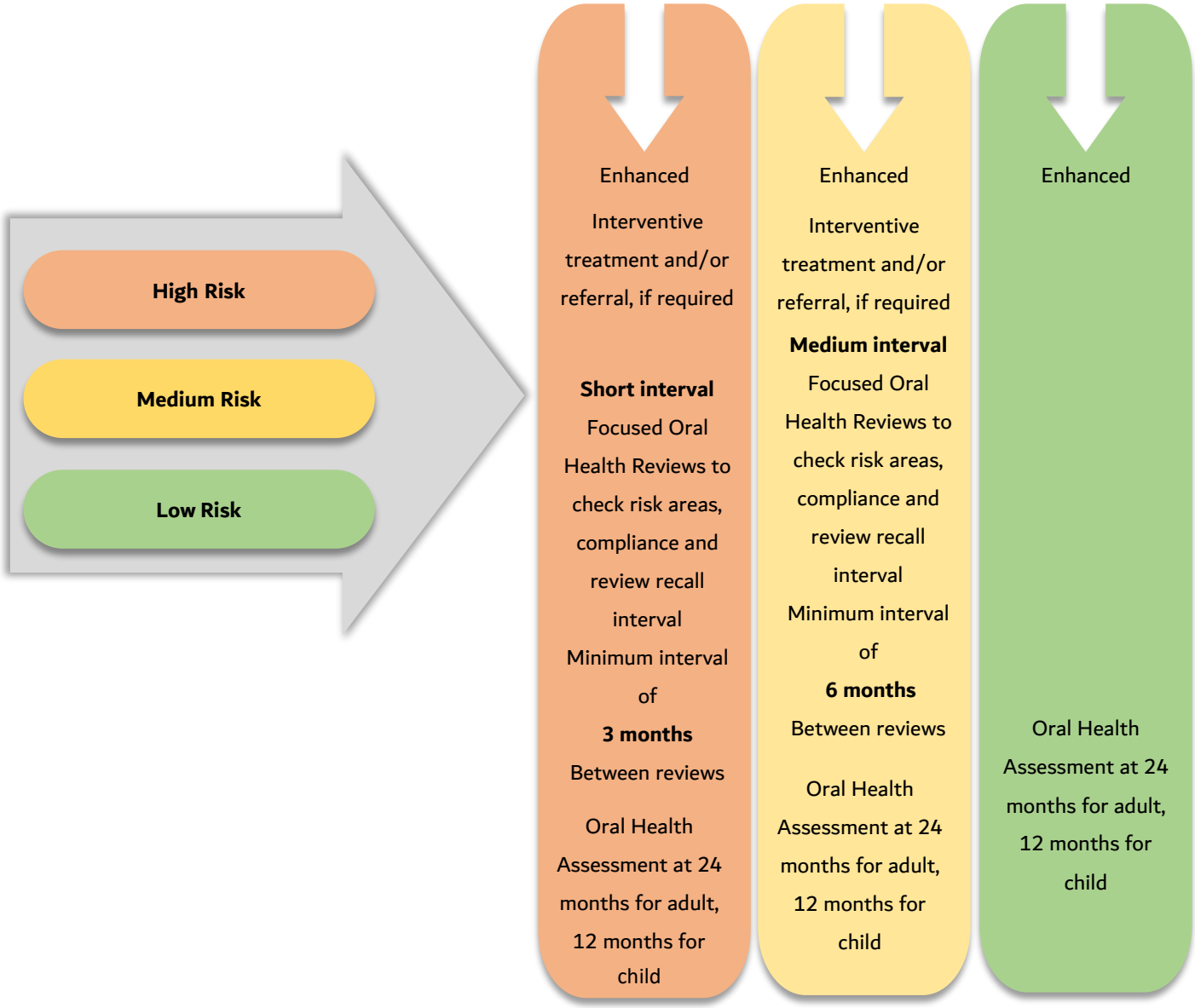
Number of 1st molars sealed: (0 - 4) =_____	Number of 2nd molars sealed: (0 - 4) =_____	Number of other permanent teeth sealed: (0 - 8) =_____
Number of primary teeth sealed: (0 - 8) =_____	Fluoride varnish provided: ☐ Yes ☐ No	Prophylaxes provided: ☐ Yes ☐ No

Signature of the GP: _____

Signature of the Dental Hygienist: _____

APPENDIX 9: TRAFFIC LIGHT APPROACH

Patients are then placed in a screening process to categorize them based on a traffic signal methodology, where patients are divided into high risk, medium risk and low risk patients.



1. Treatment plans are placed based on the categories of the patients in consultation with the dental team. Red category patients are given referrals to dental clinics where appropriate. Yellow category patients are to be treated within the mobile dental van and green categories are to be seen by the dental hygienists for preventive measures.
2. Arrangements should be made with the coordinator and the center for people of determination (location could be community center, rehab centers or others) to set a schedule for the patients to be treated within the yellow and green categories.
3. On the day of the treatment patients attend with their caregivers and consents a group of the patients are given oral health instructions by demonstrating the proper methods for oral hygiene with the participation of their families, parents or care givers.
4. Scheduled patients are then taken to the mobile dental van to start the treatment. Note that it is expected that there may be more than one visit for each patient to familiarize with the team, environment and equipment used to allow the start of the treatment. Behaviour management methods are used such as:
    a. Non-threatening environment
    b. Attitude of the team towards the patient
    c. Tell, show, do technique OR Tell, feel, do for visual impaired
    d. Proper timings
    e. Stabilization whether psychological, pharmacological or physical

Treatment starts based on the treatment plan placed and several appointments are scheduled with the caregivers to complete the treatments. Transformation of patients from yellow category to the

green category is one of the main objectives to provide the patient with a healthy oral cavity and equipped them with the proper tools to maintain self-care.

APPENDIX 10: SCREENING RESULT (ENGLISH /ARABIC)

Screening Result form (*to be returned to the school and placed in student medical file*)

Child's Name: _____

Dear Parent or Guardian,

Your child has received a dental screening at school today. The results of the screening indicate that:

(*Check all that apply*)

☐ Your child has no obvious dental problems.

☐ Your child should be evaluated for preventive care (cleaning) or sealants.

☐ Your child appears to have some dental problems which should be evaluated by a dentist. Please make an appointment at your earliest convenience so that your child can receive a complete examination. Your dentist will determine, what, if any, treatment is needed.

☐ Your child appears to have an URGENT dental need. Please contact a dentist as soon as possible for a complete examination.

Additional Comments

Parent: Please take this referral to the dentist if it is recommended above. Return to the school nurse with dentist's signature when work is completed.

Child's name: _____

Dentist Signature: _____

Date: _____

نتائج الفحوصات

اسم الطالب\ الطالبة:_____

عزيزي ولي الامر،

لقد تم الكشف عن اسنان طفلك اليوم والنتائج كالاتي

(*النتائج والتوصيات*)

☐ ابنك/ ابنتك ليس لديه/ لديها أي من أمراض الأسنان واللثة ولكن نوصي بالمتابعة الدورية (كل ستة أشهر) مع طبيب الأسنان.

☐ابنك/ ابنتك تظهر عليه/عليها علامات أمراض الأسنان واللثة لذلك يرجى التكرم بتسجيل موعد مع طبيب الأسنان لتلقي الفحص الشامل والعلاج عند الحاجة.

☐ ابنك/ ابنتك يعاني/تعاني من وجود أمراض الأسنان واللثة مما يستوجب ضرورة العلاج. الرجاء زيارة طبيب الأسنان في أسرع وقت ممكن للحصول على الفحص الشامل والعلاج اللازم.

ملاحظة الى ولي الامر

يرجى أخذ هذه التوصيات الى طبيب الأسنان في حالة الاشارة الى مشكلة في اسنان طفلك. الرجاء اعادة هذا الطلب إلى ممرضة المدرسة مع توقيع طبيب الأسنان عند اكتمال العلاج المطلوب.

اسم الطالب\ الطالبة: _____

اسم وتوقيع طبيب الاسنان المعالج: _____

التاريخ: _____

APPENDIX 11: PARENTS ANNUAL QUESTIONNAIRE

1. Kindly answer the following questions concerning the Oral health	
Name: Nationality:	
School Name: Gender: Age:	
Date:	
2	**How would you describe the health of your child teeth and gums?** **Teeth** **Gums** Excellent ☐ 1 ☐ 1 Very good ☐ 2 ☐ 2 Good ☐ 3 ☐ 3 Average ☐ 4 ☐ 4 Poor ☐ 5 ☐ 5 Very poor ☐ 6 ☐ 6 Don't know ☐ 9 ☐ 9
3	**How often during the past 6 months did your child have toothache or feel discomfort?** Often ☐ 1 Occasionally ☐ 2 Rarely ☐ 3 Never ☐ 4 Don't know ☐ 9
4	**How often did your child visit the dentist during the last 6 months?** (One answer only) Once ☐ 1 Twice ☐ 2 Three times ☐ 3 Four times ☐ 4 More than four times ☐ 5 I had no visit to dentist during the last 12 months ☐ 6 I have never received dental care/visited a dentist ☐ 7 I don't know/don't remember ☐ 8
5	**How often does your child clean his/her teeth?** (One answer only) Never ☐ 1 Occasionally ☐ 2 Once a day ☐ 3 Twice a day ☐ 4

6	**How often does your child eat or drink any of the following foods, even in small quantities?** (Read each item)				
		Several times a week	**Once a week**	**Occasionally**	**Never**
	1. Fresh fruit.....	☐	☐	☐	☐
	2. Biscuits, cakes, buns etc.....	☐	☐	☐	☐
	3. Soft drinks.....	☐	☐	☐	☐
	4. Sweets/candy.....	☐	☐	☐	☐
	5. Other drinks containing sugar	☐	☐	☐	☐
That completes our questionnaire. Thank you very much for your cooperation!					

APPENDIX 12: DENTAL REFERRAL FORM FOR CHILDREN

Patient's Name: _____

Age: _____ Phone: _____

School Name: _____

Parent's Name: _____

Special Health Concerns: _____

Patient Insurance information: _____

Permanent Teeth															
Upper Right								**Upper Left**							
18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
Lower Right								**Lower Left**							
Deciduous Teeth															
Upper Right								**Upper Left**							
			55	54	53	52	51	61	62	63	64	65			
			85	84	83	82	81	71	72	73	74	75			
Lower Right								**Lower Left**							

Reason for Referral:

☐ Pain

☐ Trauma

☐ Special Needs

☐ Rampant Caries

☐ Behaviour/Age

☐ Extractions

☐ Pathology

☐ Sedation

☐ General Anesthesia

☐ Interceptive orthodontic treatment

☐ Other; please specify _____

Referring Doctor Information:

☐ X-rays given to parent

☐ X-rays mailed/e-mailed

☐ Needs X-rays

Referring Doctor: _____

Phone: _____

Doctor's Email address: _____

Today's Date: _____

APPENDIX 13: TOOTH BRUSHING MODELS

MODEL A -TOOTH BRUSHING AT A SINK

1. Supervisors should exercise hand hygiene before and after the tooth brushing sessions.
2. Children should collect their toothbrushes from the storage systems.
3. Appropriate amount of toothpaste is used based on age of children (smear layer under 3 years of age and pea size amount for children 3 years and above).
4. A maximum number of two students on each sink is allowed on one turn.
5. Children should always be supervised.
6. Children should not rinse their mouths after tooth brushing as this will decrease the effect of fluoride in the toothpaste.
7. After brushing, children should rinse their toothbrushes with cold running water at the sink and should be supervised that the toothbrush does not touch the sink.
8. Each child should replace their toothbrush in the designated storage system to be air dried.
9. Rough surfaces, including labels on storage systems should be replaced as they are a good environment for the growth of harmful microorganisms.
10. Monitoring of the tooth brushing programs by SHEU should take place twice yearly per school calendar. Monitoring should include observation of the tooth brushing sessions, discussions and feedback of standards with the lead and arrangement of next visit.
11. Tooth brushing timings should be arranged from the educational establishments to fit their timetables and daily schedules.
12. Paper towels or tissues are used to wipe any excess visible drips on the storage system.
13. Supervisors are responsible for rinsing sinks after tooth brushing is complete.

MODEL B-TOOTH BRUSHING IN DRY AREAS

1. Supervisors should exercise hand hygiene before and after the tooth brushing sessions.
2. Children should collect their toothbrushes from the storage systems.
3. Appropriate amount of toothpaste is used based on age of children (smear layer under 3 years of age and pea size amount for children 3 years and above).
4. Children may be seated or standing.
5. After children complete the tooth brushing, they may spit excess tooth paste in a paper towel, or cup and disposed of in proper bins immediately.
6. Toothbrushes can either be:
    - Returned to the designated places in the storage system by each child. The system is then taken to an identified sink area by the supervisor, who is responsible for rinsing each toothbrush individually under cold running water.
    - Rinsed in the identified sink by each child under cold running water and returned to the designated storage system. Supervision is always required to prevent the toothbrush from touching the sink and to be placed in the correct area and form.
7. Rough surfaces, including labels on storage systems should be replaced as they are a good environment for the growth of harmful microorganisms.
    - Monitoring of the tooth brushing programs by SHEU should take place twice yearly per school calendar. Monitoring should include observation of the tooth brushing sessions, discussions and feedback of standards with the lead and arrangement of next visit.
    - Tooth brushing timings should be arranged from the educational establishments to fit their timetables and daily schedules.
8. Paper towels or tissues are used to wipe any excess visible drips on the storage system.
9. Supervisors are responsible for rinsing sinks after tooth brushing is complete.

APPENDIX 14: EXEMPTIONS FROM TOOTH BRUSHING PROGRAMS

1. There are a few medical reasons why children should not participate in supervised tooth brushing programs. In specific cases where there is a medical diagnosis of infection or oral ulceration, children may be temporally excluded from the program. Tooth brushing at home can continue, as this will usually aid healing.
2. If parents inform nursery or school of specific medical conditions (e.g. cystic fibrosis, blood-borne disease viruses) the risk for individual children can be discussed with the school nurse.
3. Ideally are materials used in the tooth-brushing program should be safe and approved.

APPENDIX 15: EDUCATIONAL MATERIAL FOR CHILDREN

DUBAI HEALTH AUTHORITY

Oral Health For Children

Build Habits for a Lifetime

You can help children build good oral health habits at a young age.

Be a role model for healthy teeth and gums by following these easy steps, and help make a child's smile last a lifetime

- Brush thoroughly with fluoride toothpaste at least twice a day, especially after eating breakfast and before bedtime.
- Use a pea-sized amount of toothpaste.
- Floss daily (parents should floss for children under the age of 8).
- Limit the number of times you eat snacks each day.
- Visit the dentist twice a year.

Why Healthy Teeth and Gums are Important

Healthy "oral structures" include firm gums and strong teeth. They are important for children in so many ways!

- **Eating**
  Food is broken down by chewing. Teeth then work along with saliva to break down food even further before swallowing.
- **Speaking**
  Both baby (primary) and adult (permanent) teeth are important for helping children to speak properly and form sounds.
- **Self-Esteem**
  A bright and healthy smile can enhance appearance and increase confidence.
- **Aesthetics**
  Keep teeth looking good- and fresh breath!

Top Toothbrushing Tips to share with kids

- **Brush away plaque** Brush all surfaces of the teeth using a back and forth motion: top, bottom, front, back, inside and outside. Make sure to brush the tongue too.
- **Take care of your baby teeth** They save space for permanent teeth and help them come in straight. Brushing them thoroughly is important.
- **Brush wa-a-ay in the back** Make sure to reach all of your teeth, including those at the very back. This is where the six-year-molars will come in (your first adult teeth).

APPENDIX 16: ORAL HEALTH SCREENING FORM FOR PREGNANT WOMEN

Patient Details	
First Name:	Last Name:
Date:	Age:
Insurance ID #:	

Medical History		
1. When was the last dental visit?		
2. Number of weeks pregnant?		
3. Due date		
4. Any known medical history (diabetes/HTN/OTHERS)		
5. Current Medications		
6. Do you have any dental/oral health problems that you know of?	☐ Yes	☐ No
7. Any known allergies	☐ Yes	☐ No

Screening		
1. Dental Erosion	☐ Yes	☐ No
2. Pregnancy Oral Tumour	☐ Yes	☐ No
3. Tooth Mobility	☐ Yes	☐ No
4. Halitosis (bad breath)	☐ Yes	☐ No

Initial Periodontal Exam			
1. Gingival Inflammation	☐ Slight	☐ Moderate	☐ Severe
2. Soft Plaque Build-up	☐ Slight	☐ Moderate	☐ Heavy
3. Hard Calculus Build-up	☐ Light	☐ Moderate	☐ Heavy
4. Stains	☐ Light	☐ Moderate	☐ Heavy
5. Periodontal condition	☐ Good	☐ Fair	☐ Poor

Chart for program use (**D** = decayed, **F** = filled, **M** = missing due to disease, **S** = sealant present, **PS** = prescribe sealant, **R** = Simple restoration, **N** = no treatment recommended, **U**= un-erupted)

				55	**54**	**53**	**52**	**51**	**61**	**62**	**63**	**64**	**65**			
	18	**17**	**16**	**15**	**14**	**13**	**12**	**11**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**
Dentition status																
Treatment																

				85	**84**	**83**	**82**	**81**	**71**	**72**	**73**	**74**	**75**			
	48	**47**	**46**	**45**	**44**	**43**	**42**	**41**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**
Dentition status																
Treatment																

SCORE	CRITERIA
+	Appearance of bleeding within 10 seconds of probing gingival crevice gently with a periodontal probe
–	Absence of bleeding.

Upper Right Quadrant	Upper Left Quadrant

Lower Right Quadrant		Lower Left Quadrant	
Plaque		**Calculus**	
UR	UL	UR	UL
LR	LL	LR	LL

Scores	Criteria
0	No calculus present
1	Supragingival calculus covering not more than third of the exposed tooth surface.
2	Supragingival calculus covering more than one third but not more than two thirds of the exposed tooth surface.
3	Supragingival calculus covering more than two third of the exposed tooth surface.

Scores	Criteria
0	No plaque
1	A film of plaque adhering to the free gingival margin and adjacent area of the tooth. The plaque may be seen in situ only after application of disclosing solution or by using the probe on the tooth surface.
2	Moderate accumulation of soft deposit s within the gingival pocket, or the tooth and gingival margin which can be seen with the naked eye.

3	Abundance of soft matter within the gingival pocket and/or on the tooth and gingival margin.

APPENDIX 17: DENTAL REFERRAL FORM FOR PRENATAL PROVIDERS

Section A: Prenatal Provider to Complete (Send to Dental Provider)

Patient Referred to: _____ Referral Date: _____

(Dentist Name | Practice)

Patient Information:

Name: _____ _____

(Last) (First)

DOB: ____ / ____ / _____ **Estimated Delivery Date**: ____ / ____ /

Known Allergies and Precautions: (Specify, if any) _____

List of Medications currently being taken by the patient _____

Pregnancy: ☐ Normal ☐ Low-risk ☐ High-risk

Cause for dental referral: ☐ Decay ☐ Bad Breath ☐ Gum disease ☐ Pain

Other (please specify) _____

Dental Procedures:

The following are considered safe during pregnancy. Please check any or all of the procedures that may not be performed.

☐ Dental Prophylaxis ☐ Dental X-ray with Lead Shielding

☐ Scaling and Root Planning ☐ Extraction

☐ Local Anesthetic with Epinephrine ☐ Root Canal Restorations ☐ Fillings

Patient may NOT have: (Specify) _____

(Below are commonly used medications prescribed in dentistry, please check any/all that may not be prescribed)

Medications:

☐ Amoxicillin ☐ Cephalosporin ☐ Clindamycin ☐ Metronidazole

☐ Penicillin ☐ Acetaminophen ☐ Acetaminophen with Codeine

☐ Hydrocodone, or Oxycodone

☐ Others (Specify) _____

REFERRING PRENATAL PROVIDER

Name: _____ Signature: _____

(Please Print)

Date: _____ Phone #: (____) _____

Email: _____ Fax #: (____) _____

SECTION B: DENTAL PROVIDER TO COMPLETE (RETURN TO PRENATAL PROVIDER)

Diagnosis: _____

Treatment Plan: _____

Treatment performed: _____

Medication prescribed: _____

DENTAL PROVIDER

Name: _____ Signature: _____

(Please Print)

Date: _____ Phone #: (____) _____

Email: _____ Fax #: (____) _____

APPENDIX 18: EDUCATIONAL MATERIALS FOR PREGNANT WOMEN

DUBAI HEALTH AUTHORITY

Infant Oral Health while Breastfeeding

Breast-fed milk is not only easier for a baby to digest, but it is healthier than store bought milk. An infant should exclusively be breast-fed for the first sixth months of life and should continue being breastfed, along with a gradual introduction of food until at least 12 months of life or beyond. Infant dental care is important while a mother is breastfeeding to ensure good oral hygiene.

Benefits of Breastfeeding

- It is more accessible.
- It contains essential nutrients for an infant.
- Breast milk contains elements not found in baby formula. For example, breast milk protects a baby from diseases and infections.

Infant Oral Hygiene

- After the last feeding before bedtime, the baby's gums and any erupted teeth should be wiped with a piece of gauze, soft washcloth or soft-finger toothbrush.
- Before teething, it may be helpful to get the infant used to having their gums massaged.
- When the infant's teeth begin to erupt, have their teeth cleaned with the products they'll use later in childhood.
- Avoid any sugar beverages in the first year of life. If used, make sure to wipe off mouth with a clean gauze afterwards.
- Discuss infant oral hygiene with your dentist.

DUBAI HEALTH AUTHORITY

Oral Health During Pregnancy

The health of your teeth and gums is important because it affects the health of you and your child. Getting dental care while you are pregnant is safe during pregnancy. If your mouth is healthy, you will be giving your baby a healthy start. Doing the following will help keep you and your baby healthy.

Practice Good Oral Hygiene

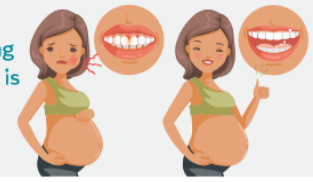
- **Brush teeth twice a day** with fluoride toothpaste.
- **Floss once a day.**
- **Waterpiks and electric toothbrushes** are also known to reduce plaque.
- **If you vomit, rinse your mouth with a teaspoon of baking soda.**

Eat Healthy Foods

- **Avoid foods high in sugar. Avoid beverages high in sugar** like juice, fruit-flavored drinks, and soda.
- If you have problems with nausea, **eat small amounts of healthy foods** throughout the day.
- **Drink fluoridated water** throughout the day, preferably in between meals.

Get Dental Care

Dental Care During Pregnancy is Safe and Important



- **Tell the dentist and dental hygienist that you are pregnant** and your due date.
- Second trimester (4 – 6 months of pregnancy) is safe for most dental procedures.
- **Dental care is safe during pregnancy,** including the use of X-rays (at dentist's discretion), most pain medications, and local anesthesia (at the dentists' discretion).
- Gum disease is common in pregnancy and has been associated with pre-term labor.

Practice Other Healthy Behaviors

- Attend prenatal classes.
- **Stop use of all tobacco products.** Avoid secondhand smoke.
- **Do not drink alcohol.**
- Take vitamins as recommended by your Ob-Gyn.

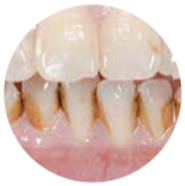
Oral Health During Infancy

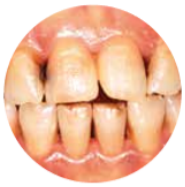
While most babies don't start getting teeth until they are 6 months old, infant dental care is important from the very beginning. Many dentists recommend an initial visit before the child's first birthday to make sure teeth and gums are cared for and cleaned properly.

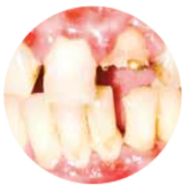
Practice Good Oral Hygiene

- Beginning soon after birth, clean your child's gums daily with a clean, wet washcloth.
- Do not put your child to bed with a bottle. Children should be weaned from a bottle between 12 and 14 months.
- Avoid saliva-sharing activities (sharing utensils, cleaning pacifier in your mouth) as cavity-causing bacteria can be passed from mother to child.
- Once teeth come in, start brushing twice a day with a smear of fluoride toothpaste for children under age 3. For children ages 3 and above, a pea-size amount should be used.
- Avoid giving your child foods and drinks containing sugar. Children should not have fruit juice during their first year.
- Lift the child's lip once a month to look for cavities. The child should see a dentist immediately if there are signs of cavities.
- Ask doctor about child's oral health and fluoride.


Healthy Teeth


Mild Decay


Moderate Decay

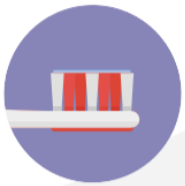

Severe Decay

How to Relieve Teething Pain

- Do not use teething gels.

Tips on How to Brush a Young Child's Teeth

- Use a small, child-sized toothbrush.
- Lay child down on a comfortable surface (changing table).
- Position yourself behind child's head.
- Give child a toy to hold.


Under 3 Year
= Smear


Over 3 Year
= PEA Sized

APPENDIX 19: ORAL HEALTH TRAINING TOOLKIT FOR NON-DENTAL CLINICAL STAFF

Smiles for life curriculum, the curriculum has a total of eight courses in which the provider can choose to complete any of the eight courses that they see relevant to their field, although it is encouraged to go through all eight as it is rich with information and gives a very clear picture on how oral health is directly linked to systemic health.

Each course takes approximately one hour to complete. The courses are as follows:

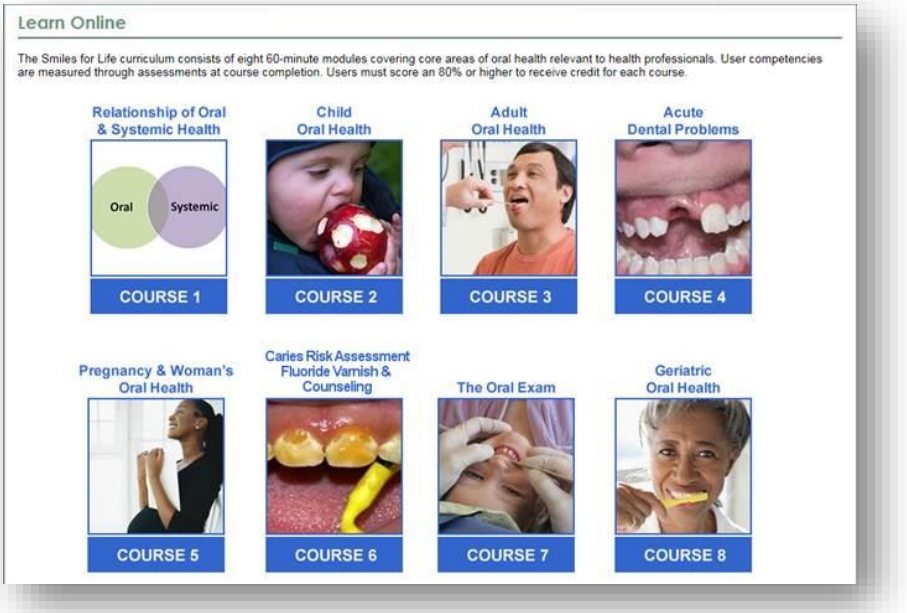
1. Relationship of Oral and systemic health
2. Child oral health
3. Pregnancy & women's oral health
4. Adult Oral health
5. Geriatric Oral health
6. The oral exam
7. Caries risk assessment , Fluoride varnish & counselling
8. Acute dental problems

Link

https://www.smilesforlifeoralhealth.org/buildcontent.aspx?tut=555&pagekey=62948&cbreceipt=0

It will take you to this page, choose learn online

Then you can register and choose the courses that you would like to start



APPENDIX 20: REFERRAL DOCUMENT FOR HEALTH PROVIDERS/PHYSICIANS

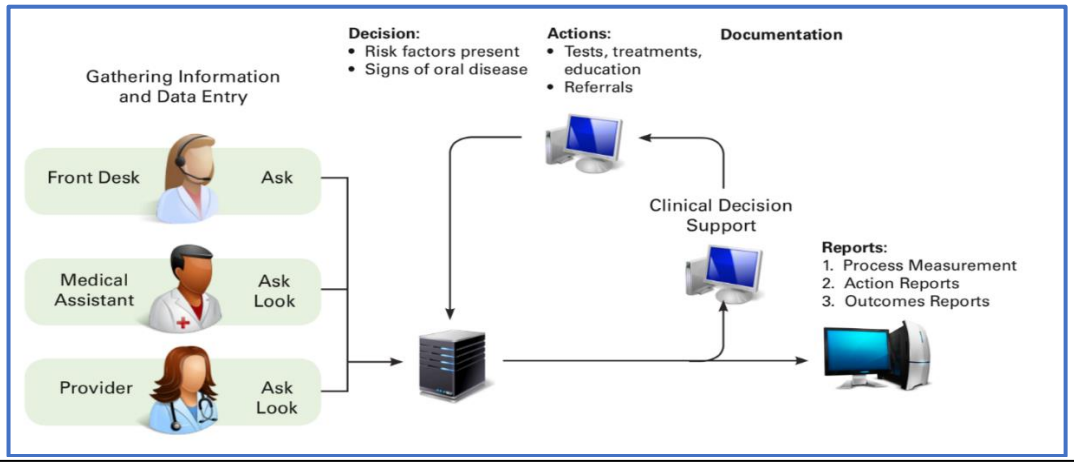
Aim: The aim of this document is to develop a referral system for general health providers if and when they identify oral diseases in their patients.

Developing primary care-dentistry referral networks will take effort and commitment from primary care providers, dentists, and their respective teams.

We recognize that many primary care practices may not yet have all of the capacities or resources of an advanced primary care practice and encourage these practices to consider ways they might address oral health, even if implementation of the full Framework is not possible initially. Specific examples of incremental approaches include:

- Begin with screening patients for signs and symptoms of early disease and develop a structured referral process for dentistry.
- Offer fluoride varnish for pediatric patients; consider indications for fluoride varnish for high-risk adults.
- Focus on patient/caregiver risk assessment and risk reduction through patient education, dietary counselling, and oral hygiene advice along with distribution of health education materials.
- Identify a particular high-risk patient population (e.g., children, adult patients with diabetes, pregnant women) and begin with a pilot before expanding population/practice wide.

Methods:



*The front desk personnel can just streamline the patient pool into medical or dental areas that stratifies the patient pool

**The Medical assistant further helps in streamlining the referral process by asking simple close-ended questions during their regular screening like

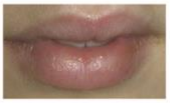
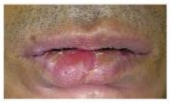
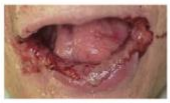
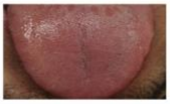
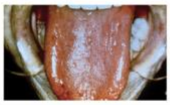
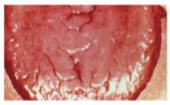
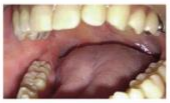
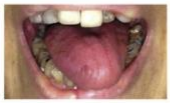
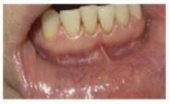
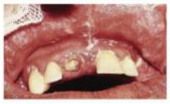
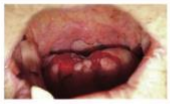
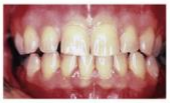
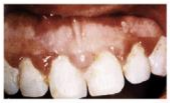
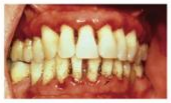
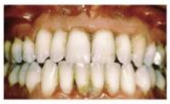
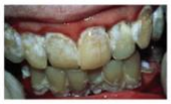
Do you have any oral health problem?

Do you have any dental pain?

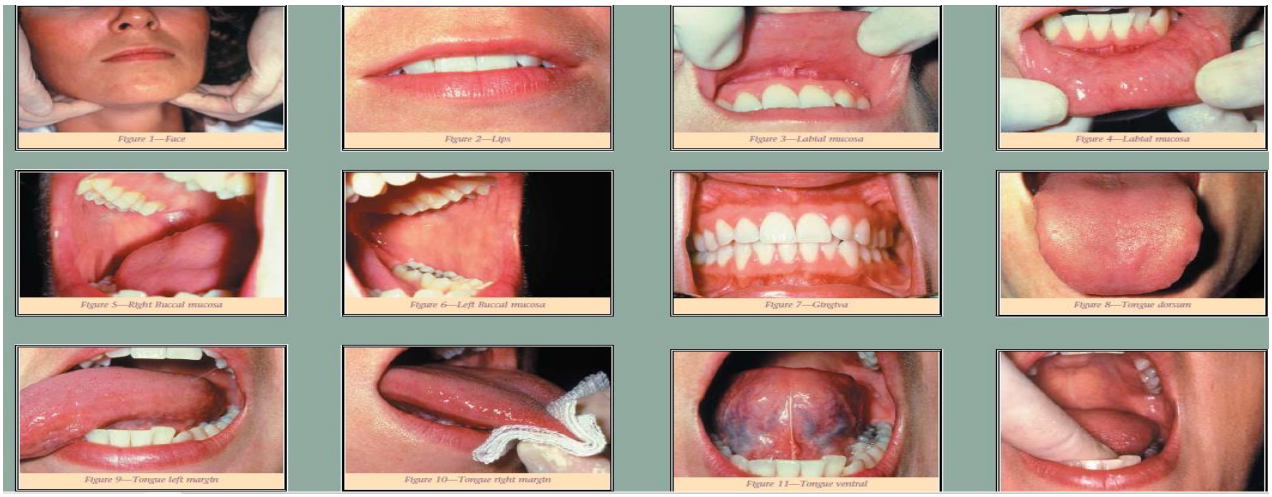
A “structured” dental referral should include the information the dentist needs to participate appropriately in the patient’s care, for example: the patient’s problem list, current medication and allergy lists, the specific reason for the referral, and a statement that the patient is healthy enough to undergo routine dental procedures.

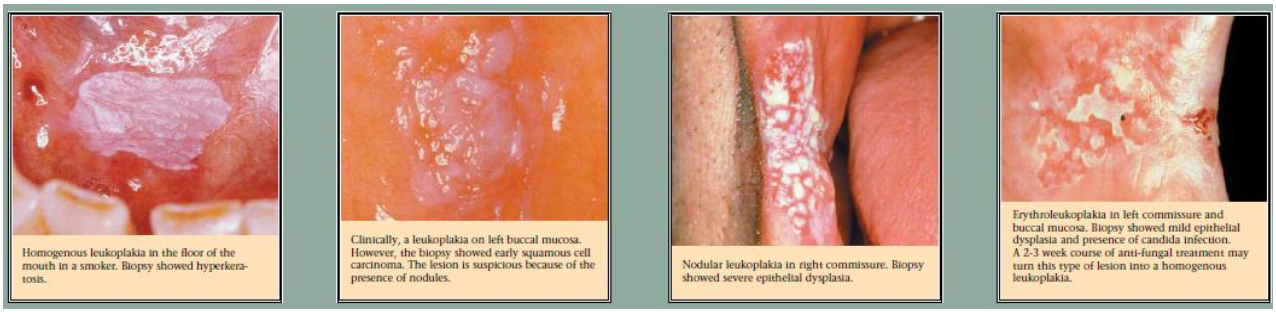
Oral Health Assessment: A member of the primary care team conducts a brief (one- or two-minute) oral exam to assess the adequacy of salivary flow, obvious signs of poor oral hygiene, white spots or cavities, gum recession or periodontal inflammation, and examination of the oral mucosa and tongue for signs of disease. During a well-visit or complete physical exam, this activity could be included as a component of the standard Head, Ears, Eyes, Neck, and Throat Exam (HEENT exam) resulting in a comprehensive assessment that includes the oral cavity—a “HEENOT” exam.

Oral Exam Guide for Healthcare Professionals

Category	Methods of Measurement	Numerical and Descriptive Ratings		
		1 Normal	2 Moderate Dysfunction	3 Severe Dysfunction
Swallow	Observe while patient swallows, check gag reflex	Normal swallow	Pain or difficulty with swallow	Unable to swallow *(intubated, absent gag)*
Lips	Observe	 Smooth, pink	 Dry or cracked	 Ulcerated or bleeding
Tongue	Observe appearance of tissue	 Pink, moist, papillae present	 Coated or loss of papillae with shiny appearance, with or w/o redness	 Blistered, cracked, or bleeding
Saliva	Observe Use tongue blade, touching the center of tongue and floor of mouth *(optional)*	 Watery	 Thick or ropy	 Absent
Mucous Membranes	Observe appearance of tissue	 Pink, moist	 Red or coated, no ulcers	 Ulcers with or w/o bleeding
Gingiva	Observe Use tongue blade, may gently press tissue with tip of blade *(optional)*	 Pink, firm	 Edema, with or w/o redness; with or w/o bleeding	 Bleeds easily
Teeth or dentures	Observe appearance of teeth or denture	 Clean or no teeth	 Local debris (between teeth)	 General debris, decay
Odor	Smell	Normal	Slightly to moderately foul	Strong foul odor

Oral Cancer Screening for Health Providers





Referral Tracking and Coordination: A referral is completed only when the patient makes an

appointment, receives care from the specialist (in this case, the dentist), and information about that care is transmitted back to the referring provider (in this case, the primary care provider) for inclusion in the patient's health record.

Risk Assessment • Conduct patient-specific oral health risk assessment on all patients. • Identify patient-specific conditions and medical treatments that impact oral health. • Identify patient-specific oral conditions and diseases that impact oral health. • Integrate epidemiology of caries, periodontal disease, oral cancer and common oral trauma into the risk assessment.	**Ask about symptoms that suggest oral disease and factors that place patients at increased risk of oral disease.** Two or three simple questions can be asked to elicit symptoms of oral dryness, pain or bleeding in the mouth, oral hygiene and dietary habits and length of time since the patient last saw a dentist. These questions can be asked verbally or can be included in a written health risk assessment.
Oral Health • Perform oral health evaluation linking patient history, risk assessment and clinical presentation. • Identify and prioritize strategies to prevent or mitigate risk impact for oral and systemic diseases. • Stratify interventions in accordance with evaluation findings.	**Look for signs that indicate oral health risk or active oral disease.** Assess the adequacy of saliva flow; look for signs of poor oral hygiene, white spots or cavities, gum recession or periodontal inflammation and conduct examination of the oral mucosa and tongue for signs of disease (HEENOT exam). **Decide on the most appropriate response** Review information gathered and share results with patients and families. Determine course of action using standardized criteria based on the answers to the screening and risk assessment questions; findings of the oral exam and the values preferences and goals of the patient and family.

Phillips KE, Hummel J. Oral Health in Primary Care: A Framework for Action. JDR Clinical & Translational Research. 2016 Apr 1;1(1):6–9.

Assessment measures for Referral process

Clinical Process Measured	Percentage of patients given: • A written or verbal risk assessment or screening questions • An oral exam • A referral to a dentist, if indicated based on finding
Intervention Measures	Percentage of patients in need given: • Dietary counselling • Oral Hygiene Training • Risk Behaviour Education • Fluoride Varnish and/or other fluoride supplement therapy • Medication adjustments to address dry mouth
Care Coordination and Referral Process Measures	• Number of referral agreements in place with local dental partners • Percentage of referral patients with a completed dental referral
Patient Experience Measures	• Percentage of patients satisfied with preventative measures offered • Percentage of patients who received useful oral health information, dietary counselling or oral hygiene training
Practice Experience Measures	• Percentage of staff trained to deliver oral health preventive services • Percentage of staff with demonstrated knowledge of oral health clinical content • Percentage of staff satisfied with dental referral process.

*** Local dental partner- in the context of DHA refers to the different dental clinics under DHA to track the number of cases.**

APPENDIX 21: PATIENT REFERRAL FORM, DENTIST TO PHYSICIAN

Patient Name: _____ **ID:** _____

Referral Date: _____

Patient Referred by: Dr. _____Office Phone: _____

Patient Referred to: Dr. _____

During a recent oral and maxillofacial examination, we were alerted to the possibility of this patient having a positive medical history or signs and symptoms of the following:

☐ Diabetes mellitus

☐ Cardiovascular disease (hypertension, stroke, myocardial infarction, other)

☐ Malignancy/cancerous lesion

☐ Chronic Obstructive Pulmonary Disease (COPD)

☐ Other: _____

We are referring this patient to you for a thorough medical evaluation and are requesting any additional medical information to assist us in managing the patient when he or she undergoes dental treatment.

Dental Treatment Planned:

_____

_____

Contraindications to the planned procedures based on your physical findings or the patient's medical history (please indicate all of this patient's dental diagnoses):

_____

_____

We will delay dental procedures, pending your written recommendations. Thank you for your efforts on behalf of this patient.

Dentist's Signature: _____

Date Evaluation Completed _____

Physician's Comments:

_____

_____

Patient Fit to Continue Dental Treatment:

☐ Yes

☐ No

☐ Defer until (date)

Physician's Signature: _____

Date Evaluation Completed _____

Patient: *Please return form to referring dentist.*

APPENDIX 22: ORAL HEALTH SCREENING FORM FOR PEOPLE WITH NON-COMMUNICABLE DISEASES (NCD'S)

Patient ID:

Patient Name: First: _____ **Last:** _____

Age: _____

Health Insurance ID #: _____ **Date:** _____

Medical History _____

Social history (tobacco/smoking/alcohol): _____

Medications _____

DENTURES:

Complete upper arch ☐ lower arch ☐

Partial upper arch ☐ lower arch ☐

Chart for program use (**D** = decayed, **F** = filled, **M** = missing due to disease, **N** = no treatment recommended, **Mo**= mobile tooth, **Fu**=furcation involvement, **I** =implants)

			18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
Dentition status	Root																	
	Crown	O																
		M																
		D																
		B																
		L/P																
Treatment																		

			48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
Dentition status	Root																	
	Crown	O																
		M																
		D																
		B																
		L/P																
Treatment																		

Note: mobile tooth can be defined as the one with more than 2 mm mobility

Calculus index

16 11 26

46 31 36

Bleeding on probing

16 11 26

46 31 36

Note: Please use second molar if first is absent or has been extracted

Scores	Criteria
0	No calculus present
1	Supragingival calculus covering not more than third of the exposed tooth surface.
2	Supragingival calculus covering more than one third but not more than two thirds of the exposed tooth surface or the presence of individual flecks of sub gingival calculus around the cervical portion of the tooth or both.
3	Supragingival calculus covering more than two third of the exposed tooth surface or a continuous heavy band of sub gingival calculus around the cervical portion of the tooth or both.

Periodontal pockets

16 11 26

46 31 36

gingival recession

16 11 26

46 31 36

Note: Please use second molar if first is absent or has been extracted

Criteria for examining and recording the pockets

2: pocket ≥ 5 mm

1: pocket 4-5 mm

Oral Hygiene: ☐ Good ☐ Fair ☐ Poor

☐ **Halitosis:**

Alveolar ridge resorption: ☐ Upper arch _____ ☐ Lower arch _____

☐ **Soft tissue lesions**_____

Tooth wear:

☐ Abrasion

☐ Attrition

☐ Erosion

☐ Abfraction

Diagnosis:

_____

_____

Treatment advised:

_____

_____

_____

Any comments:

_____

_____

Signature of the GP: _____

APPENDIX 23: NCD RISK ASSESSMENT FORM (TO BE FILLED BY DENTAL PROVIDER)

Name:	**Birthday/Age:**	**Date of Visit:**
Address:		
Nationality:		**Sex:**

A. Non-Modifiable Risk Factors

Family History of:	
Hypertension ☐ Yes ☐ No	
Cardiovascular disease ☐ Yes ☐ No	
Diabetes mellitus ☐ Yes ☐ No	
Asthma ☐ Yes ☐ No	
Cancer ☐ Yes ☐ No	

B. Modifiable Risk Factors

Cigarette/Tobacco Smoking	**Alcohol Drinking**
☐ Never smoked	☐ Never
☐ Passive smoker	☐ Alcohol Drinker:
☐ Current smoker	In the past month, how many times did you have
No. of cigarettes per day: _____	5 drinks in one occasion? _____

C. Anthropometric Measurement and Blood Pressure

Date	**Height (cm)**	**Weight (kg)**	**BMI**	**Nutritional Status**			**Blood Pressure**	**Hypertension**	
				<N	N	>N		Y	N

Age started smoking: _____

No. of Attempts to quit: _____

Any desire to quit?: ☐ Yes ☐ No

☐ Ex-smoker

- Age started smoking: _____
- Age quit smoking: _____

No. of cigarettes per day: _____

Physical Activity Type of work/occupation: _____ Means of travel to work: _____ Activities other than work: _____ _____ ☐ Sedentary ☐ Active	Intake of High Fat/high Salt Foods How often do you eat fast foods (e.g. instant noodles, hamburgers, French fries, fried chicken etc.? _____ times per _____
Dietary Fibre Intake: Servings of fruits per day: _____ ☐ adequate ☐ inadequate Servings of vegetables per day: _____ ☐ adequate ☐ inadequate	Has a doctor or nurse ever told you that you had any of the conditions listed below? ☐ Never been told ☐ Elevated total cholesterol ☐ Elevated LDL ☐ Elevated triglycerides ☐ Low HDL

Diabetes Mellitus Have you been diagnosed with diabetes mellitus? ☐ Yes ☐ No Date of Diagnosis: _____FBS: ___PP: _____	Stress Do you often feel stressed? ☐ Yes ☐ No What are the sources of your stress? _____

D. Cancer Screening

Have you screened for cancer before? ☐ Yes ☐ No

FOR MALES

- Digital rectal exam: _____

FOR FEMALES

- Breast screening _____

Cervical screening _____

Summary

CLIENT NOT AT RISK: _____

☐ Client DOES NOT have any of the risk factors

☐ Affirm healthy lifestyle practices, CONGRATULATE client.

☐ Proceed with health education on healthy lifestyle:

- Regular Physical Activity
- Nutrition And Diet
- No Smoking
- No Alcohol Drinking

CLIENT AT RISK: _____

☐ No risk-DO NOTHING

☐ PROCEED with education on LIFESTYLE MODIFICATION.

☐ Refer for screening for NCD and other diagnostic tests as well as lifestyle modification

APPENDIX 24: EDUCATIONAL MATERIALS FOR NON-COMMUNICABLE DISEASES

DUBAI HEALTH AUTHORITY

Oral Health & Risk for Heart Disease

Maintaining optimal oral hygiene is an important part of your overall health. You should brush twice day and use floss regularly. If you have certain heart conditions, you should let your dentist know about your medications.

Is there a link between gum disease and heart disease?

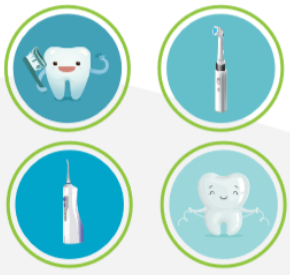
Researchers continue to study the possible relationship between gum disease and heart disease. Some studies have shown that bacteria in the mouth that are involved in the development of gum disease can move into the bloodstream and result in inflammation. These changes can, in turn, increase the risk of heart disease and stroke.

What are the benefits of proper oral care?

You can reduce the chance of developing dental decay, gum inflammation and oral infections such as abscess formation by taking good care of your teeth and gums.

Optimal dental care includes:

- Seeking professional dental care every six months.
- Brush your teeth at least twice a day.
- Regularly flossing your teeth.
- Waterpiks and electric toothbrushes are also known to reduce plaque.
- Making sure dentures fit properly.



What are the benefits of proper oral care?

- Give your dentist a complete medical history and list of the names and dosages of all medications you are taking.
- Give your dentist the name and phone number of your doctor(s) in case your dentist needs to speak to him or her about your care.
- If you are nervous about undergoing a dental procedure, talk with your dentist. He or she can provide you with information and work with you on strategies to control dental pain and ease your fears.

DUBAI HEALTH AUTHORITY

Oral Health and COPD/Asthma

Did you know your oral health can become affected by certain lung problems? Mouth and lung issues are often connected by way of periodontal (gum) health, which can directly contribute to respiratory diseases you may not know you have.

Some of the most common lung ailments that can affect your mouth are asthma and chronic obstructive pulmonary disease (COPD). Their effects on the oral cavity come from the treatments used against these disorders.

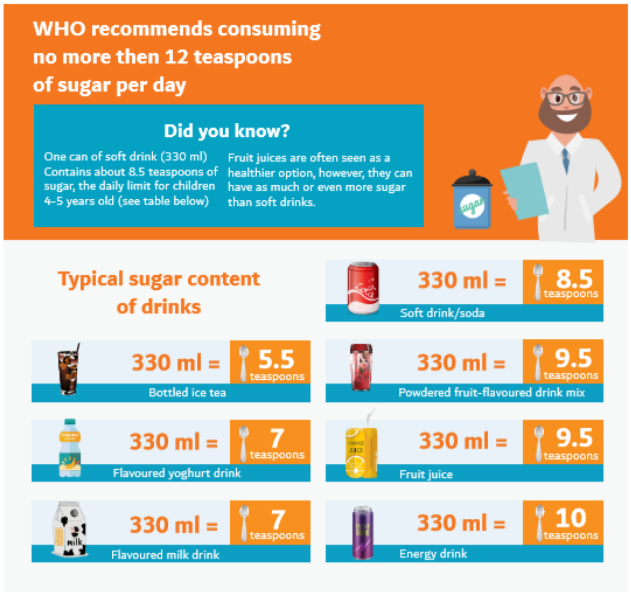
Healthy Gums, Healthy Lungs

What can you do to achieve optimal gum health?

- A visit to your dental professional is the first step. Be sure to **mention any respiratory problems you may be experiencing** at present & relevant medication history.
- Taking extra care of your mouth is essential when avoiding lung problems.
- Perhaps most important, **good home care to keep your mouth healthy and should include:**
  - Proper **brushing** and **flossing**.
  - Waterpiks and electric toothbrushes are also known to reduce plaque.
  - Toothpastes containing fluoride.
  - Antibacterial mouth rinse.
  - Avoid sugars in diet.

How to Get Rid of These Problems?

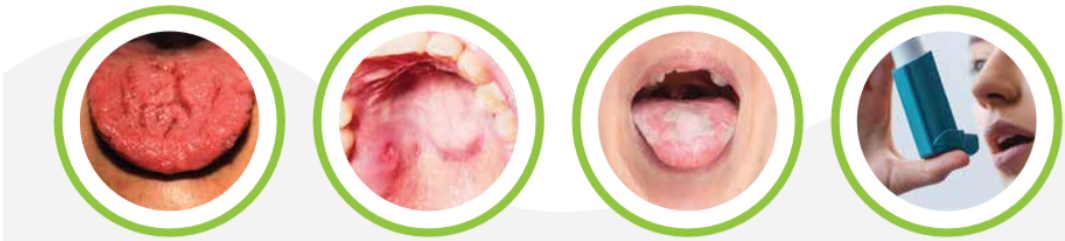
Avoid Beverages with High Sugar Content



World Health Organization

COPD/Asthma and Oral Health Risk Factors

- Smoking is the major cause of COPD.
- Oral candidiasis, gingivitis, and/or periodontitis can occur in those who use inhaled corticosteroids for long periods of time or at high dose.
- The use of steroid inhalers can also result in throat irritation, voice impairment, cough, dry mouth, and rarely tongue enlargement. Individuals using inhaled medications may also be at increased risk of dental erosion and gum disease. You are encouraged to rinse your mouth right after using an inhaler.



DUBAI HEALTH AUTHORITY

Oral Health & Risk for Heart Disease

Did you know that people who have diabetes have a greater risk of developing gum disease, tooth decay, fungal disease, and other problems with oral (mouth) health?

Maintaining good oral hygiene is part of a comprehensive diabetes care plan. You can make sure your mouth stays healthy with these simple steps:

Keep your blood sugar in check

- Patients with uncontrolled blood sugar are more likely to develop gum disease and can lose more teeth than someone whose diabetes is well-controlled. Maintaining gum health also helps keep your blood sugar in check.
- Be sure to regulate blood sugar before any surgical procedures/tooth extractions to heal faster.
- Ideal blood pressure is 120/80 mm Hg. If your blood pressure is 150/100 or higher, your dentist can not perform treatment for that day.

See a dental professional regularly

- Have your teeth cleaned by a dental professional at least two times a year.
- See a dentist at least once a year.
- Tell both the dentist that you have diabetes, if your blood sugar levels are controlled, and any medications you are taking.

MONTH 6

Oral Hygiene Practice

- Brush for at least 2 minutes with fluoride toothpaste.
- Brush at least 2 times a day, after each meal.
- Floss at least once a day.
- Waterpiks and electric toothbrushes are also known to reduce plaque.

Visit your dentist if you notice any of the following:

- Bleeding, red, or sore gums.
- Gums that are pulling away from teeth.
- Bad breath for a long period of time.
- Loose teeth.
- Oral thrush, an infection caused by fungus that grows in the mouth.
- Dry mouth.
- Any mouth ulcers/infections.

DUBAI HEALTH AUTHORITY

Oral Cancer

Oral cancer is divided into two categories – those occurring in the oral cavity (the lips, the inside of the lips and cheeks, teeth, gums, the front two-thirds of the tongue and floor and roof of the mouth) and those occurring in the oropharynx (middle region of the throat, including tonsils and base of the tongue).

What Are the Risk Factors for Oral Cancer?

Research has identified several factors that increase the risk of developing oral cancers.

- Men are twice more likely to get oral cancer than women.
- Smokers and excessive alcohol drinkers.
- Individuals over the age of 50.
- Individuals with Human Papilloma Virus (HPV).
- Maintain regular visits with your doctor.

What Are the Symptoms of Oral Cancer?

It's important to be aware of the following signs and symptoms and to see your dentist if they do not disappear after two weeks:

- A sore or irritation that doesn't go away after 2-3 weeks.
- Red or white patches.
- Pain, tenderness or numbness in mouth or lips.
- Difficulty chewing, swallowing, speaking or
- moving your tongue or jaw.
- A change in the way your teeth fit together when you close your mouth.
- Sore throat or feeling like something is caught in their throat.
- Numbness, hoarseness or a change in voice.