KHYBER MEDICAL UNIVERSITY

LOGBOOK FOR COMMUNITY AND PREVENTIVE DENTISTRY

2nd YEAR BDS

CERTIFICATE

Name of Institution:

Full Name of Student:

Roll Number:

Class:

It is certified that _____ has fulfilled the requirement of practical work in Department of Community and Preventive Dentistry.

_____

Signature of Teacher

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Practicals / Lab Work List

SNO	PRACTICALS / LAB WORK NAME	BLOCK & MODULE NAME	COMPLETION STATUS	SIGNATURE OF TEACHER
1	Delivery of health education	D, Foundation II	☐Yes ☐No	
2	Brushing Techniques	E, Infection and Inflammation and Auxiliary Dental Materials	☐Yes ☐No	
3	Flossing Techniques	E, Infection and Inflammation and Auxiliary Dental Materials	☐Yes ☐No	
4	Disinfection and Sterilization	E, Infection and Inflammation and Auxiliary Dental Materials	☐Yes ☐No	
5	Waste Segregation and Disposal	E, Infection and Inflammation and Auxiliary Dental Materials	☐Yes ☐No	
6	Atraumatic Restorative Treatment	F, Pre-Clinical Dentistry I: Healing, Repair & Dental Restorations	☐Yes ☐No	
7	Dental Indices	F, Pre-Clinical Dentistry I: Healing, Repair & Dental Restorations	☐Yes ☐No	
8	Fluorosis Index	F, Pre-Clinical Dentistry I: Healing, Repair & Dental Restorations	☐Yes ☐No	
9	School Dental Health Programmes and outreach programmes	F, Pre-Clinical Dentistry I: Healing, Repair & Dental Restorations	☐Yes ☐No	
10	Dietary counseling in a dental care setting	G, Pre-Clinical Dentistry II: Neoplasia & Dental Rehabilitation	☐Yes ☐No	

General Learning Outcomes

1. Describe the principles of health promotion and health education and oral education
2. Deliver health education
3. Describe prevention of infection and methods of sterilization and disinfection
4. Discuss waste disposal methods.

5. Define and explain factors related to common oral diseases and their prevention.
6. Describe in detail all aspects of Atraumatic Restorative Treatment.
7. Discuss dental indices in detail.
8. Discuss the importance of school dental health for the community.
9. Explain the principles of oral health nutrition and diet counselling

Block D Module 1: Foundation II Practical List

1. Delivery of Health Education

Block D

Module 1: Foundation II

Delivery of Health Education

Number of hours: 4

Learning Outcomes:

1. Deliver health education regarding general self-care advice, and for maintenance of oral health on simulated patients
2. Demonstrate effective interpersonal communication techniques (verbal, non-verbal, motivational interviewing basics).
3. Design Information, Education, and Communication Materials like posters, leaflets, infographics on health education

Materials Required:

1. Pen, pencil, and paper

2. Computers with internet access

3. Whiteboard with marker

4. Simulated or Actual Patient

Date:

Health Education Definition – WHO

Process of providing information and advice related to healthy lifestyle and encouraging the development of knowledge, attitudes and skills (practice) aimed at behaviour change of individuals or communities.

AIMS OF HEALTH EDUCATION (WHO):

1. To ensure that health is valued as an asset in the community.

2. To equip the people with skills, knowledge & attitudes to enable them to solve their health problems by their own actions & efforts.

3. To promote the development & proper use of health services.

OBJECTIVES OF HEALTH EDUCATION

1. **Informing people (impart knowledge)**

   - Clear the barriers of ignorance, prejudice & misconceptions.
   - Assuming more responsibility towards one's health care.
   - Induce awareness about health needs, minimizing the gap between needs & demands.

2. **Motivating people:**

- Choose his own alternatives about the health actions (cafeteria approach).

3. **Guiding into action:**

- The suggested technology must be available, culturally acceptable & economically affordable.

4. **Seek help when needed**

10 PRINCIPLES OF HEALTH EDUCATION

1. **Interest:** people are unlikely to listen to those who are not of interest to them. Felt needs.

2. **Participation:** based on active learning - how? Group discussion, workshops, panel discussions. Have participants gain practical experience. Start from the known & lead the people to the unknown, i.e. Knowledge. This will enable the community to develop an in-depth insight into their own health problems.

3. **Comprehension:** Make the learner understand what you are saying now? Adjust your level as a teacher with the educational background of the learner. "Teaching should be within the mental capacity of the audience". "Speak in the language they speak and use words they understand" Give simple explanation and avoid technical words.

4. **Reinforcement:** By repetition of the information in the same session or during subsequent sessions.

5. **Remember:** few people can learn all that is new in a single sitting. Use various methods.

6. **Motivation:** By creating the desire in a person to learn through incentives like praise, love, rivalry, rewards, etc.

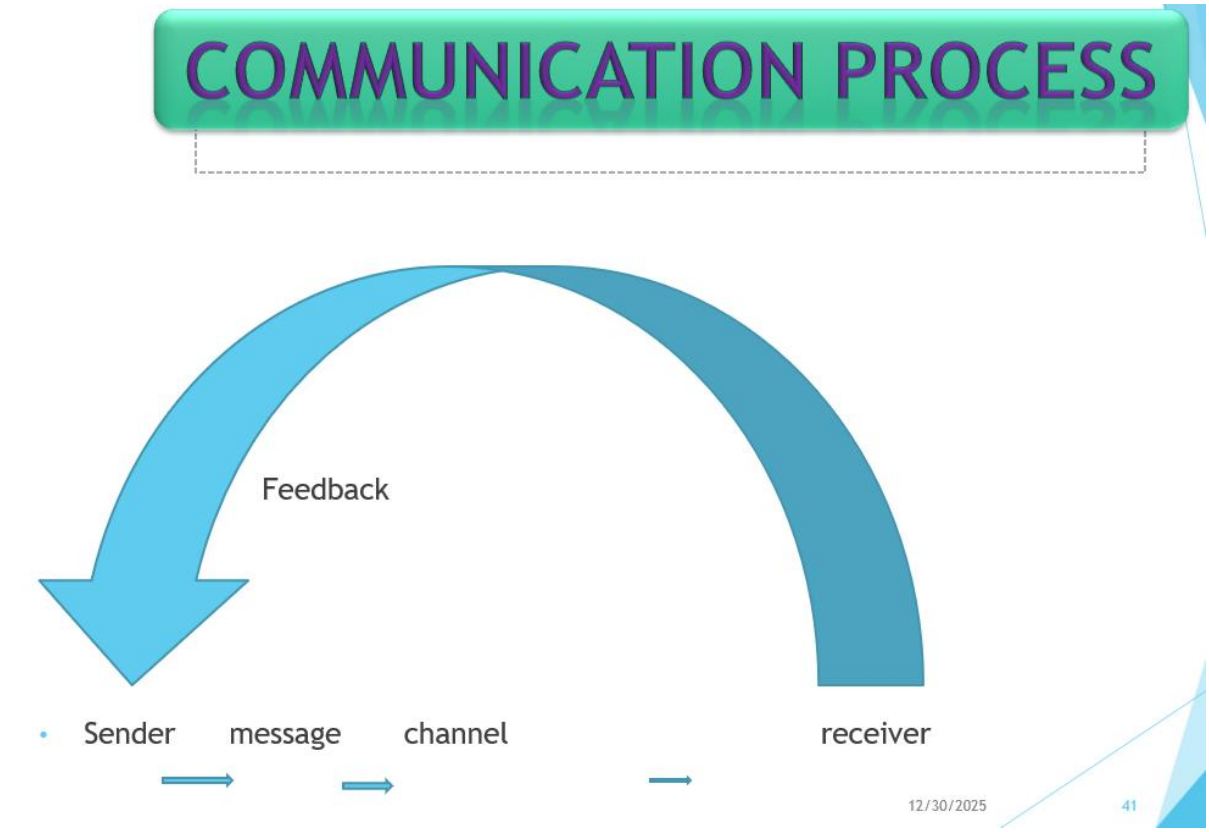
7. **Learning by doing:** Usually leaves a lasting imprint & leads towards positive action. Participant will do what he/she has learnt or understood and give instant feedback. Participants gain confidence in performing such tasks without supervision. "If I hear, I forget, if I see I remember, if I do I know." Chinese proverb.

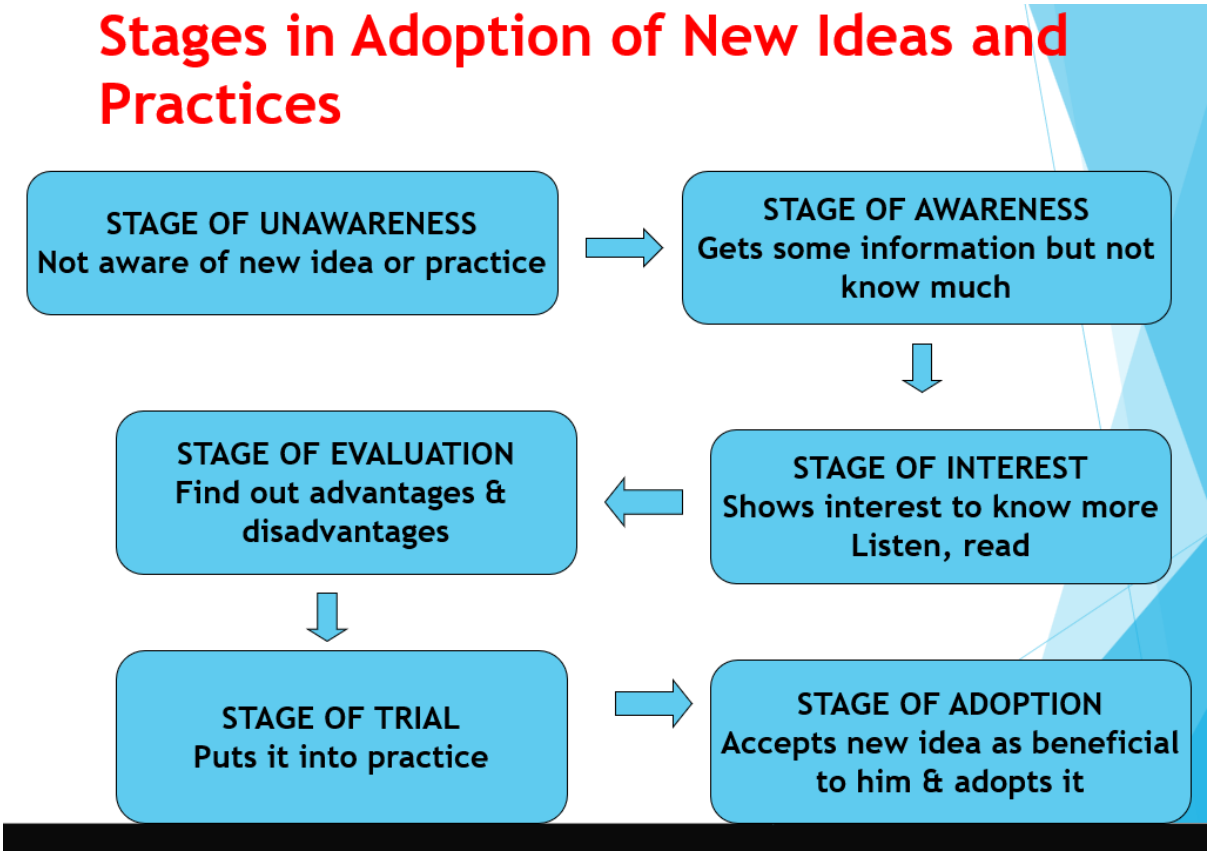
8. **Soil, seed & sower:** The people are soil, the health facts are the seeds & the educator is the sower. All the components of this triad will influence the outcome. The 3 factors should be carefully & satisfactorily interrelated.

9. **Good human relationships:** People must accept you as a friend & a well-wisher & have the confidence to confide in you. The personal qualities of the health educator are more important than his technical qualifications.

10. **Leaders:** People learn best from people who they respect & admire. Try to make use of councilors, ulema, schoolteachers, etc.

Additionally: Credible information based on facts which conform to social system. Set an example for the community to observe healthy practices and lifestyle. Feedback is crucial to success of any programme, wherein the health educator modifies as and when required to suit their needs. Poor education of patients is clearly a sign of poor communication skills on the part of the clinician





STAGES OF HEALTH EDUCATION

1. **Stage of Sensitization**

In this stage people are sensitized by giving messages like smoking kills. Not interested in changing behavior (smokers who know but are not interested in stopping in the next six months, may be unaware of their problem or do not consider it to be a problem.)

2. **Stage of Publicity**

In this stage, media and all possible means of advertising are used for providing information to people. Idea is people should discuss

3. **Stage of Education**

Educate the people through one-way methods like lectures, newspapers, handouts, posters and/or two-way methods including talk shows, conferences, workshops, focal group discussions, mohalla meetings. Give messages like 3 million deaths of smokers globally, 2 million in developed world, 1 million in underdeveloped world.

4. **Stage of Attitude Change**

As a result of education people think in a different way. Convincing youth that smoking is not cool is one way to decrease cigarette use. I know the effects of smoking; it is causative factor of many fatal diseases like oral cancer, periodontal disease, cancer of lungs, cardiac diseases, hypertension, Low birth weight babies & others.

5. **Stage of Motivation/Adaptation**

At this stage health educators persuade people to adopt healthy lifestyle and change. I am quitting smoking. I will do regular brushing. I will exercise when I am tense. I will recite when stressed. I will swim when I am in distress. I will drink boiled water. I will trim my nails

Motivation for performance: Forces that energize, direct, and sustain a person's efforts. Highly motivated people, with adequate ability and understanding of the job, will be highly productive. Health educators must know what behaviors they want to motivate people to exhibit

Performance = knowledge x motivation

6. **Stage of Community Transformation**

It is a ripple effect, one sees other and change lifestyle. My friend can change and adopt healthy lifestyle, so can I. Legislations will ban smoking in public areas

MATERIALS FOR HEALTH EDUCATION

1. **Print media** e.g. Posters, flannel graphs, flip charts, hand bills etc.
2. **Electronic media** e.g. Projectors, radio, television, internet, etc.
3. **Traditional media** e.g. Storytelling, songs, roleplays, announcers etc.

MOTIVATION

Intrinsic motivation is self-generated such as hunger, thirst etc. Satisfaction derived from these are likely to induce long-term changes in attitude and behavior. Extrinsic motivation/incentives are found outside the patient within his/her environment like rewards or punishments, material or abstract.

Maslow's Hierarchy of Needs:

1. **Physiologic:** food, water, oxygen, sleep. Oral H/E: periodic visits to dentist.
2. **Safety:** protection against physical threat/harm. Oral H/E: enlighten about preventive dental measures.
3. **Belonging and Love:** oral H/E kindness by dentist.
4. **Esteem and Ego:** desire to be successful and respected. Oral H/E: aesthetic dentistry
5. **Self-actualization.** Oral H/E: dentist sets a realistic goal and patient achieves the goal.

EDUCATION

Oral health educator should be clear about his/her objectives and goals. Should be able to utilize available resources and be cognizant of barriers of communication. Then able to plan an education program. Dental health

educators should be cognizant in sending written, verbal and non-verbal messages. If dentist-patient relationship is positive, then chances of behavior change are more.

COMMUNICATION

The Dentist must show concern for patient's problems by questioning, listening and supporting without criticizing or rejecting their ideas as baseless. Be able to communicate with level of individual, anticipate probable objections, allow listeners to question back if information is not clear and it is clarified. A dentist should also be a good listener. When asked to speak in a formal setting, a speech is prepared which is organized, focused, accurate, relevant & brief. Feedback is important.

DELIVERY OF HEALTH EDUCATION

The risk factors for many general health conditions are common to those that affect oral health, namely smoking, alcohol misuse and a poor diet. There is currently a drive for greater emphasis on prevention of ill health and reduction of inequalities of health by giving advice, provision of support to change behaviour and application of evidence-informed actions.

It is therefore important that all clinical teams make every contact count and support patients in making healthier choices. By doing this not only will patients' oral health benefit but their general health will be at lower risk as well. Clinical dental teams therefore have an important role in advising their patients about how they can make choices that improve and maintain both their dental and general health. It is important that the whole dental team, as well as other healthcare workers, give consistent messages and that those messages are up to date and correct.

(Practical Exercise 1 on next page)

PRACTICAL EXERCISE 1:

Take brief history of a simulated patient or an actual patient on the proforma below and then give health education according to the condition.

Name	
Age (Years)	
Sex/Gender	
Address	
Occupation	
Chief Complaint: What is your chief complaint?	☐ Pain ☐ Bleeding ☐ Plaque/Calculus ☐ Caries ☐ Staining ☐ Trauma ☐ Sensitivity ☐ Bad Breath (Halitosis) ☐ Irregular Teeth ☐ Missing Teeth _____ any other complaint
Smoking and Smokeless Tobacco Use	
Are you a smoker or have you ever smoked in the past?	☐ Non-smoker ☐ Current Smoker ☐ Past Smoker
How often do you smoke?	☐ Daily Multiple Times ☐ Once Daily ☐ Multiple times a week ☐ Weekly ☐ Occassionally
How many packs of cigarettes do you smoke in a day?	☐ <10 (Light Smoker) ☐ 11-20 (Medium S) ☐ >20 (Heavy S)
Do you use snuff/naswar or have you ever used it in the past?	☐ Non-user ☐ Past User ☐ Current User
How often do you take snuff/naswar?	☐ Daily Multiple Times ☐ Once Daily ☐ Multiple times a week ☐ Weekly ☐ Occassionally

Toothbrushing	
How often do you do toothbrushing?	☐ Twice a day ☐ Once Daily ☐ Multiple times a week ☐ Weekly ☐ Occassionally
What time of the day do you do toothbrushing?	☐ Before breakfast ☐ After breakfast ☐ Before a Meal ☐ After a Meal ☐ Before going to bed
What kind of toothbrush do you use?	☐ Manual ☐ Electric ☐ Miswak
What is the consistency of the bristles of the toothbrush that you use?	☐ Extra Hard ☐ Hard ☐ Medium ☐ Soft ☐ Extra Soft
Flossing	
Do you use dental floss or any other interdental mechanical plaque control method? If yes, then which one?	☐ No ☐ Dental Floss ☐ Dental Pick ☐ Toothpick ☐ Tongue Cleaner ☐ Interdental brush _____ any other type
How often do you do flossing?	☐ Don't floss ☐ Once Daily ☐ Multiple times a week ☐ Weekly ☐ Occassionally
Diabetes Mellitus	
Do you suffer from Diabetes Mellitus?	☐ Yes ☐ No
If yes, do you take medication for it?	☐ Yes ☐ No
If yes, what medication(s) do you take?	☐ Insulin ☐ Don't Know _____ other antidiabetic drugs
If yes, what is disease activity of your disease?	☐ Controlled ☐ Uncontrolled

Other Diseases: Which other diseases do you suffer from or not?	_____ state which disease
Pregnancy	
Are you pregnant?	☐ Yes ☐ No
If yes, for how many months have you been pregnant?	☐ <3 months (1st Trimester) ☐ 3-6 months (2nd Trimester) ☐ 6-9 months (3rd Trimester)
Miscellaneous Questions	
Drugs or Medications: Which other drugs and medicines are you taking?	_____ state which drugs or medications
Orthodontic Appliances: are you wearing braces?	☐ Yes ☐ No
Prosthodontic care: Do you have any missing teeth?	☐ Yes ☐ No ☐ Don't Know
Do you want a denture/crown/bridge to treat your missing teeth?	☐ Yes ☐ No
Clinical Findings	
Disease Present on Examination and History	☐ Dental Caries ☐ Periodontal Disease ☐ Oral Cancer ☐ Missing Teeth ☐ Malocclusion ☐ Trauma

HEALTH EDUCATION ADVICE (choose the appropriate heading (s) and tick the boxes)

Caries Prevention

Age	Advice to be given
0-3 years old	• Breast feeding provides the best nutrition for babies ☐ • From six months of age infants should be introduced to drinking from a free-flow cup, and from age one year feeding from a bottle should be discouraged ☐ • Sugar should not be added to weaning foods or drinks ☐ • Clean oral cavity with clean moist cloth after weaning ☐ • Parents/carers should brush or supervise tooth brushing ☐

	• Brush last thing at night and on one other occasion. ☐ • It is good practice to use only a smear of toothpaste ☐ • The frequency and amount of sugary food and drinks should be reduced. ☐ • Sugar-free medicines should be recommended ☐
3-6 years old	• Brush at least twice daily, with fluoridated toothpaste ☐ • Brush last thing at night and at least on one other occasion ☐ • Brushing should be supervised by a parent/carer ☐ • It is good practice to use only a pea size amount ☐ • Spit out after brushing and do not rinse, to maintain fluoride concentration levels ☐ • The frequency and amount of sugary food and drinks should be reduced ☐ • Sugar-free medicines should be recommended ☐ • Avoid sugar containing foods and drinks at bedtime when saliva flow is reduced and buffering capacity is lost ☐ • Visit dentist so that fluoride varnish two times a year (2.2% NaF) can be applied to teeth ☐
7 years to young adults	• Brush at least twice daily, with fluoridated toothpaste ☐ • Brush last thing at night and at least on one other occasion ☐ • Use fluoridated toothpaste ☐ • Spit out after brushing and do not rinse, to maintain fluoride concentration levels ☐ • The frequency and amount of sugary food and drinks should be reduced ☐ • Avoid sugar containing foods and drinks at bedtime when saliva flow is reduced and buffering capacity is lost ☐ • Visit dentist so that fluoride varnish two times a year (2.2% NaF) can be applied to teeth ☐ • Visit dentist for fissure sealant application on permanent molars ☐
Adults	• Brush at least twice daily, with fluoridated toothpaste ☐ • Brush last thing at night and at least on one other occasion ☐ • Use fluoridated toothpaste ☐ • Spit out after brushing and do not rinse, to maintain fluoride concentration ☐ • The frequency and amount of sugary food and drinks should be reduced ☐ • Use a fluoride mouth rinse daily (0.05% NaF) at a different time to brushing ☐ • Avoid sugar containing foods and drinks at bedtime when saliva flow is reduced and buffering capacity is lost ☐ • Visit dentist so that fluoride varnish two times a year (2.2% NaF) can be applied to teeth ☐

Periodontal Disease Prevention

Age	Advice to be given
All Adults & Children	• Remove plaque effectively using methods shown by the dental team. ☐ • Daily, effective plaque removal is more important to periodontal health than tooth scaling and polishing by the clinical team ☐ • Advise best methods of plaque removal to prevent gingivitis, achieve lowest risk of periodontitis and tooth loss ☐ • Use behaviour change methods with oral hygiene instruction ☐
	• Brush gum line and each tooth twice daily (before bed and at least on one other occasion) ☐ • Instruct on brushing technique like Modified Bass and avoid horizontal scrub method ☐ • Use either Manual or powered toothbrush ☐ • Small toothbrush head, soft texture ☐ • For small spaces between teeth: Use dental floss or tape ☐ • For larger spaces: Use interdental or single-tufted brushes ☐ • Around orthodontic appliances and bridges: Use interdental brushes or use method suggested by the dental professional ☐ • Correct factors which impede effective plaque control including supra and sub-gingival calculus, open margins, restoration overhangs and contours which prevent effective plaque removal ☐ • Assess patient's/parent's/ carer's preferences for plaque control ➢ Decide on manual or powered toothbrush ☐ ➢ Demonstrate methods and types of brushes ☐ ➢ Assess plaque removal abilities and confidence with brush ☐ • Patient sets a target for tooth brushing for next visit ☐

Risk Factor Control

Risk factor	Advice to be given
Tobacco (for both smoking and snuff / naswar)	• Do not smoke. Smoking increases the risk of periodontal disease, reduces benefits of treatment and increases the chance of losing teeth. ☐ • Ask, Advise, Act: Take a history of tobacco use, give brief advice to users to quit and sign post to local stop smoking service ☐ • Major causative factor for oral cancer. ☐ • Quitting tobacco use is the most important thing you can do to protect your health. ☐

	• Cutting down while you receive dental treatment is not enough ☐ • Tobacco use is hurting your oral health, your finances and your family's happiness. ☐ • Encourage non-users to stay away from tobacco, affirm non-use of tobacco and advise them to never use tobacco in future. ☐ • Affirm and congratulate those who have quit the tobacco use and offer support, if required. ☐ • Ask every tobacco user if he or she is willing to quit currently. ☐ • If the patient is willing to quit, assess the level of dependence. ☐ • If the patient is not prepared to quit shift them to the 5R method: Relevance of quitting, Risks of continuous tobacco usage, Rewards of quitting, Roadblocks to quitting, and Repetition at each visit ☐ • ASSIST TOBACCO USERS TO MAKE A QUIT PLAN: Set a firm quit date, ideally within 2 weeks. ☐ • Get support from family, friends, coworkers. ☐ • Review past quit attempts-what helped and what led to relapse. ☐ • Identify reasons for quitting in writing and keep a copy. ☐ • Reduce tobacco use during the 2 weeks before quitting. ☐ • Anticipate challenges, particularly during the first few weeks, including nicotine withdrawal symptoms. ☐ • Throw out all tobacco products in his or her possession. ☐ • Avoid places where tobacco is available. ☐ • Encourage other tobacco users around to quit along with him or her. ☐ • Advise the patient: Total abstinence is essential to quitting-not even a single puff or portion. ☐ • Having other tobacco users in the home hinders successful quitting. ☐ • Withdrawal symptoms typically decrease considerably after 1-3 weeks of quitting. Suggest alternatives to tobacco. ☐ • Recommend or provide pharmacotherapy for depressed patients and those who have tried to quit several times and failed ☐
Diabetes Mellitus	• Patients with diabetes should try to maintain good diabetes control as they are at greater risk of developing serious periodontal disease ☐ • Less likely to benefit from periodontal treatment if diabetes is not well-controlled ☐ • Take your medications properly ☐
Medications	• Some medications can affect gingival health ☐ • For patients who use medication that cause dry mouth or gingival enlargement explain oral health findings and risk related to medication ☐ • Assess and discuss clinical management ☐

ADVICE FOR PREGNANT MOTHERS

ADVICE TO BE GIVEN
• Poor maternal oral health can increase the risk of complications of pregnancy including preterm delivery or low birth weight, gestational diabetes, preeclampsia and stillbirth. ☐ • Moreover, foetal exposure to oral pathogens may increase risk of subsequent neonatal intensive care admission. ☐ • An individualized preventive plan needs to be made for each patient including oral health instructions, oral rinses, and use of xylitol gum to decrease the likelihood of Mutans Streptococcus transmission post-partum. ☐ • Dietary consideration e.g., maintaining healthy diet, avoiding frequent exposures to cariogenic foods and beverages, overall nutrient and energy needs. ☐ • Ideally, a dental prophylaxis should be performed during 1st trimester and again during 3rd trimester. ☐ • Elective restorative and periodontal therapy should be performed during 2nd trimester. ☐ • Foetal organ development occurs during the first trimester; it is best to avoid all potential risks at that time if possible. ☐ • Other elective treatments, such as teeth whitening and other cosmetic procedures, should be postponed until after birth. ☐ • It is best to avoid this dental work while pregnant and avoid exposing the developing baby to any risks, even if they are minimal. ☐ • If dental work is needed, the amount of anesthesia administered should be as little as possible, but still enough to make patient comfortable. ☐ • Patient's comfort leads to less stress on the foetus. ☐ • Amalgam fillings should be avoided. ☐ • Rubber dam and increase speed suction devices should be used. ☐ • Nitrous oxide/ oxygen analgesia should be avoided. ☐ • Precautions must be taken to prevent hypoxia, hypotension and aspiration (Patient can be asked to keep legs uncrossed while they sit in a dental chair to help maintain healthy circulation or keep a pillow to make them comfortable). ☐ • If morning sickness or gastro-oesophageal reflux occurs, patients should be instructed to rinse with a cup of water with a teaspoon of sodium bicarbonate and avoid brushing for an hour. ☐ • A daily neutral sodium fluoride mouth rinse or gel should be used to prevent softening by acids (from foods and morning sickness) and control pulpal sensitivity. ☐ • A palliative approach to alleviate dry mouth may include increase water consumption or chewing sugarless gum to increase salivation. ☐ • Avoid use of aspirin, aspirin-containing products, erythromycin estolate and tetracycline during pregnancy. ☐ • Non-steroidal anti-inflammatory drugs routinely are not recommended during pregnancy, if necessary, administration should be avoided during 1st and 3rd trimester and be limited to 48-72 hours. ☐ • Antibiotics such as penicillin, amoxicillin and clindamycin, which are labelled category B for safety in pregnancy, may be prescribed after procedure. ☐ • Routine x-rays, usually taken during annual examinations (check-ups), can usually be postponed until after birth. ☐

Student demonstrated proper health education delivery technique: ☐ Yes ☐ No

Student needs improvement on: _____

PRACTICAL EXERCISE 2 FOR STUDENT: Design a one-page leaflet on any one of the above health education topics and draw/paste it here.

Student designed appropriate leaflet: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Block E Module 2: Infection and Inflammation and Auxiliary Dental Materials Practical List

1. **Brushing Techniques**
2. **Flossing Techniques**
3. **Disinfection and Sterilization**
4. **Waste Segregation and Disposal**

Block E

Module 2: Infection and Inflammation and Auxiliary Dental Materials

Brushing Techniques

Number of Hours: 2 hours

Learning Outcomes:

1. Perform brushing techniques in skill lab on a given model.

Materials Required:

1. Pen, pencil and paper
2. Computers with internet access
3. Whiteboard with marker
4. Oral Cavity Model with Toothbrush

Date:

Introduction

- Brushing teeth is an important part of dental care routine.
- For a healthy mouth and smile, the American Dental Association (ADA) recommends - Brush your teeth twice a day with a soft-bristled brush.
- The size and shape of your brush should fit your mouth, allowing you to reach all areas easily.
- Replace your toothbrush every three or four months, or sooner if the bristles are frayed.
- Make sure to use an ADA specified fluoride toothpaste.

Objectives

1. To clean teeth surfaces from food, debris and stain
2. To remove plague and disturb reformation
3. To stimulate the gingival tissues
4. Application of dentifrice with specific therapeutic agents to address caries, periodontal disease or sensitivity problem.

- Toothbrushes may be manual or electric with continuous design modifications by competing manufacturers.
- The patient's compliance, motivation along with the individual's dexterity and thoroughness are more critical than technique or design in determining efficacy of plaque removal by a toothbrush.

- For small children, toothbrushing should be performed by an adult until the child is approximately 6 years old or till the child is capable of independent brushing.
- In adults, toothbrushing can remove plaque effectively from smooth surfaces and prevent or resolve gingivitis at these sites. However, anatomic and prosthetic factors may limit access inter-proximally, in pits and fissures and around prostheses.
- In general, the high prevalence of chronic marginal gingivitis in adults suggests poor tooth-brushing compliance or low performance dexterity.
- Improper toothbrushing can damage teeth and surrounding tissues by mechanical abrasion resulting in cervical notches, gingival ulceration and recession.
- Therefore, re-education of toothbrushing techniques may be required for adults.
- Toothbrushing in the elderly can preserve gingival health, improve appearance, decrease mouth odor and minimize taste interference.
- However, diminished cognition and medical conditions may hinder toothbrushing and the elderly may have their dexterity impeded by decreased visual acuity and physical disabilities such as arthritis and stroke.
- The institutionalized elderly may have brushing performed inadequately by careers.
- Double-headed toothbrushes can aid plaque removal in this population and modifications such as adding fresh acrylic to the handle to mold to the patient's handgrip can aid self-care for handicapped patients.
- **Toothbrushing Time and Frequency:** Daily toothbrushing is extremely important to maximize sulcular cleaning as a periodontal disease control measure, because few individuals completely remove plaque and use fluoride dentifrices more often in caries control.
- Recommended to use 8 to 10 strokes in each brushing area of the tooth surface.
- Toothbrushing after every meal would be ideal, but keeping in mind the practical problems, twice daily toothbrushing is recommended, i.e. once in the morning after breakfast and once in the night immediately after dinner.
- As the debris is not easily removed due to reduced salivary flow during sleeping, night-time toothbrushing is more important.
- Benefits of proper oral care must be explained and demonstrated to patients to ensure continued commitment to a personal oral hygiene program.
- It is proposed not to insist on the duration of toothbrushing, e.g. for 3 to 5 minutes, but advise toothbrushing all the teeth surfaces thoroughly as far as possible.
- "One brushing area". The area covered by normal length of the toothbrush is one area covering about 3-4 teeth
- Toothbrushing is one of the most widely used mechanical methods of plaque control
- Manual toothbrushes vary in size, shape, texture and design.
- It consists of a handle and a head with bristles.
- Tufts in a toothbrush head are composed of the bristles, which are bunched together.
- The head is divided into the toe, which is at the extreme end of the head, and the heel, which is closest to the handle.
- A constriction, termed the shank, usually occurs between the handle and the head.
- Many toothbrushes are manufactured in different sizes such as large, medium and small so that they adapt better to the oral anatomy of different individuals.
- Toothbrushes also differ in their defined hardness or texture classified as extra hard, hard, medium, soft or extra/ultra soft.

(Practical Exercise 1 given on next page)

Practical Exercise 1

Draw a labelled diagram of a manual toothbrush below.

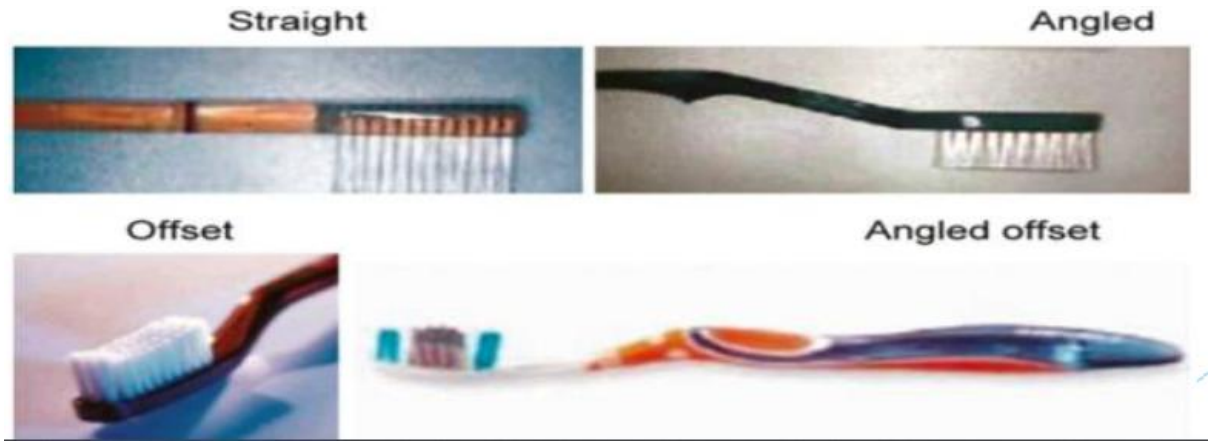
Student drew appropriate labelled diagram: ☐ Yes ☐ No

Student needs improvement on: _____

- **Profiles:** Toothbrushes have four basic lateral profiles when viewed from the side: flat, concave, convex and multileveled (rippled or scalloped).
- Concave shape is useful for improved cleaning of facial surfaces.
- Convex shape is more useful for improved cleaning of lingual surfaces.
- Toothbrushes with multilevel profiles are found to be consistently more effective than flat toothbrushes, especially when interproximal efficacy is monitored.
- **Bristle Shapes:** Recently toothbrush products utilizing the bristles of new shapes and textures in multiple diameters, textures and bristle trims have been developed.
- Compared to toothbrushes with standard round bristles, laboratory studies have documented improved efficacy of toothbrushes with tapered, feathered and diamond-shaped bristles. Rounded, tapered or smooth bristle tips are less abrasive.

- **Handle Designs:** Many of the new toothbrushes have a styled handle design.

- Many modifications, such as triangular extrusions or indentations along the sides for better grasp, a "thumb position" on the back of the handle for more comfort, and various angle bends to permit better access into and around the mouth have been introduced.
- Based on the handle designs four types of toothbrushes are available in the market (i) Straight, (ii) Angled, (iii) Offset and (iv) Angled Offset
- Handle design and length may provide comfort and compliance during toothbrush use, and these factors have recently been documented to improve the quality of toothbrushing.
- This is particularly important for children whose dexterity may not be highly developed.

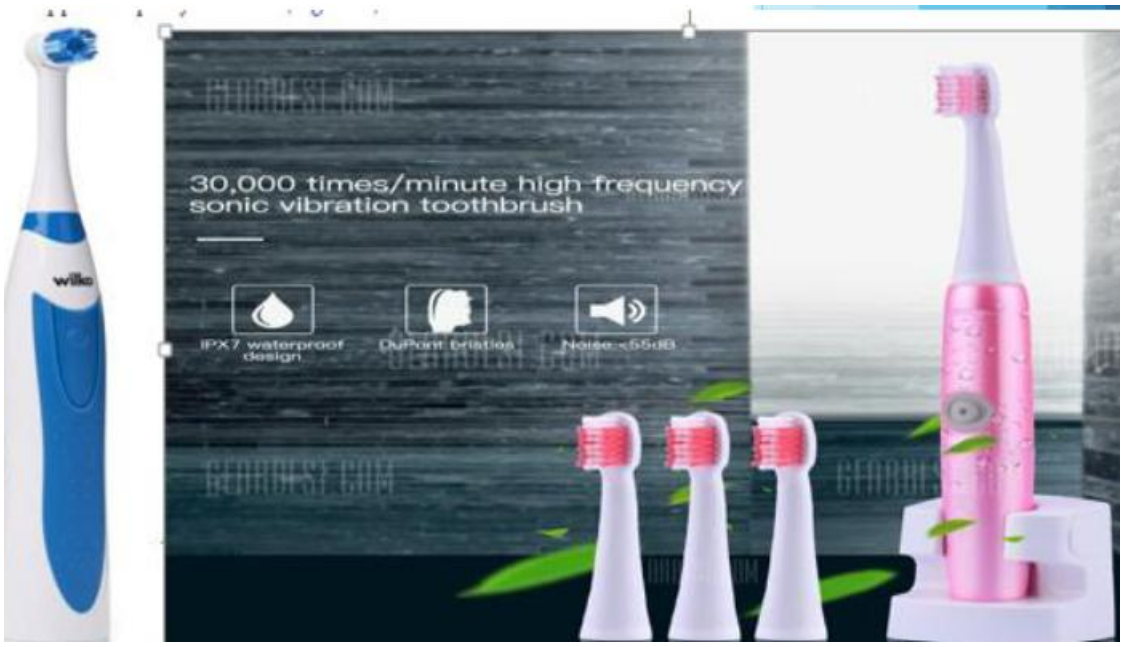


- **Texture:** Bristle resistance to pressure is defined as texture AKA firmness, stiffness and hardness.
- It is related to its: (i) composition, (ii) diameter, (iii) length and (iv) the number of individual bristle per tuft.
- Bristle length is 10-12 mm.
- Diameter of the bristle ranges from 0.007 to 0.015 inches.
- Factors which affect texture are temperature, uptake of water (hydration) and frequency of toothbrush use.
- Nylon bristles are superior to the natural (hog) bristles in several prospects as flexibility of Nylon bristles is as many as 10 times more often than natural bristles before breaking with ease and economy of production
- They are easy to clean and do not split or abrade.
- The configurations and hardness of nylon bristles can be standardized within specified and reproducible tolerances.
- Current opinion favours use of soft textured or medium texture bristle, nylon, multitufted toothbrush with short head.

Powered / Electric Toothbrush

- Sometime back, battery-powered products were a commercial success, which had the advantage of being portable and available at a lower cost.
- Unfortunately, problems with these battery-powered products included short 'working times' and mechanical breakdowns.
- The enthusiasm for the powered toothbrush declined.
- They are recommended mainly for the handicapped.
- Head designs used now are basically of two primary types: (i) rotating, (ii) oscillating type with small, round molar-crown-size brushes head and (iii) oscillating brushes with either vibrational or rotational sonic movements.
- Plaque removal by these brushes appears equally effective
- **Bristle Designs:** the heads of most powered or mechanical toothbrushes are usually removable to allow for replacements and are smaller than manual toothbrushes.

- The head follows three basic patterns when the motor is started:
    - Reciprocating, a back-and-forth movement
    - Arcuate, an up-and-down movement
    - Elliptical, a combination of reciprocating and arcuate motions
- In case of handicapped patients, powered toothbrushes are consistently superior to manual toothbrushes in plaque removal and gingivitis efficacy.
- However, under ideal conditions they are not superior to natural toothbrushing.



TOOTHBRUSHING METHODS

1. Horizontal Reciprocating Scrub
2. Vibratory

i) Bass (Sulcular technique)
ii) Stillman
iii) Charters

3. Vertical Sweeping

i) Modified Stillman (Rolling Stroke, Press Roll)
ii) Modified Charters
iii) Modified Bass
iv) Leonard
v) Smith-Bell (Physiologic Technique)

4. Fones (Rotary)

- A person can brush without damaging the gums or the teeth whatever the way he/she pleases as long as the dental plaque and/or other deposits are removed.
- As a dentist this should be respected since it is very hard to change a person's toothbrushing habits, even harder is to teach someone who has never brushed.
- It is recommended to tell the patient to use vertical movements, which are always from the gums to the edge of the tooth.
- In the upper jaw, from upward to downward and on the lower jaw from downward to upward.
- It is always better to start by leaning the toothbrush against the gum and then move to the face of the tooth, giving the gum a little massage stimulating blood circulation and emptying the gingival sulcus.

(Practical Exercise 2 given on next page)

Practical Exercise 2:

Demonstrate brushing techniques and draw their labelled diagrams in the table given below.

Brushing Technique	Labelled Diagram	Advantages	Disadvantages
Horizontal Scrub		1. Easy to learn and implement. 2. Recommended for small children	1. Cervical abrasion is caused after long use of this technique. 2. No cleaning of interdental spaces. 3. May lead to gingival recession. 4. Not very effective at plaque removal
Bass		1. Effective method for removing plaque. 2. Provides good gingival stimulation 3.The short back and forth motion is easy to master.	1. Can cause injury to the gingival margin if done overzealously 2. Time-consuming as it requires patience and placement of the toothbrush in many different positions to cover the full dentition. 3. In certain patients, dexterity requirement is too high 4. Patients need to be instructed to brush in a controlled and systematic sequence to optimize plaque removal.
Modified Bass		1. Excellent sulcus cleaning 2. Good interproximal & gingival cleaning 3.Good gingival stimulation	1. Dexterity of wrist is required
Stillman		1.Gingival stimulation and massage 2.Effective for gingivitis	1. Dexterity of wrist is required 2. Less effective at subgingival plaque removal 3. Can cause injury to the gingival margin if done overzealously 4. Not as effective for interdental cleaning

Modified Stillman		1.Gingival stimulation and massage 2.Effective for gingivitis	1.Dexterity of wrist is required 2. Time consuming 3. Can cause damage to epithelial attachment
Charters		1. Gingival stimulation and massage 2. Adaptability to various tooth conditions	1.Dexterity requirement is high 2.Poor removal of subgingival bacterial accumulations 3.Limited brush placement
Modified Charters		1. Ideal for patients with orthodontic appliances (e.g., braces), fixed prosthodontics (e.g., bridges), or post-periodontal surgery 2. Enhanced Plaque Removal 3. Promotes Healing and Gum Stimulation	1. Greater Dexterity is required 2. Less Effective for Subgingival Plaque 3. Time consuming
Leonard		1. Simple and Easy to learn for children and individuals with limited cognitive or motor skills. 2. Useful as an introductory method for teaching brushing to preschoolers or those new to oral hygiene routines. 3. Effective for Anterior Teeth 4. May be used therapeutically to teach basic hand motion and grip control in individuals undergoing occupational or neurodevelopmental therapy. 5. Less Technique-Sensitive compared to more advanced techniques like the Bass technique	1. Limited Plaque Removal at the Gingival area 2. Ineffective in interproximal Areas 3. Risk of Gingival Trauma with overzealous brushing can lead to gingival abrasion or recession over time. 4. Encourages Brushing of One Arch at a Time as the upper and lower arches are brushed separately, which increases brushing time and may reduce efficiency or patient compliance. 5. Poor Control on Posterior Teeth as vertical strokes may be awkward or difficult to execute
Smith-Bell		1. Mimics the self-cleansing action of mastication 2. Gingival Stimulation	1. Interdental spaces and sulcular areas of teeth are not properly cleaned

		3. Effective supragingival cleaning	
Fones		1. Easy to learn and perform 2. Requires less time 3. Good for physically or emotionally handicapped individuals & patients who lacks dexterity. 5. Provides good gingival stimulation. 6. Has equal or better potential than bass technique for plaque removal.	1. Possible trauma to gingiva 2. Interdental areas not properly cleaned 3. Detrimental for adults especially those who brush vigorously

Student demonstrated toothbrushing techniques and drew appropriate labelled diagrams: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Block E

Module 2: Infection and Inflammation and Auxiliary Dental Materials

Flossing Techniques

Number of Hours: 2 hours
Learning Outcomes:

1. Perform flossing techniques in skill lab.

Date:

Materials Required:

1. Pen, pencil, and paper

2. Computers with internet access

3. Whiteboard with marker

4. Oral Cavity Model

5. Dental Floss

- **Flossing** is a method for removing bacteria and other debris that cannot be reached by a toothbrush. It generally entails a very thin piece of synthetic cord inserted and moved up and down between the sides of two adjoining teeth.
- **Dental Floss** is a cord of thin filaments used to remove food and dental plaque from between teeth in between areas a toothbrush is unable to reach

INDICATION: Dental floss is best indicated for plaque and debris removal from embrasures, where the papilla fills the interproximal space and the teeth are in contact.

OBJECTIVES OF FLOSSING:

1. Removes plaque and debris that adheres to the teeth, restorations, orthodontic appliances, fixed prostheses in the interproximal embrasures and around implants
2. Aids the clinician in identifying the presence of interproximal calculus deposits, overhanging restorations, or interproximal carious lesions
3. Reduces gingival bleeding
4. May be used as a vehicle for the application of polishing or chemotherapeutic agents (fluorides) to interproximal and subgingival areas

DENTAL FLOSS TYPES

1. Waxed and Unwaxed
2. Flavoured and Unflavoured
3. Colored and Uncolored
4. Fluoridated and Non-fluoridated
5. Thick and Thin
6. Regular Floss / Thread Floss
7. Floss Pick / Specialized Floss Wand / Floss Stick
8. Ergonomic Floss
9. Tape Floss / Dental Tape
10. Super Floss
11. PTFE Floss
12. Biodegradable and Natural Floss
13. Dental Floss Holder
14. Vibrating Dental Flosser
15. Water Flosser

- Not all interproximal contact areas, natural or restored, have the same configuration. So, several types of floss are available to accommodate
- These vary from thin unwaxed varieties to thicker waxed types and include variable thickness floss with no significant differences in the cleaning ability between them
- Unwaxed floss is made from nylon made of about 35 strands twisted together.
- Waxed floss is also made from nylon and covered with a light wax coating.
- Unwaxed floss is frequently recommended because it is thin and slips easily through tight contact areas, & it absorbs food particles better,
- But it can fray and tear when contacting rotated teeth, heavy calculus deposits or defective and overhanging restorations.
- For such conditions, waxed, lightly waxed resistant floss is recommended.
- The waxed variety of dental floss tends to glide through the teeth better.
- Waxed floss is less likely to get stuck between the teeth or get caught on rough edges.
- It also doesn't fray or break as quickly as unwaxed dental floss.
- The downside is that the wax makes the floss a little thicker.
- Therefore, if your teeth are close together, you may prefer to use unwaxed dental floss.

- **Dental floss and tape** are available as coloured and flavoured brands.
- Provides increased appeal and colour provides a visual contrast to plaque and oral debris enabling one to see what is being removed, possibly increasing the motivation to floss.
- A mint flavor leaves a pleasantly fresh, clean taste in the mouth or can try cinnamon for this.
- Flavored floss can be used for children as it is difficult for them to get into the habit of flossing their teeth.
- Flosses impregnated with a variety of agents have been introduced. Examples are floss treated with fluoride, baking soda, herbal extracts, antimicrobial agents or abrasives for whitening.

- **Thread Floss / Regular Floss** is made from nylon
- It works the same way as other dental flosses.
- It is easy to use and easy to glide in between the teeth.
- It is commonly supplied in plastic dispensers which contain 10 to 100 meters of floss
- It is available in different thickness

- **Tape Floss or Dental Tape** is used in widely spaced teeth
- It is thicker and broader than conventional dental floss
- It does not easily fray or break.
- It gives the feeling of getting into both sides of a tooth where people have larger gaps in between.

- Waxed dental tape, unlike round dental floss, is broad and flat, and may be effective in an interproximal space without tight contact points.

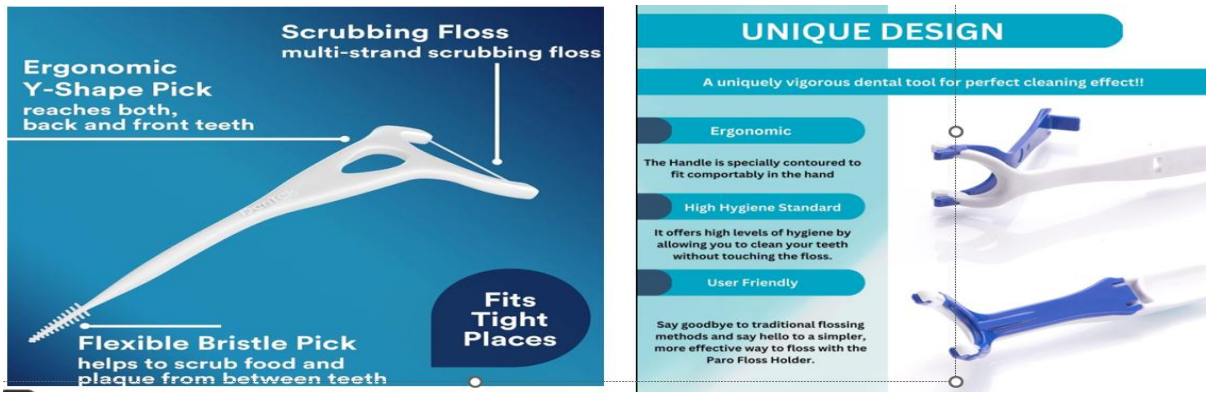
- **Super Floss** is made from yarn-like material.
- It is used to clean around braces, dental bridges or implants.
- Because it has stiffer sections on each end, this type of floss stands up to the rigors of flossing between those complex spaces when wearing braces or dental bridges.

- **PTFE Floss** (polytetrafluorethylene) is composed of the same material as that used in the high-tech Gore-Tex fabric.
- It slides between your teeth with ease.
- It is perfect for those who have a challenging tooth formation or crowded teeth.
- Because perfluorooctanoic acid is a possible carcinogen, dentist consultation is required before using PTFE floss.

- **Biodegradable and Natural Floss:** If one is concerned about the environment, one can buy floss contained in glass bottles that can be reused and packaged in biodegradable packaging.
- One can also buy floss made from silk and waxed with plant-derived vegan candelilla wax as it's also biodegradable.

- **Flossing Stick / Floss Pick / Specialized Plastic Wand** resembles a stick and is the most effective when wound tightly onto it.
- The tighter the floss, the more effective it will be.
- They are handy
- They do not pinch fingers like a regular floss does
- Enhanced reach can make flossing the posterior teeth better
- Disadvantage is that it makes it difficult to floss at all angles which are possible with the regular floss

- **Ergonomic Floss:** has improved handle for better grip
- Its floss head has a unique feature in that it can rotate in any direction making it accessible to any pair of teeth in the mouth



- **Dental Floss Holder** is a device that eliminates the need for placing fingers in the mouth
- They come in a 'Y' shape & the floss is attached to the top points of the Y and works in the same way as you would if holding floss in your hands.
- It is recommended for individuals with: (i) poor manual dexterity, (ii) physical disabilities, (iii) limited mouth opening, (iv) large hands, (v) a strong gag reflex and (vi) low motivation for traditional flossing.
- They are ideal for people who have crowns, dental implants, a bridge or orthodontic braces.
- When one person is assisting another with flossing, the floss holder may also be helpful.
- These may be helpful for people who are just learning how to floss.
- They may also help children with limited dexterity in their arms or hands.
- Or they may be helpful if you are flossing a child's teeth.
- Quick and easy to use, the Y floss holders are easy to get into those hard-to-reach areas of the mouth.
- The longer the handles, the easier they are to use.

- **Vibrating Dental Flosser:** Is used if one does not like the idea of standing in front of a mirror and flossing the teeth manually.
- This electric flosser uses a sturdy single-line type of nylon that vibrates between the teeth.
- This oscillating motion is excellent for those who have difficulty with dental floss.
- Be careful when using an electric vibrating dental flosser, as it can be hard on the gum line.
- They are easy to use and give the gums a nice gentle massage at the same time.
- The downside is that they are more expensive than standard dental floss choices.

- **Water Flosser:** It shoots a thin streak of water between your teeth and the gum line, removing plaque and food particles with ease.
- It has a massaging effect.
- They are an excellent option for those with braces and bridges.
- The downside is that water does not floss as effectively as conventional dental floss types

PRACTICAL EXERCISE 1:

Draw a dental floss and dental pick.

Student drew appropriate diagrams: ☐ Yes ☐ No

Student needs improvement on: _____

USAGE OF FLOSS

The American Dental Association recommends cleaning between your teeth once a day prior to brushing to allow the fluoride from the toothpaste to reach between the teeth.

WHICH FLOSS AND WHEN?

- If one is on the road or at work, a small container of nylon dental floss or dental tape is a fantastic choice.
- If one needs a boost of freshness, mint-flavored floss can be a great choice when traveling & it means one does not have to carry mouthwash.
- When one is at home, one can treat oneself to water flosser or vibrating flosser.
- While there are so many flossing options to choose from, choosing the right one need not be overwhelming.
- No matter what floss one chooses, manual or electric, the most important thing is to floss daily.

BENEFITS OF FLOSSING:

1. Improve oral hygiene
2. Clean those areas where toothbrush cannot reach
3. Removes plaque and food particles from interdental spaces
4. Cleans tooth surface beneath the gum line
5. Prevents halitosis
6. Polishes tooth surface

LIMITATIONS OF FLOSSING:

1. Time Consuming
2. Require skill
3. Tissue damage risk if not used properly
4. Inability to conform to a concave interproximal surface such as the mesial surface of maxillary premolars so then other interproximal devices, which clean those surfaces more effectively, should be used.

FLOSSING METHODS

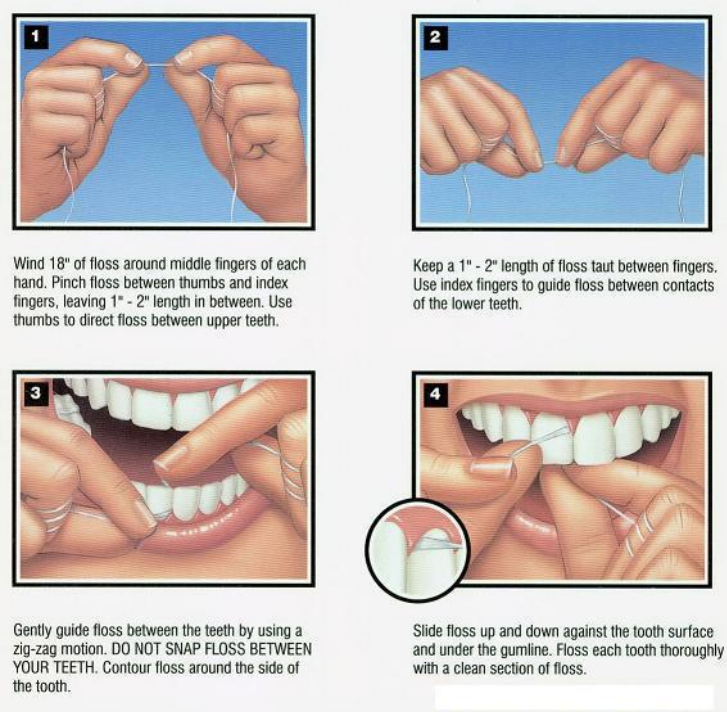
- The two methods are Spool method and the Circle or Loop method.
- Both methods facilitate control of the floss and ease of handling.
- Spool method is particularly suited for teenagers and adults who have acquired the necessary neuromuscular coordination required to use floss.
- Loop method is suitable for children and adults with less nimble hands or physical limitations caused by conditions such as poor muscular coordination or arthritis
- In certain circumstances, the use of a floss holder, floss threaded, variable, thickness floss or precut floss strands with a stiff end may be more effective.

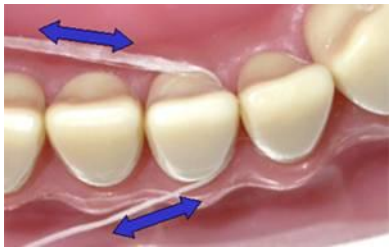
Rules

1. Always keep the pressure of your floss against teeth.
2. Never apply pressure on gums
3. Change the section of floss used from time to time
4. Rinse the mouth afterwards.

SPOOL METHOD:

- The spool method is the most popular for those who do not have problems with stiff joints or fingers.

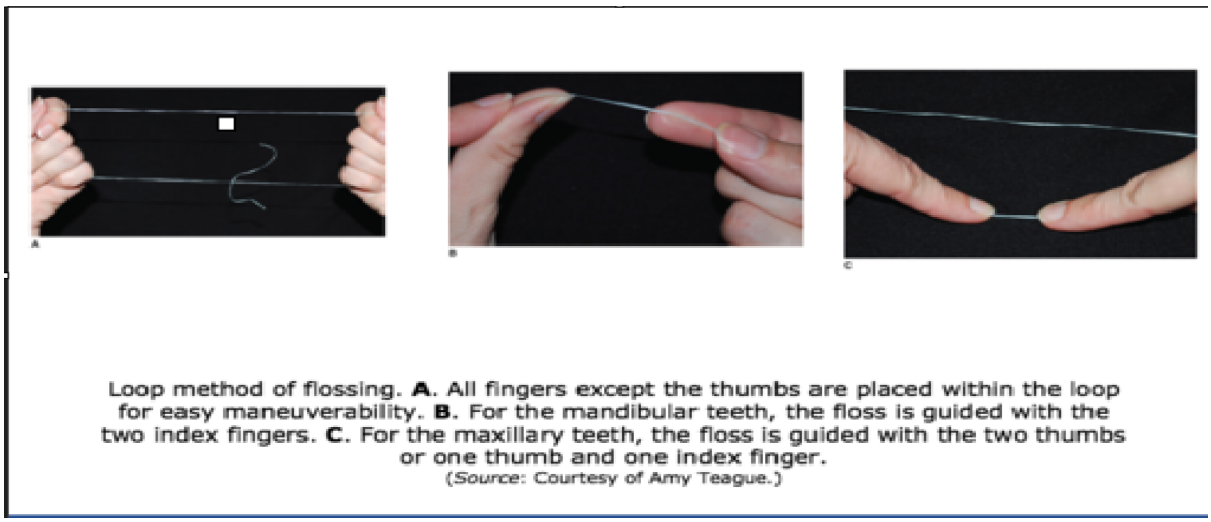




Flossing Movements

LOOP METHOD (CIRCLE METHOD):

- The loop method is often effective for children or adults with dexterity problems like arthritis.



Loop method of flossing. **A**. All fingers except the thumbs are placed within the loop for easy maneuverability. **B**. For the mandibular teeth, the floss is guided with the two index fingers. **C**. For the maxillary teeth, the floss is guided with the two thumbs or one thumb and one index finger.
(*Source*: Courtesy of Amy Teague.)

PRACTICAL EXERCISE 2

Demonstrate flossing methods on the given model and draw labelled diagrams for the spool method and loop method of flossing below.

Student demonstrated flossing techniques and drew appropriate labelled diagrams: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Block E

Module 2: Infection and Inflammation and Auxiliary Dental Materials

Disinfection and Sterilization

Number of Hours: 2 hours

Learning Outcomes:

1. Describe the infection control procedure in a dental care setting.
2. Describe disinfection and sterilization in dental care setting.

Materials Required:

1. Pen, pencil and paper
2. Whiteboard with marker
3. Autoclave
4. Disinfectant
5. Dental Unit

Date:

INTRODUCTION:

Instruments that are being used in a dental clinic are classified upon the risk of transmitting infection. According to the classification instruments are either sterilized or disinfected. To prevent cross infection, the equipment and surroundings of the dental clinic is also disinfected.

Classification of Patient Care Items

Instruments are classified into 3 categories depending upon the risk of transmitting infection

1. Critical
2. Semi-Critical
3. Non-Critical

Critical Instruments

Instruments that are used to penetrate soft tissues or bone are classified as critical instruments. They should be sterilized after each use. These include the following instruments:

- Forceps • Bone chisels
- Scalpels • Burs
- Scalers

Semi-Critical Instruments

Instruments that do not penetrate soft tissues and bone but contact oral tissues only are classified as semi-critical instruments. They also should be sterilized after each use or at least receive high-level disinfection. These include the following instruments:

- Mirrors
- Amalgam condensers
- Impression trays

Non-Critical Instruments

Instruments or devices that come into contact only with intact skin are classified under non-critical instruments. They should receive intermediate or low-level disinfection. These instruments include:

- X-ray Heads
- Face-bows
- Blood pressure apparatus cuffs

Heat Sterilized Items

Items that must be heat sterilized between patients

- All hand and orthodontic instruments
- Burs and bur changers
- Endodontic instruments
- Air-water syringe tips
- Surgical instruments
- Ultrasonic scalers
- Metal impression
- I/O radiographic equipment

Chemically Sterilized Items

Items that may be chemically sterilized include:

- Glass slabs
- Metal spatulas

- Mirrors for intraoral photography
- Cheek retractors

Disinfection

Disinfection is defined as the destruction or inhibition of most pathogenic agents on inanimate objects by chemical or physical means. It does not necessarily kill all microorganism especially bacterial spores, thus is less effective than sterilization. It can be accomplished by two means:

- Heat Disinfection
- Chemical Disinfection

Heat Disinfection

It is accomplished by boiling water at atmospheric pressure for at least 5 minutes. It is used for the disinfection of Prosthodontic instruments such as polishing buffs and brushes.

Chemical Disinfection

It is accomplished by using certain chemicals such as phenols, alcohols, halogens and others. Phenols destroy the membrane of microorganisms; alcohol denatures the proteins. Hypochlorite, glutaraldehyde and halogens such as iodine and chlorine are also used for disinfection purposes.

Sterilization

A process which kills all forms of microbial life including transmissible agents such as viruses, bacteria, fungi & spore forms.

Various approved methods of sterilization are:

1. Moist heat; Steam under pressure
2. Dry heat
3. Chemical vapour
4. Ethylene oxide

1. Moist Heat; Steam Under Pressure

It is the most widely used method for sterilization of critical and non-critical items that are not sensitive to heat and moisture. This process utilizes a combination of pressure, temperature and time that causes denaturation and coagulation of proteins. Two different methods are used:

- **121 °C at 15 psi for 15minutes**
- **134°C at 3 psi for 3 minutes**

SNO	Advantages	SNO	Disadvantages
1.	Good penetration	1.	Non- stainless steel metal items corrode
2.	More economical	2.	May damage plastic and rubber items

3.	Reliable method	3.	Sharp instruments loose lustre and get dull

2. Dry Heat

The method of sterilization utilizes the principle of oxidation to destroy microorganisms. Instruments are heated at:

1. 170° C for one hour
2. 160° C for two hours

Advantages		Disadvantages	
1	Useful for materials that cannot be subjected to steam under pressure	1	Less reliable
2	No corrosion	2	Prolonged process
		3	Not suitable for certain instruments like plastic

3. Chemical Vapour (Chemiclave)

This procedure involves heating a mixture of formaldehyde, alcohols, ketones, acetone and water and placing instruments in them under pressure. The variables are adjusted at:

- 20 minutes at 127°C to 132°C with 20 - 40 pounds pressure

Advantages		Disadvantages	
1.	Less corrosion	1.	Cannot be used for material which can be altered by chemicals
		2.	Adequate ventilation is needed
2.	Short cycle of sterilization	3.	Slight odour
		4.	High cost of special solutions

4. Ethylene Oxide

Instruments are placed inside ethylene oxide which alkylates the DNA molecules and thereby inactivates microorganisms. The only disadvantage of this method is that it is difficult to operate.

(Practical Exercise 1 on next page)

Practical Exercise 1:
Write down the following:

Classification of Patient Care Items
Instruments are classified into three categories depending upon the risk of transmitting infection.
1. _____
2. _____
3. _____

Critical Instruments

_____
_____
_____
_____
_____

Semi-Critical Instruments

_____
_____
_____
_____
_____

Non-Critical Instruments

_____
_____
_____
_____
_____

Enlist the items that must be Heat Sterilized between patients

_____
_____
_____
_____
_____

Enlist the items that may be Chemically Sterilized

_____
_____
_____
_____
_____

Disinfection

_____
_____
_____

Heat Disinfection

Chemical Disinfection

Sterilization

Various approved methods of sterilization are:

1. Moist Heat: Stem under Pressure

Two different methods are used:

1._____ 2. _____

Advantages		Disadvantages	
1.		1.	
2.		2.	
3.		3.	

2. Dry Heat

Advantages		Disadvantages	
1.		1.	
2.		2.	
3.		3.	

3. Chemical Vapour (Chemiclave)

Advantages		Disadvantages	
1.		1.	
2.		2.	
3.		3.	

4. Ethylene Oxide

Advantages		Disadvantages	
1.		1.	
2.		2.	
3.		3.	

Student wrote appropriate answers: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

DISINFECTION OF DENTAL UNIT:

The dental unit is cleaned by a disposable towel using a hospital disinfectant or other cleaning agents such as phenols, iodophors and chlorine containing compounds.

Clinical Surfaces

Clinical surfaces have a high potential for direct contamination from spray or splatter or by contact with gloved hands during or after treatment procedures. Such surfaces are:

- Dental Lamp
- Head Rest
- Chair Back
- X-Ray Tube

- Adjustable operating table

These surfaces need to be thoroughly cleaned with disinfectant solution and surface barriers can be used between patients for cross infection control. Surfaces barriers are usually coverings made of aluminum foil or special casing for specific structures of the dental unit.

House Keeping Surfaces

These surfaces do not make any contact with patients or devices in use during dental procedures. There is limited risk of disease transmission because they are not direct vectors of infection. Such surfaces are:

- Patient leg rest
- Instrument tables
- Instrument washing area / sink
- Doors
- Floors

These surfaces need to be thoroughly cleaned by physical removal of microorganisms and soil by wiping or scrubbing. This is critical before wiping thoroughly with disinfectant.

Practical Exercise 2:
Write down the following:

Clinical Surfaces
The different clinical surfaces in a dental clinic are:

1. _____
2. _____
3. _____
4. _____
5. _____

Disinfection of these surfaces is carried out by:

_____
_____
_____
_____

HOUSE KEEPING SURFACES

The different housekeeping surfaces in a dental clinic are:

1. _____
2. _____
3. _____
4. _____
5. _____

Disinfection of these surfaces is carried out by:

_____
_____
_____
_____
_____
_____
_____
_____

Student wrote the correct answers: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Block E

Module 2: Infection and Inflammation and Auxiliary Dental Materials

Waste Segregation and Disposal

Number of Hours: 2 hours

Learning Outcomes:

1. Describe the various types of waste in health care.
2. Categorize biomedical waste according to the color-coding system.
3. Discuss the management of mercury spill.

Materials Required:

1. Pen, pencil and paper
2. Whiteboard with marker
3. Color-coded waste disposal bins.

Date:

Introduction

Bio-dental waste management has emerged as a critical and important function in the entire ambit of providing quality health care. The first action in each patient area should be to segregate these waste components at the time of waste generation and keep them segregated until final disposal. This allows the bulk of the waste (general waste) to be disposed off via the municipal route and the smaller volumes of potentially infectious health care waste to be handled and disposed off in a more secure manner.

WASTE CATEGORIES:

The waste is categorized as follows and should be segregated accordingly:

1. **General Waste**

Separate into organic waste that can be composted and recycled such as stationary waste, cartons, boxes etc.

2. **Biomedical Waste**

Must be separated into the following:

- **Infectious Sharps**

Needle and syringes, reamers, wires, orthodontic bands, lancets, scalpels, broken glass etc.

- **Infectious Non- Sharp Wastes**

  Surgical specimens, extracted teeth etc.

- **Soiled Waste**

  Non-plastic items such as dressings, cotton, linen, bandages, etc. soiled with blood and/or body fluids

- **Solid Waste**

  Disposable non- incinerable plastic items such as used gloves, catheters, intravenous sets etc.

Colour Coding System

Waste should be placed into appropriate colour-coded and labelled containers. The containers should have an outer rigid part made of plastic or metal (with a lid and handles) and an inner lining of disposable polythene bags. Containers should be emptied every day, and internal lining be replaced. Colour-coded bags and bins are used for ease of segregation and ultimate disposal.

Waste Categories	Contents	Colour Coding
General waste	Stationery waste, cartons etc.	Green
Solid, non-sharp waste	Plastic tubing, catheters	Blue
Soiled waste	Cotton dressings, bed linen, bandages etc.	Red
Infected non- sharp waste	Used cotton, gauze, biopsy tissue, extracted tooth	Yellow
Waste sharps	Needles, lancets, reamers, Orthodontic bands etc.	White

Practical Exercise 1

Write down the following:

General Waste

_____

_____

Biomedical Waste

Must be separated into the following:

- **Infectious Sharps**

  _____

  _____

- **Infectious Non-Sharp Waste**

  _____

  _____

- **Soiled Waste**

  _____

  _____

- **Solid Waste**

  _____

  _____

Colouring Coding System

Colour-Coded bags and bins are used for ease of segregation and ultimate disposal

Waste Categories	Contents	Color coding
General waste		
Solid, non-sharp waste		
Soiled waste		
Infected non-sharp waste		
Waste sharps		

Student wrote the correct answers: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Block F Module 3: Pre-Clinical Dentistry I: Healing, Repair & Dental Restorations Practical List

1. **Atraumatic Restorative Treatment**
2. **Dental Indices**
3. **Fluorosis Index**
4. **School Dental Health Programmes and outreach programmes**

Block F

Module 3: Pre-Clinical Dentistry I: Healing, Repair & Dental Restorations

Atraumatic Restorative Treatment

Number of Hours: 2

Learning Outcomes:

1. Demonstrate the application of atraumatic restorative procedures in a community/ simulated environment.

Materials Required:

1. Pen, pencil and paper
2. Whiteboard with marker
3. ART kit.
4. Dental Models
5. Simulated patient

Date:

Introduction

Atraumatic restorative treatment (ART) is a procedure where carious cavities of teeth are excavated using hand instruments only and restored with tooth friendly and adhesive cement such as glass ionomer (type 9). This method of treatment initially developed with the idea of providing basic dental treatment to underprivileged people in less industrialized countries and neglected groups like refugees and disadvantaged communities. They usually do not approach dental health care for decay until teeth require their removal or pain is intolerable. These people are deprived of advanced oral health care as in the developed world. The main reasons for underlying circumstances are dearth of electricity and traditional restorative dental care requiring electrically driven equipment. On the other hand, ART technique enables restoration of carious teeth of people in areas where scarcity of electricity and / or where the community cannot afford costly dental equipment. "Teeth for life" concept is supported by ART technique by proving a specially designed tool to health workers. With this technique, tooth structure is conserved to a great extent by removing carious tooth part with hand instruments alone and restoring the cavity with tooth adhesive material such as glass ionomer cement (GIC). As GIC has fluoride releasing property, it prevents further tooth decay. ART concept has established a position in modem surgery in developed countries. This technique could be performed in a patient with multiple carious lesions and caries progression is stabilized before more definitive treatment is provided. This technique also gained its importance in treating anxious patients who are scared of drilling. This is mainly because of accomplishing restorative procedure by using hand instruments only. As the ART procedure could be carried out at home or hospital, for this reason it gained popularity in treating patients with medical or physical disability and it has

became easy. The principal objective of managing dentinal lesion operatively is to remove mainly completely demineralised tooth tissues. This is best achieved through using hand instruments or slowly rotating drills if accessibility is not available. In doing so, only soft, completely demineralised tissue is removed without any preconceived cavity design. A very large proportion of dentine lesions can be treated using the ART approach, which causes less discomfort than conventionally placed amalgam restorations. The anatomy of the carious lesion dictates the size and shape of the cavity preparation, followed by restoration with an adhesive filling material into the cleaned cavity preparation, over the margin and over the adjacent pit and fissures. This sealant restoration arrests caries activity that is present in dentine and enamel. If it is supported by good oral hygiene and other preventive measures, it increases the survival of the restoration.

Principles

1. Removing carious tooth tissue using hand instruments only.

2. Restoring the cavity with adhesive cement (glass ionomer)

Reasons for Using Hand Instruments

• With this technique, restorative care is made available to all population groups.

• This technique is said to be tooth friendly as this conserves sound tooth tissues and causes less trauma to the teeth by requiring minimal cavity preparation.

• Cost effective technique as this uses hand instruments in place of costly electrically driven dental equipment
• Use of local anesthesia for pain management is minimal there by reducing the psychological trauma to patients.

• Hand instruments are easy clean and sterilize after every use, thus making infection control simplified.

Reasons for Using Glass Ionomer Cement

• Glass ionomer cement has inherent property of chemically bond to both enamel and dentine, thereby need for the cutting of sound tooth structure for cavity preparation is reduced

• Leaching of fluoride from glass ion om er cement restoration also prevent and arrest the caries progression.

• Glass ionomer cement is considered to be biocompatible cement as this restoration does not cause any irritation to pulp and gingiva and has a co-efficient of thermal expansion similar to tooth structure.

• For these reasons, ART provides both preventive and curative treatment in one procedure.

Indications:

• Carried out only in the small and shallow cavities involving dentine that are accessible to hand instruments.
• Introducing oral care to very young children scared of drilling.
• Patients with extreme fear / anxiety.
• For home bound elderly and those living in nursing homes.
• For mentally or physically handicapped patients.
• In high-risk cases as an intermediate treatment to stabilize conditions.

Contraindications

• Presence of swelling (periapical abscess) or fistula (opening from periapical abscess region to the oral cavity) near the decayed tooth.

• Pulp exposure

• Chronic inflammation of the pulp with pain in the tooth.

• Frank carious cavity with inaccessible opening to hand instruments.

ART INSTRUMENTS

Instruments	Materials	Other
Mouth mirror	Cotton wool roll	Examination gloves
Explorer	Cotton wool pellet	Mouth mask
Pair of tweezers	Clean water	Operating light
Dental hatchet	Glass ionomer restorative material liquid, powder and measuring spoon	Operating bed/head rest extension
Spoon excavator, small	Dentine conditioner	Stool
Spoon excavator, medium	Petroleum jelly	Methylated alcohol
Spoon excavator, large	Wedge	Pressure cooker
Applier/carver	Plastic strip	Instrument forceps
Glass slab or paper mixing pad	Articulation paper	Soap and towel
Spatula		Sheet of textile Sharpening stone and oil

(Practical Exercises 1 and 2 on next page)

Practical Exercise 1

Draw all the instruments and materials required for ART below and do not draw the others category:

Student drew appropriate diagrams: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Practical Exercise 2

For each of the instruments and materials required for ART which you have drawn above, write down one of their functions.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

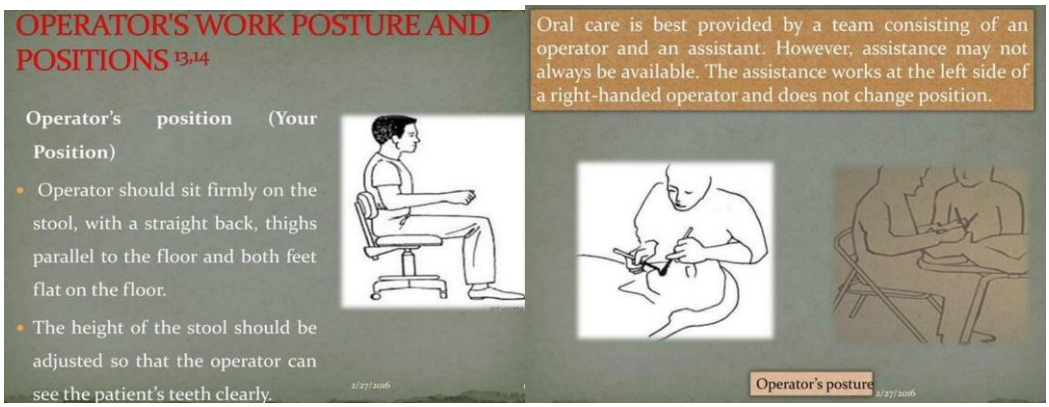
Student wrote the correct answers: ☐ Yes ☐ No

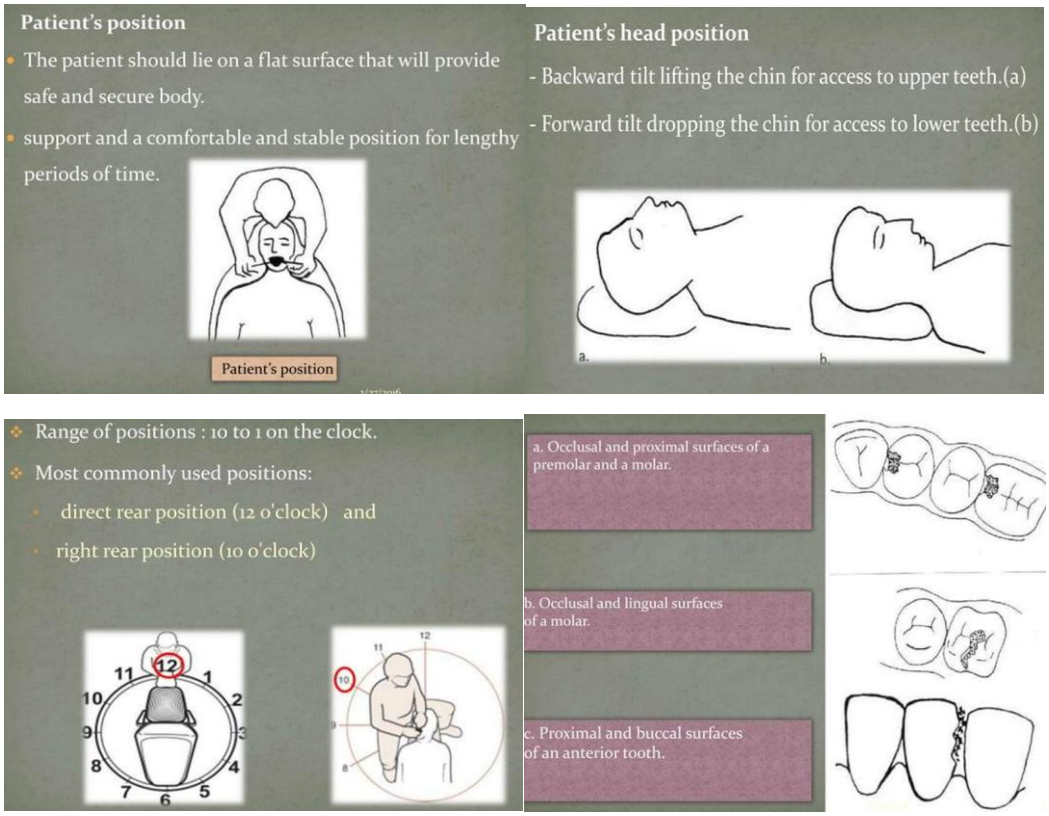
Student needs improvement on: _____

_____

Signature of Teacher

Operator Position and ART filling Procedure





Practical Exercise 3

1. After learning to demonstrate ART on a dental model and/or patient, write down the steps of the ART procedure for restoring one-surface cavities.

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

6. _____

_____

7. _____

_____

8. _____

_____

9. _____

_____

10. _____

_____

11. _____

_____

12. _____

_____

2. Write down the steps of the ART procedure for restoring one-surface cavities.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

3. Write down the steps of the ART procedure for restoring anterior teeth cavities.

1. _____

2. _____

3. _____

4. _____

Student wrote the correct answers: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Block F

Module 3: Pre-Clinical Dentistry I: Healing, Repair & Dental Restorations

Dental Indices

Number of hours: 4

Learning Outcomes:

1. Demonstrate the measurement of different indices on study models
2. Discuss the merits and demerits of different oral disease indices

Materials Required:

1. Pen, pencil and paper
2. Whiteboard with marker
3. Dental Examination Instruments.
4. Dental Indices Models
5. Simulated patient

Date:

Index

A numerical value describing the relative status of a population on a graduated scale with definite upper and lower limits, which is designed to permit and facilitate comparison with other populations classified by the same criteria and methods.

Uses

1. Clinical trial
2. Epidemiologic survey

Indices covered in practicals:

1. Decayed, Missing and Filled Teeth for permanent and deciduous teeth (DMFT, dmft)
2. Decayed, Missing and Filled Surfaces for permanent and deciduous teeth (DMFS, dmfs)
3. Simplified Oral Hygiene Index (OHI-S)
4. Community Periodontal Index of Treatment Needs (CPITN)
5. Dean's Fluorosis Index (DFI)

Decayed, Missing and Filled Teeth for permanent and deciduous teeth (DMFT, dmft)

Introduction

The Decayed - Missing - Filled Index was introduced by Henry Klein, Carrole .E. Palmer & Knutson J.W in 1938. It has been used for more than 70 years as a key measure of caries experience in Dental Epidemiology. The DMFT index measures total lifetime caries experience.

Permanent dentition

The DMFT Index is applied to the permanent dentition and is expressed as the total number of teeth or surfaces that are decayed (D), missing (M) or filled (F) in an individual. When the index is applied to teeth specifically, it is called the DMFT index and scores per individual can range from 0 to 28 or 32, depending on whether the third molars are included in the scoring or not.

When the index is applied only to tooth surfaces (five per posterior tooth and four per anterior tooth), it is called the DMFS index, and scores per individual can range from 0 to 128 or 148, depending on whether the third molars are included in the scoring or not.

Deciduous dentition

When written in lowercase letters, the dmft index is a variation that is applied to the primary dentition. The caries experience for a child is expressed as the total number of teeth or surfaces that are decayed (d), missing (m) or filled (f)- The dmft index expresses the number of affected teeth in the primary dentition, with scores ranging from 0 to 20 for children. Because of the difficulty in distinguishing between teeth extracted due to caries and those that have naturally exfoliated, missing teeth may be ignored according to some protocols. In this case, it is called the df index.

Permanent	Description	Deciduous
D	Used to describe decayed teeth	**d**
M	Used to describe missing teeth due to caries	**m**
F	Used to describe teeth that have been previously filled	**f**
T	Denotes teeth	**t**

Criteria of DMFT

Identification of dental caries:

1. The lesion is clinically visible and obvious.

2. The explorer tip can penetrate deep into soft yielding material.

3. There is discoloration or loss of translucency typical of undermined or dematerialized enamel.

4. The explorer tip in a pit or fissure catches or resists removal after moderate to firm pressure on insertion and when there is softness at the base of the area.

Principles and rules in recording DMFT

1. No tooth must be counted more than once. It's either decayed, missing, filled or sound.

2. Decayed, Missing and Filled teeth should be recorded separately.

3. When counting the number of decayed teeth, it also includes those teeth which have restoration with recurrent decay.

4. Care must be taken to list as missing only those teeth which have been lost due to decay. Also included should be those teeth which are so badly decayed that they are indicated for extractions.

5. The following should not be counted as missing:

    a) Unerupted teeth.

    b) Missing teeth due to accident.

    c) Congenitally missing teeth.

    d) Teeth that have been extracted for orthodontic reasons.

6. A tooth may have several restorations, but it is counted as one tooth.

7. Deciduous teeth are not included in DMFT count.

8. A tooth is considered to be erupted when occlusal surface or incisal edge is totally exposed or can be exposed by gently reflecting the overlying gingival tissue with the mirror and explorer.

9. Generally, all 28 permanent teeth are examined. The teeth not included are:

    a) The 3rd molar

    b) Unerupted teeth

10. Congenitally missing and supernumerary teeth

    a) Teeth removed for reasons other than dental caries such as for orthodontic treatment or impaction

    b) Teeth restored for reasons other than dental caries such as trauma, cosmetic purposes or for use as a bridge abutment.

    c) Primary tooth retained with the permanent successor erupted. The permanent tooth is evaluated since a primary tooth is never included in this index.

WHO modification of DMFT index (1986)

1. All 3rd molars are included.

2. Temporary restorations are considered as 'D'.

3. Only carious cavities are considered as 'D'. The initial lesions (chalky spots, stained fissures etc.) are not considered as 'D'. The DMFT Index can be applied to denote the number of affected teeth (DMFT) or to measure the surface affected by dental caries (DMFS).

Limitations of DMFT index

1. DMFT values are not related to the number of teeth at risk.
2. DMFT index can be invalid in older adults because teeth can become lost for reasons other than caries.
3. DMFT index can be misleading in children whose teeth have been lost due to orthodontic reasons.
4. DMFT index can overestimate caries experience in teeth in which preventive fillings have been placed.
5. DMFT index is of little use in studies of root caries.

Examination method for DMFT (Permanent teeth only)

'D' Decayed	• It indicates the number of permanent teeth that are decayed. • In counting the number of decayed permanent teeth, remember that a tooth can only be counted once. • It cannot be counted as decayed and filled. • If it has been restored and caries can be described, count it as decayed. • Be sure the explorer falls into carious tooth substance and not just in a deep groove before counting occlusal caries.
'M' Missing	• Indicate the number of missing permanent teeth due to decay. • Those teeth which are so badly decayed that they are indicated for extraction are counted as missing. • When possible, history should be taken when it is suspected that teeth have been lost due to caries or for reasons other than caries.
F' Filled	• Indicate the numbers of permanent teeth that have been attacked by caries, due to which they have been restored to keep them in healthy condition in mouth. • A tooth may have several fillings, but it is counted as one tooth.

Practical Exercise 1

Record and calculate the DMFT index on the given model and/or on a simulated patient.

Practical Exercise 2

Record and calculate the dmft index on the given model and/or on a simulated patient.

DMFT Index

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

DT : MT : FT : DMFT :

dmft Index

55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75

dt: mt: ft: dmft:

Recording form for caries index

Individual DMFT	Total each component separately then add. i.e. D+M+F= DMFT
Percentage of teeth affected by dental caries	DMFT divided by total number of teeth examined, multiplied by 100. (D+M+F/ 28 or 32) x 100
Group average	Calculate DMFT of each individual of group Add all DMFTs and divide them by total number of subjects.

Student recording and calculated DMFT and dmft correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Decayed, Missing and Filled Surfaces for permanent and deciduous teeth (DMFS, dmfs)

DMFS Index

DMFS index records the number of decayed, missing and filled surfaces of permanent teeth, providing a more sensitive measure of caries experience.

dmfs Index

dmfs index records the number of decayed, missing and filled surfaces of primary teeth. It expresses the number of affected surfaces in primary dentition (five per posterior tooth and four per anterior tooth), with a score range of 0 to 88 surfaces.

Procedure for DMFS / dmfs Recording

Tooth Surfaces Examined:

Posterior teeth: 5 surfaces (M, D, F, L, O)

Anterior teeth: 4 surfaces (M, D, F, L)

Each affected surface is recorded separately.

Practical Exercise 3

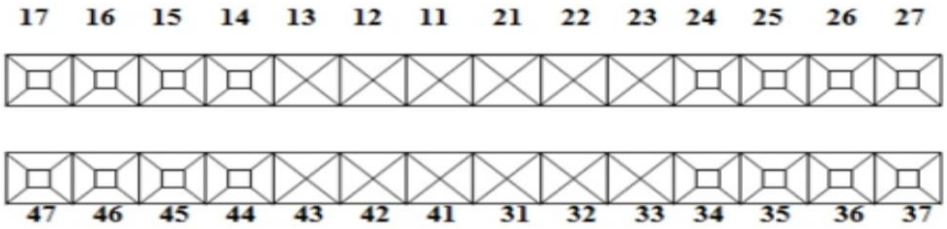
Record and calculate the DMFS index on the given model and/or on a simulated patient.

Practical Exercise 4

Record and calculate the dmfs index on the given model and/or on a simulated patient.

Recording Tables: DMFS / dmfs

Permanent Dentition (DMFS)



Total Decayed Surfaces = _____

Total Missing Surfaces = _____

Total Filled Surfaces = _____

DMFS Score = D + M + F = _____

Primary Dentition (dmfs)

Tooth No.	Mesial	Distal	Labial / Buccal	Lingual / Palatal	Occlusal	Tooth dmfs
55						
54						
53						
52						
51						
61						
62						
63						
64						
65						
85						
84						
83						
82						
81						
71						
72						
73						
74						
75						

Total Decayed Surfaces = _____

Total Missing Surfaces = _____

Total Filled Surfaces = _____

dmfs Score = d + m + f = _____

Student recording and calculated DMFS and dmfs correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Simplified Oral Hygiene Index (OHI-S)

The Simplified Oral Hygiene Index (OHI-S) is a quantitative index used to assess oral cleanliness by estimating the amount of debris and calculus present on selected tooth surfaces.

Components of OHI-S: OHI-S consists of two components:

1. Simplified Debris Index (DI-S)
2. Simplified Calculus Index (CI-S)

Formula: OHI-S = DI-S + CI-S

Teeth and Surfaces Examined: Six specific teeth are examined, one from each sextant:

Sextant	Tooth Number	Surface Examined
Maxillary right posterior	16	Facial
Maxillary anterior	11	Facial
Maxillary left posterior	26	Facial
Mandibular left posterior	36	Lingual
Mandibular anterior	31	Facial
Mandibular right posterior	46	Lingual

Rules for calculation

1. Only fully erupted permanent teeth are scored.
2. Third molars and incompletely erupted teeth are not scored because of the wide variations in heights of clinical crowns.
3. The buccal and lingual debris scores are both taken on the tooth in a segment having the greatest surface area covered by debris.
4. The buccal and lingual calculus scores are both taken on the tooth in a segment having the greatest surface area covered by supragingival and subgingival calculus.
5. If the index tooth is missing, the next fully erupted tooth in that sextant is examined.

Procedure

1. Seat the patient comfortably and explain the procedure.
2. Examine only fully erupted permanent teeth.
3. Dry the teeth using cotton rolls or gauze.
4. Examine the selected tooth surfaces for debris using a dental explorer.
5. Record debris scores according to the criteria.
6. Examine the same surfaces for calculus both visually and using an explorer.
7. Record calculus scores.

Scoring Criteria

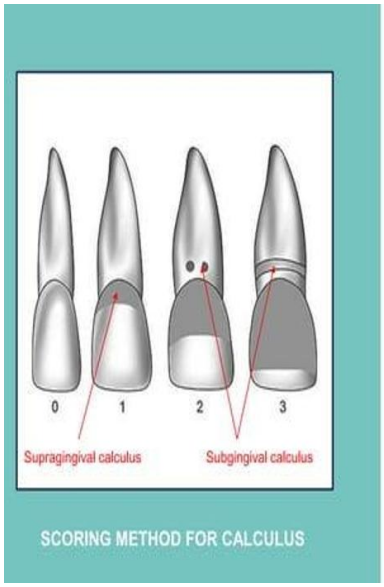
Simplified Debris Index (DI-S)

DEBRIS SCORE

SCORE	CRITERIA
0	No debris or stains present.
1	Soft debris covering not more than 1/3rd the tooth surface or presence of extrinsic stains without other debris regardless of the area covered.
2	Soft debris covering more than 1/3rd, but not more than 2/3rd of the exposed tooth surface.
3	Soft debris covering more than 2/3rd of the exposed tooth surface.

$$\text{Debris index(DI)} = \frac{\text{Total Debris Score}}{\text{No. of segments scored}}$$

Simplified Calculus Index (CI-S)



CALCULUS SCORE

SCORE	CRITERIA
0	No calculus present.
1	Supragingival calculus covering not more than 1/3rd of the exposed tooth surface.
2	Supragingival calculus covering more than 1/3rd but not more than 2/3rd of the exposed tooth surface or presence of individual flecks of subgingival calculus around the cervical portion of the tooth or both.
3	Supragingival calculus covering more than 2/3rd of the exposed tooth surface or a continuous heavy band of the subgingival calculus around the cervical portion of the tooth or both.

$$\text{Calculus Index (CI)} = \frac{\text{Total calculus score}}{\text{No. of segments scored}}$$

Practical Exercise 5

Record and calculate the OHI-S index on the given model and/or on a simulated patient.

Recording Table

Debris and Calculus Scores			
Tooth No.	**Surface**	**Debris Score**	**Calculus Score**
16	Facial		
11	Facial		
26	Facial		

36	Lingual		
31	Facial		
46	Lingual		
Total			

Calculations

DI-S = Total Debris Score ÷ Number of surfaces examined

CI-S = Total Calculus Score ÷ Number of surfaces examined

OHI-S = DI-S + CI-S = =

Interpretation of Scores

Interpretation of DI-S and CI-S

Score Range	Interpretation
0.0 – 0.6	Good
0.7 – 1.8	Fair
1.9 – 3.0	Poor

Interpretation of OHI-S

Score Range	Interpretation
0.0 – 1.2	Good oral hygiene
1.3 – 3.0	Fair oral hygiene
3.1 – 6.0	Poor oral hygiene

Result

Based on the calculated OHI-S score, the oral hygiene status of the patient is:

_____

Student recorded, calculated and interpreted OHI-S correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Community Periodontal Index of Treatment Needs (CPITN)

The Community Periodontal Index of Treatment Needs (CPITN) is an epidemiological index designed to assess periodontal health by recording gingival bleeding, presence of calculus, and periodontal pocket depth, and to determine the type of periodontal treatment required.

Purpose and Uses of CPITN

1. To screen periodontal conditions in individuals and communities.
2. To estimate periodontal treatment needs.
3. To plan and monitor community periodontal health programs.
4. To provide a rapid and reproducible method for periodontal assessment.

Instrument Used: CPITN Probe

WHO–CPITN Probe Characteristics:

- Lightweight probe with a 0.5 mm ball tip.
- Black band between 3.5 mm and 5.5 mm from the tip.
- Additional markings at 8.5 mm and 11.5 mm.

Functions:

1. Measurement of periodontal pocket depth.
2. Detection of subgingival calculus.

Sextants and Teeth Selection

The mouth is divided into six sextants:

Sextant	Teeth Included
Upper right posterior	18–14
Upper anterior	13–23
Upper left posterior	24–28
Lower left posterior	38–34
Lower anterior	33–43
Lower right posterior	44–48

Rules:

1. A sextant is examined only if two or more functional teeth are present.
2. If only one or no teeth are present, the sextant is scored as X.
3. Third molars are excluded unless they function in place of second molars.

Index Teeth for Examination

Adults (≥20 years): 17/16, 11, 26/27, 36/37, 31, 46/47

Adolescents and young people (≤19 years): 16, 11, 26, 36, 31, 46

If index teeth are missing, remaining teeth in the sextant are examined.

Examination Procedure

1. Seat the patient comfortably and explain the procedure.
2. Examine each sextant systematically.
3. Insert the CPITN probe gently along the gingival sulcus, keeping it parallel to the long axis of the tooth.
4. Probe six sites per tooth (mesial, mid, and distal on both buccal and lingual surfaces).
5. Apply a probing force not exceeding 20 grams.
6. Record the highest score observed in each sextant.

CPITN Codes and Criteria

Code	Criteria
0	Healthy periodontium
1	Bleeding observed during or after probing
2	Calculus detected during probing, with or without bleeding
3	Pathological pocket 4–5 mm (gingival margin on black band)
4	Pathological pocket ≥6 mm (black band not visible)
X	Less than two teeth present in sextant

Practical Exercise 6

Record and calculate the CPITN index on the given model and/or on a simulated patient.

Recording Table

CPITN Recording Chart

Sextant	Teeth Examined	Code
UR Posterior		
Upper Anterior		
UL Posterior		
LL Posterior		
Lower Anterior		
LR Posterior		

Determination of Treatment Needs

CPITN Code	Treatment Need	Description
Code 0	TN-0	No treatment required
Code 1	TN-1	Oral hygiene instruction
Code 2	TN-2	Oral hygiene instruction + scaling and removal of plaque retentive factors
Code 3	TN-2	Scaling and root planing + oral hygiene instruction
Code 4	TN-3	Complex periodontal treatment including deep scaling and surgical procedures

Result

Based on CPITN examination, the periodontal treatment need of the patient is:

_____

Student recorded, calculated and interpreted CPITN correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Block F

Module 3: Pre-Clinical Dentistry I: Healing, Repair & Dental Restorations

Fluorosis Index

Number of Hours: 2

Learning Outcomes:

1. Explain fluorosis Index.
2. Calculate dean's fluorosis index on the given model.

Materials Required:

1. Pen, pencil and paper
2. Whiteboard with marker
3. Dental Examination Instruments.
4. Dental Indices Models
5. Simulated patient

Date:

Dental Fluorosis

Dental fluorosis is a hypoplasia or hypomineralization of tooth enamel caused by chronic ingestion of excessive fluoride during the developmental stage of teeth. It is clinically manifested as dull, opaque white areas which may become mottled, discoloured or pitted. Indices are used to express clinical observations in numerical or categorical values for comparison and epidemiological assessment.

Definition of Index

An index is a numerical value describing the relative status of an individual or population on a graduated scale with definite upper and lower limits, designed to permit comparison using standardized criteria.

DEAN'S FLUOROSIS INDEX

Dean's Fluorosis Index was devised by Trendley H. Dean in 1934 to assess the presence and severity of mottled enamel. It is an ordinal scale based on the clinical appearance of the two most affected teeth.

Advantages

1. Simple and easy to apply
2. Useful in epidemiological surveys
3. Standardized and widely accepted

Limitations

1. Does not provide information on distribution of fluorosis within dentition
2. Isolated defects may not be recorded
3. Categories may overlap

Method of Examination

- Examination is carried out in good natural light.
- The subject is seated facing the source of light.
- Mouth mirror and probe are used for examination.
- The two most affected teeth are selected for scoring.

Classification of Dean's Fluorosis Index

Category	Clinical Criteria
Normal	Enamel shows usual translucency with smooth, glossy, pale creamy white appearance. Normal 
Questionable	Slight aberrations from normal translucency, ranging from a few white flecks to occasional white spots. Questionable 
Very Mild	Small opaque, paper white areas scattered irregularly; less than 25% of surface involved; no brown stain. Very Mild 
Mild	White opaque areas involving less than 50% of the tooth surface; faint brown stains may be present.

	Mild 
Moderate	All enamel surfaces affected; surfaces subjected to attrition are definitely marked; brown stains frequently present. Moderate 
Moderately Severe	Marked enamel hypoplasia; pitting is more frequent and generally seen on all surfaces; brown stains more pronounced. Moderately Severe 
Severe	All enamel surfaces affected; discrete or confluent pitting; widespread brown to black stains; alteration in tooth form. Severe 

MODIFIED DEAN'S FLUOROSIS INDEX

Modified Dean's Fluorosis Index is a numerical modification of Dean's original classification. It assigns numerical scores to each category to facilitate calculation of the Community Fluorosis Index (CFI).

Classification of Modified Dean's Fluorosis Index

Score	Category	Clinical Criteria
0	Normal	Enamel shows usual translucency with smooth, glossy, pale creamy white colour. Normal 
0.5	Questionable	Slight aberrations from normal translucency, ranging from a few white flecks to occasional white spots. Questionable 
1	Very Mild	Small opaque, paper white areas scattered irregularly; less than 25% of surface involved; no brown stain. Very Mild 
2	Mild	White opaque areas involving less than 50% of the tooth surface; faint brown stains may be present. Mild 
3	Moderate	All enamel surfaces affected; surfaces subjected to attrition are definitely marked; brown stains frequently present.

		Moderate 
4	Severe	All enamel surfaces affected; discrete or confluent pitting; widespread brown to black stains; alteration in tooth form. Severe 

Procedure

1. Seat the subject comfortably facing the light source.
2. Examine all teeth using mouth mirror and probe.
3. Identify the two most affected teeth.
4. Assess enamel changes according to Dean's criteria.
5. Assign appropriate Dean's and Modified Dean's scores.
6. Record findings on the recording table.

Practical Exercise 1

Record all the information given below about Dean's Flourosis index using the given model and/or a simulated patient.

Recording Table

Tooth Number	Clinical Appearance	Dean's Category	Modified Dean's Score

Final Recording

Dean's Fluorosis Index Category: _____

Modified Dean's Fluorosis Index Score: _____

Interpretation

Based on both indices' findings, the subject is classified as having: _____

Student recorded, calculated & interpreted Dean's & Modified Dean's Fluorosis Index correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Block F

Module 3: Pre-Clinical Dentistry I: Healing, Repair & Dental Restorations

School Dental Health Programmes and outreach programmes

Number of hours: 20

Learning Outcomes:

1. Define the concept of school health programs and describe their importance in community health (WHO initiative).
2. Explain the aims of school dental health and the role it plays in preventing oral diseases among children.
3. Discuss the importance of early detection and the prevention of dental diseases in the school setting.
4. Critically assess the challenges and limitations of implementing comprehensive dental care in schools
5. Develop effective communication skills tailored to interacting with children and their caregivers about oral health.
6. Propose strategies for integrating dental health education into existing school health curricula to enhance long-term dental care among children

Materials Required:

1. Pen, pencil and paper
2. Dental Examination Instruments
3. School Children patients during school visit

Date:

Practical Exercise 1

During your school visit start the examination of the child by following the School Dental Visit Questionnaire given below.

School Dental Visit Questionnaire (2nd Year BDS)

Instructions for Students:

This questionnaire is to be used during a school dental visit for the assessment of oral health status and related factors among school-going children. Complete Sections A–C by interview and observation. Complete Section D after clinical examination using mouth mirror and probe under natural light, following WHO criteria. According to the findings fill in Section F.

Section A: Identification Details

Name of School: _____

School Address / Area: _____

Date of Visit: ____ / ____ / _____

Examiner Name (Student): _____

Examiner Roll No.: _____

Child's Serial Number: _____

Section B: Socio-Demographic Information

Name of Child: _____

Age (in completed years): _____ years

Gender: ☐ Male ☐ Female

Class / Grade: _____

Type of School: ☐ Government ☐ Private

Area of Residence: ☐ Urban ☐ Rural

Section C: Oral Health Behaviour and History

1. How often do you brush your teeth?

☐ Twice daily ☐ Once Daily ☐ Other please specify: _____

2. What is the timing of your toothbrushing?

☐ Before Meals ☐ After Meals

3. What do you use to clean your teeth?

☐ Toothbrush & toothpaste ☐ Toothpowder ☐ Miswak ☐ Other: _____

4. If you use toothpaste, what type do you use?

☐ Fluoridated ☐ Non-fluoridated ☐ Don't know

5. Do you rinse your mouth after meals?

☐ Always ☐ Sometimes ☐ ☐ Never

6. How often do you consume sugary foods?

☐ Once daily ☐ More than once daily ☐ Occasionally ☐ Rarely

7. How often do you drink sugary beverages?

☐ Daily ☐ Weekly ☐ Occasionally ☐ Never

8. Have you ever visited a dentist before?

☐ Yes ☐ No

9. If yes, what was the 4eason for the last dental visit?

☐ Pain ☐ Check-up ☐ Tooth decay ☐ Gum problem ☐ Other: _____

10. Do you have pain or discomfort in your teeth at present?

☐ Yes ☐ No

Section D: Caries Experience Index (dmft / DMFT)

1. Dentition Type: ☐ Primary ☐ Permanent ☐ Mixed

2. Decayed, missing, filled teeth (DMFT) recording for permanent teeth Decayed, filled teeth (dmft) recording for primary teeth:

DMFT Index

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

DT : MT : FT : DMFT :

dmft Index

55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75

dt: mt: ft: dmft:

Section E: Oral Hygiene Status

Overall oral hygiene status: ☐ Good ☐ Fair ☐ Poor

Presence of visible plaque: ☐ Yes ☐ No

Gingival condition: ☐ Healthy ☐ Bleeding ☐ Inflamed

Part F: Treatment Priority & Recommendations (Based on your findings)

1. Urgency of Care:

☐ No obvious problem (Recall)

☐ Routine dental care needed (e.g., small caries, prophylaxis)

☐ Early dental care needed (e.g., large caries, mild pain)

☐ Urgent care needed (e.g., swelling, abscess, severe pain)

2. Specific Advice Given:

☐ Oral hygiene instructions (Brushing frequency and method, flossing frequency and method)

☐ Health education (Stop smoking and drugs)

☐ Diet counseling (Reduce sugar frequency)

☐ Fluoride application advised

☐ Referred to dentist for: _____

Student filled in the proforma correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

School Dental Visit Questionnaire (2nd Year BDS)

Instructions for Students:

This questionnaire is to be used during a school dental visit for the assessment of oral health status and related factors among school-going children. Complete Sections A–C by interview and observation. Complete Section D after clinical examination using mouth mirror and probe under natural light, following WHO criteria. According to the findings, fill in Section F.

Section A: Identification Details

Name of School: _____

School Address / Area: _____

Date of Visit: ____ / ____ / _____

Examiner Name (Student): _____

Examiner Roll No.: _____

Child's Serial Number: _____

Section B: Socio-Demographic Information

Name of Child: _____

Age (in completed years): _____ years

Gender: ☐ Male ☐ Female

Class / Grade: _____

Type of School: ☐ Government ☐ Private

Area of Residence: ☐ Urban ☐ Rural

Section C: Oral Health Behaviour and History

2. How often do you brush your teeth?

☐ Twice daily ☐ Once Daily ☐ Other please specify: _____

3. What is the timing of your toothbrushing?

☐ Before Meals ☐ After Meals

4. What do you use to clean your teeth?

☐ Toothbrush & toothpaste ☐ Toothpowder ☐ Miswak ☐ Other: _____

5. If you use toothpaste, what type do you use?

☐ Fluoridated ☐ Non-fluoridated ☐ Don't know

6. Do you rinse your mouth after meals?

☐ Always ☐ Sometimes ☐ ☐ Never

7. How often do you consume sugary foods?

☐ Once daily ☐ More than once daily ☐ Occasionally ☐ Rarely

8. How often do you drink sugary beverages?

☐ Daily ☐ Weekly ☐ Occasionally ☐ Never

9. Have you ever visited a dentist before?

☐ Yes ☐ No

10. If yes, what was the 4eason for the last dental visit?

☐ Pain ☐ Check-up ☐ Tooth decay ☐ Gum problem ☐ Other: _____

11. Do you have pain or discomfort in your teeth at present?

☐ Yes ☐ No

Section D: Caries Experience Index (dft / DMFT)

1. Dentition Type: ☐ Primary ☐ Permanent ☐ Mixed

2. Decayed, missing, filled teeth (DMFT) recording for permanent teeth Decayed, filled teeth (dft) recording for primary teeth:

DMFT Index

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

DT : MT : FT : DMFT :

dft Index

55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75

dt : ft : dft :

Section E: Oral Hygiene Status

Overall oral hygiene status: ☐ Good ☐ Fair ☐ Poor

Presence of visible plaque: ☐ Yes ☐ No

Gingival condition: ☐ Healthy ☐ Bleeding ☐ Inflamed

Part F: Treatment Priority & Recommendations (Based on your findings)

1. Urgency of Care:

☐ No obvious problem (Recall)

☐ Routine dental care needed (e.g., small caries, prophylaxis)

☐ Early dental care needed (e.g., large caries, mild pain)

☐ Urgent care needed (e.g., swelling, abscess, severe pain)

2. Specific Advice Given:

☐ Oral hygiene instructions (Brushing frequency and method, flossing frequency and method)

☐ Health education (Stop smoking and drugs)

☐ Diet counseling (Reduce sugar frequency)

☐ Fluoride application advised

☐ Referred to dentist for: _____

Student filled in the proforma correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

School Dental Visit Questionnaire (2nd Year BDS)

Instructions for Students:

This questionnaire is to be used during a school dental visit for the assessment of oral health status and related factors among school-going children. Complete Sections A–C by interview and observation. Complete Section D after clinical examination using mouth mirror and probe under natural light, following WHO criteria. According to the findings, fill in Section F.

Section A: Identification Details

Name of School: _____

School Address / Area: _____

Date of Visit: ____ / ____ / _____

Examiner Name (Student): _____

Examiner Roll No.: _____

Child's Serial Number: _____

Section B: Socio-Demographic Information

Name of Child: _____

Age (in completed years): _____ years

Gender: ☐ Male ☐ Female

Class / Grade: _____

Type of School: ☐ Government ☐ Private

Area of Residence: ☐ Urban ☐ Rural

Section C: Oral Health Behaviour and History

12. How often do you brush your teeth?

☐ Twice daily ☐ Once Daily ☐ Other please specify: _____

13. What is the timing of your toothbrushing?

☐ Before Meals ☐ After Meals

14. What do you use to clean your teeth?

☐ Toothbrush & toothpaste ☐ Toothpowder ☐ Miswak ☐ Other: _____

15. If you use toothpaste, what type do you use?

☐ Fluoridated ☐ Non-fluoridated ☐ Don't know

16. Do you rinse your mouth after meals?

☐ Always ☐ Sometimes ☐ Never

17. How often do you consume sugary foods?

☐ Once daily ☐ More than once daily ☐ Occasionally ☐ Rarely

18. How often do you drink sugary beverages?

☐ Daily ☐ Weekly ☐ Occasionally ☐ Never

19. Have you ever visited a dentist before?

☐ Yes ☐ No

20. If yes, what was the 4eason for the last dental visit?

☐ Pain ☐ Check-up ☐ Tooth decay ☐ Gum problem ☐ Other: _____

21. Do you have pain or discomfort in your teeth at present?

☐ Yes ☐ No

Section D: Caries Experience Index (dft / DMFT)

2. Dentition Type: ☐ Primary ☐ Permanent ☐ Mixed

2. Decayed, missing, filled teeth (DMFT) recording for permanent teeth Decayed, filled teeth (dft) recording for primary teeth:

DMFT Index

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

DT : MT : FT : DMFT :

dft Index

55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75

dt : ft : dft :

Section E: Oral Hygiene Status

Overall oral hygiene status: ☐ Good ☐ Fair ☐ Poor

Presence of visible plaque: ☐ Yes ☐ No

Gingival condition: ☐ Healthy ☐ Bleeding ☐ Inflamed

Part F: Treatment Priority & Recommendations (Based on your findings)

1. Urgency of Care:

☐ No obvious problem (Recall)

☐ Routine dental care needed (e.g., small caries, prophylaxis)

☐ Early dental care needed (e.g., large caries, mild pain)

☐ Urgent care needed (e.g., swelling, abscess, severe pain)

2. Specific Advice Given:

☐ Oral hygiene instructions (Brushing frequency and method, flossing frequency and method)

☐ Health education (Stop smoking and drugs)

☐ Diet counseling (Reduce sugar frequency)

☐ Fluoride application advised

☐ Referred to dentist for: _____

Student filled in the proforma correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

School Dental Visit Questionnaire (2nd Year BDS)

Instructions for Students:

This questionnaire is to be used during a school dental visit for the assessment of oral health status and related factors among school-going children. Complete Sections A–C by interview and observation. Complete Section D after clinical examination using mouth mirror and probe under natural light, following WHO criteria. According to the findings, fill in Section F.

Section A: Identification Details

Name of School: _____

School Address / Area: _____

Date of Visit: ____ / ____ / _____

Examiner Name (Student): _____

Examiner Roll No.: _____

Child's Serial Number: _____

Section B: Socio-Demographic Information

Name of Child: _____

Age (in completed years): _____ years

Gender: ☐ Male ☐ Female

Class / Grade: _____

Type of School: ☐ Government ☐ Private

Area of Residence: ☐ Urban ☐ Rural

Section C: Oral Health Behaviour and History

22. How often do you brush your teeth?

☐ Twice daily ☐ Once Daily ☐ Other please specify: _____

23. What is the timing of your toothbrushing?

☐ Before Meals ☐ After Meals

24. What do you use to clean your teeth?

☐ Toothbrush & toothpaste ☐ Toothpowder ☐ Miswak ☐ Other: _____

25. If you use toothpaste, what type do you use?

☐ Fluoridated ☐ Non-fluoridated ☐ Don't know

26. Do you rinse your mouth after meals?

☐ Always ☐ Sometimes ☐ Never

27. How often do you consume sugary foods?

☐ Once daily ☐ More than once daily ☐ Occasionally ☐ Rarely

28. How often do you drink sugary beverages?

☐ Daily ☐ Weekly ☐ Occasionally ☐ Never

29. Have you ever visited a dentist before?

☐ Yes ☐ No

30. If yes, what was the 4eason for the last dental visit?

☐ Pain ☐ Check-up ☐ Tooth decay ☐ Gum problem ☐ Other: _____

31. Do you have pain or discomfort in your teeth at present?

☐ Yes ☐ No

Section D: Caries Experience Index (dft / DMFT)

3. Dentition Type: ☐ Primary ☐ Permanent ☐ Mixed

2. Decayed, missing, filled teeth (DMFT) recording for permanent teeth Decayed, filled teeth (dft) recording for primary teeth:

DMFT Index

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

DT : MT : FT : DMFT :

dft Index

55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75

dt : ft : dft :

Section E: Oral Hygiene Status

Overall oral hygiene status: ☐ Good ☐ Fair ☐ Poor

Presence of visible plaque: ☐ Yes ☐ No

Gingival condition: ☐ Healthy ☐ Bleeding ☐ Inflamed

Part F: Treatment Priority & Recommendations (Based on your findings)

1. Urgency of Care:

☐ No obvious problem (Recall)

☐ Routine dental care needed (e.g., small caries, prophylaxis)

☐ Early dental care needed (e.g., large caries, mild pain)

☐ Urgent care needed (e.g., swelling, abscess, severe pain)

2. Specific Advice Given:

☐ Oral hygiene instructions (Brushing frequency and method, flossing frequency and method)

☐ Health education (Stop smoking and drugs)

☐ Diet counseling (Reduce sugar frequency)

☐ Fluoride application advised

☐ Referred to dentist for: _____

Student filled in the proforma correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

School Dental Visit Questionnaire (2nd Year BDS)

Instructions for Students:

This questionnaire is to be used during a school dental visit for the assessment of oral health status and related factors among school-going children. Complete Sections A–C by interview and observation. Complete Section D after clinical examination using mouth mirror and probe under natural light, following WHO criteria. According to the findings, fill in Section F.

Section A: Identification Details

Name of School: _____

School Address / Area: _____

Date of Visit: ____ / ____ / _____

Examiner Name (Student): _____

Examiner Roll No.: _____

Child's Serial Number: _____

Section B: Socio-Demographic Information

Name of Child: _____

Age (in completed years): _____ years

Gender: ☐ Male ☐ Female

Class / Grade: _____

Type of School: ☐ Government ☐ Private

Area of Residence: ☐ Urban ☐ Rural

Section C: Oral Health Behaviour and History

32. How often do you brush your teeth?

☐ Twice daily ☐ Once Daily ☐ Other please specify: _____

33. What is the timing of your toothbrushing?

☐ Before Meals ☐ After Meals

34. What do you use to clean your teeth?

☐ Toothbrush & toothpaste ☐ Toothpowder ☐ Miswak ☐ Other: _____

35. If you use toothpaste, what type do you use?

☐ Fluoridated ☐ Non-fluoridated ☐ Don't know

36. Do you rinse your mouth after meals?

☐ Always ☐ Sometimes ☐ Never

37. How often do you consume sugary foods?

☐ Once daily ☐ More than once daily ☐ Occasionally ☐ Rarely

38. How often do you drink sugary beverages?

☐ Daily ☐ Weekly ☐ Occasionally ☐ Never

39. Have you ever visited a dentist before?

☐ Yes ☐ No

40. If yes, what was the 4eason for the last dental visit?

☐ Pain ☐ Check-up ☐ Tooth decay ☐ Gum problem ☐ Other: _____

41. Do you have pain or discomfort in your teeth at present?

☐ Yes ☐ No

Section D: Caries Experience Index (dft / DMFT)

4. Dentition Type: ☐ Primary ☐ Permanent ☐ Mixed

2. Decayed, missing, filled teeth (DMFT) recording for permanent teeth Decayed, filled teeth (dft) recording for primary teeth:

DMFT Index

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

DT : MT : FT : DMFT :

dft Index

55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75

dt : ft : dft :

Section E: Oral Hygiene Status

Overall oral hygiene status: ☐ Good ☐ Fair ☐ Poor

Presence of visible plaque: ☐ Yes ☐ No

Gingival condition: ☐ Healthy ☐ Bleeding ☐ Inflamed

Part F: Treatment Priority & Recommendations (Based on your findings)

1. Urgency of Care:

☐ No obvious problem (Recall)

☐ Routine dental care needed (e.g., small caries, prophylaxis)

☐ Early dental care needed (e.g., large caries, mild pain)

☐ Urgent care needed (e.g., swelling, abscess, severe pain)

2. Specific Advice Given:

☐ Oral hygiene instructions (Brushing frequency and method, flossing frequency and method)

☐ Health education (Stop smoking and drugs)

☐ Diet counseling (Reduce sugar frequency)

☐ Fluoride application advised

☐ Referred to dentist for: _____

Student filled in the proforma correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

School Dental Visit Questionnaire (2nd Year BDS)

Instructions for Students:

This questionnaire is to be used during a school dental visit for the assessment of oral health status and related factors among school-going children. Complete Sections A–C by interview and observation. Complete Section D after clinical examination using mouth mirror and probe under natural light, following WHO criteria. According to the findings, fill in Section F.

Section A: Identification Details

Name of School: _____

School Address / Area: _____

Date of Visit: ____ / ____ / _____

Examiner Name (Student): _____

Examiner Roll No.: _____

Child's Serial Number: _____

Section B: Socio-Demographic Information

Name of Child: _____

Age (in completed years): _____ years

Gender: ☐ Male ☐ Female

Class / Grade: _____

Type of School: ☐ Government ☐ Private

Area of Residence: ☐ Urban ☐ Rural

Section C: Oral Health Behaviour and History

42. How often do you brush your teeth?

☐ Twice daily ☐ Once Daily ☐ Other please specify: _____

43. What is the timing of your toothbrushing?

☐ Before Meals ☐ After Meals

44. What do you use to clean your teeth?

☐ Toothbrush & toothpaste ☐ Toothpowder ☐ Miswak ☐ Other: _____

45. If you use toothpaste, what type do you use?

☐ Fluoridated ☐ Non-fluoridated ☐ Don't know

46. Do you rinse your mouth after meals?

☐ Always ☐ Sometimes ☐ Never

47. How often do you consume sugary foods?

☐ Once daily ☐ More than once daily ☐ Occasionally ☐ Rarely

48. How often do you drink sugary beverages?

☐ Daily ☐ Weekly ☐ Occasionally ☐ Never

49. Have you ever visited a dentist before?

☐ Yes ☐ No

50. If yes, what was the 4eason for the last dental visit?

☐ Pain ☐ Check-up ☐ Tooth decay ☐ Gum problem ☐ Other: _____

51. Do you have pain or discomfort in your teeth at present?

☐ Yes ☐ No

Section D: Caries Experience Index (dft / DMFT)

5. Dentition Type: ☐ Primary ☐ Permanent ☐ Mixed

2. Decayed, missing, filled teeth (DMFT) recording for permanent teeth Decayed, filled teeth (dft) recording for primary teeth:

DMFT Index

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

DT : MT : FT : DMFT :

dft Index

55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75

dt : ft : dft :

Section E: Oral Hygiene Status

Overall oral hygiene status: ☐ Good ☐ Fair ☐ Poor

Presence of visible plaque: ☐ Yes ☐ No

Gingival condition: ☐ Healthy ☐ Bleeding ☐ Inflamed

Part F: Treatment Priority & Recommendations (Based on your findings)

1. Urgency of Care:

☐ No obvious problem (Recall)

☐ Routine dental care needed (e.g., small caries, prophylaxis)

☐ Early dental care needed (e.g., large caries, mild pain)

☐ Urgent care needed (e.g., swelling, abscess, severe pain)

2. Specific Advice Given:

☐ Oral hygiene instructions (Brushing frequency and method, flossing frequency and method)

☐ Health education (Stop smoking and drugs)

☐ Diet counseling (Reduce sugar frequency)

☐ Fluoride application advised

☐ Referred to dentist for: _____

Student filled in the proforma correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

School Dental Visit Questionnaire (2nd Year BDS)

Instructions for Students:

This questionnaire is to be used during a school dental visit for the assessment of oral health status and related factors among school-going children. Complete Sections A–C by interview and observation. Complete Section D after clinical examination using mouth mirror and probe under natural light, following WHO criteria. According to the findings, fill in Section F.

Section A: Identification Details

Name of School: _____

School Address / Area: _____

Date of Visit: ____ / ____ / _____

Examiner Name (Student): _____

Examiner Roll No.: _____

Child's Serial Number: _____

Section B: Socio-Demographic Information

Name of Child: _____

Age (in completed years): _____ years

Gender: ☐ Male ☐ Female

Class / Grade: _____

Type of School: ☐ Government ☐ Private

Area of Residence: ☐ Urban ☐ Rural

Section C: Oral Health Behaviour and History

52. How often do you brush your teeth?

☐ Twice daily ☐ Once Daily ☐ Other please specify: _____

53. What is the timing of your toothbrushing?

☐ Before Meals ☐ After Meals

54. What do you use to clean your teeth?

☐ Toothbrush & toothpaste ☐ Toothpowder ☐ Miswak ☐ Other: _____

55. If you use toothpaste, what type do you use?

☐ Fluoridated ☐ Non-fluoridated ☐ Don't know

56. Do you rinse your mouth after meals?

☐ Always ☐ Sometimes ☐ Never

57. How often do you consume sugary foods?

☐ Once daily ☐ More than once daily ☐ Occasionally ☐ Rarely

58. How often do you drink sugary beverages?

☐ Daily ☐ Weekly ☐ Occasionally ☐ Never

59. Have you ever visited a dentist before?

☐ Yes ☐ No

60. If yes, what was the 4eason for the last dental visit?

☐ Pain ☐ Check-up ☐ Tooth decay ☐ Gum problem ☐ Other: _____

61. Do you have pain or discomfort in your teeth at present?

☐ Yes ☐ No

Section D: Caries Experience Index (dft / DMFT)

6. Dentition Type: ☐ Primary ☐ Permanent ☐ Mixed

2. Decayed, missing, filled teeth (DMFT) recording for permanent teeth Decayed, filled teeth (dft) recording for primary teeth:

DMFT Index

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

DT : MT : FT : DMFT :

dft Index

55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75

dt : ft : dft :

Section E: Oral Hygiene Status

Overall oral hygiene status: ☐ Good ☐ Fair ☐ Poor

Presence of visible plaque: ☐ Yes ☐ No

Gingival condition: ☐ Healthy ☐ Bleeding ☐ Inflamed

Part F: Treatment Priority & Recommendations (Based on your findings)

1. Urgency of Care:

☐ No obvious problem (Recall)

☐ Routine dental care needed (e.g., small caries, prophylaxis)

☐ Early dental care needed (e.g., large caries, mild pain)

☐ Urgent care needed (e.g., swelling, abscess, severe pain)

2. Specific Advice Given:

☐ Oral hygiene instructions (Brushing frequency and method, flossing frequency and method)

☐ Health education (Stop smoking and drugs)

☐ Diet counseling (Reduce sugar frequency)

☐ Fluoride application advised

☐ Referred to dentist for: _____

Student filled in the proforma correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

School Dental Visit Questionnaire (2nd Year BDS)

Instructions for Students:

This questionnaire is to be used during a school dental visit for the assessment of oral health status and related factors among school-going children. Complete Sections A–C by interview and observation. Complete Section D after clinical examination using mouth mirror and probe under natural light, following WHO criteria. According to the findings, fill in Section F.

Section A: Identification Details

Name of School: _____

School Address / Area: _____

Date of Visit: ____ / ____ / _____

Examiner Name (Student): _____

Examiner Roll No.: _____

Child's Serial Number: _____

Section B: Socio-Demographic Information

Name of Child: _____

Age (in completed years): _____ years

Gender: ☐ Male ☐ Female

Class / Grade: _____

Type of School: ☐ Government ☐ Private

Area of Residence: ☐ Urban ☐ Rural

Section C: Oral Health Behaviour and History

62. How often do you brush your teeth?

☐ Twice daily ☐ Once Daily ☐ Other please specify: _____

63. What is the timing of your toothbrushing?

☐ Before Meals ☐ After Meals

64. What do you use to clean your teeth?

☐ Toothbrush & toothpaste ☐ Toothpowder ☐ Miswak ☐ Other: _____

65. If you use toothpaste, what type do you use?

☐ Fluoridated ☐ Non-fluoridated ☐ Don't know

66. Do you rinse your mouth after meals?

☐ Always ☐ Sometimes ☐ Never

67. How often do you consume sugary foods?

☐ Once daily ☐ More than once daily ☐ Occasionally ☐ Rarely

68. How often do you drink sugary beverages?

☐ Daily ☐ Weekly ☐ Occasionally ☐ Never

69. Have you ever visited a dentist before?

☐ Yes ☐ No

70. If yes, what was the 4eason for the last dental visit?

☐ Pain ☐ Check-up ☐ Tooth decay ☐ Gum problem ☐ Other: _____

71. Do you have pain or discomfort in your teeth at present?

☐ Yes ☐ No

Section D: Caries Experience Index (dft / DMFT)

7. Dentition Type: ☐ Primary ☐ Permanent ☐ Mixed

2. Decayed, missing, filled teeth (DMFT) recording for permanent teeth Decayed, filled teeth (dft) recording for primary teeth:

DMFT Index

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

DT : MT : FT : DMFT :

dft Index

55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75

dt : ft : dft :

Section E: Oral Hygiene Status

Overall oral hygiene status: ☐ Good ☐ Fair ☐ Poor

Presence of visible plaque: ☐ Yes ☐ No

Gingival condition: ☐ Healthy ☐ Bleeding ☐ Inflamed

Part F: Treatment Priority & Recommendations (Based on your findings)

1. Urgency of Care:

☐ No obvious problem (Recall)

☐ Routine dental care needed (e.g., small caries, prophylaxis)

☐ Early dental care needed (e.g., large caries, mild pain)

☐ Urgent care needed (e.g., swelling, abscess, severe pain)

2. Specific Advice Given:

☐ Oral hygiene instructions (Brushing frequency and method, flossing frequency and method)

☐ Health education (Stop smoking and drugs)

☐ Diet counseling (Reduce sugar frequency)

☐ Fluoride application advised

☐ Referred to dentist for: _____

Student filled in the proforma correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

School Dental Visit Questionnaire (2nd Year BDS)

Instructions for Students:

This questionnaire is to be used during a school dental visit for the assessment of oral health status and related factors among school-going children. Complete Sections A–C by interview and observation. Complete Section D after clinical examination using mouth mirror and probe under natural light, following WHO criteria. According to the findings, fill in Section F.

Section A: Identification Details

Name of School: _____

School Address / Area: _____

Date of Visit: ____ / ____ / _____

Examiner Name (Student): _____

Examiner Roll No.: _____

Child's Serial Number: _____

Section B: Socio-Demographic Information

Name of Child: _____

Age (in completed years): _____ years

Gender: ☐ Male ☐ Female

Class / Grade: _____

Type of School: ☐ Government ☐ Private

Area of Residence: ☐ Urban ☐ Rural

Section C: Oral Health Behaviour and History

72. How often do you brush your teeth?

☐ Twice daily ☐ Once Daily ☐ Other please specify: _____

73. What is the timing of your toothbrushing?

☐ Before Meals ☐ After Meals

74. What do you use to clean your teeth?

☐ Toothbrush & toothpaste ☐ Toothpowder ☐ Miswak ☐ Other: _____

75. If you use toothpaste, what type do you use?

☐ Fluoridated ☐ Non-fluoridated ☐ Don't know

76. Do you rinse your mouth after meals?

☐ Always ☐ Sometimes ☐ Never

77. How often do you consume sugary foods?

☐ Once daily ☐ More than once daily ☐ Occasionally ☐ Rarely

78. How often do you drink sugary beverages?

☐ Daily ☐ Weekly ☐ Occasionally ☐ Never

79. Have you ever visited a dentist before?

☐ Yes ☐ No

80. If yes, what was the 4eason for the last dental visit?

☐ Pain ☐ Check-up ☐ Tooth decay ☐ Gum problem ☐ Other: _____

81. Do you have pain or discomfort in your teeth at present?

☐ Yes ☐ No

Section D: Caries Experience Index (dft / DMFT)

8. Dentition Type: ☐ Primary ☐ Permanent ☐ Mixed

2. Decayed, missing, filled teeth (DMFT) recording for permanent teeth Decayed, filled teeth (dft) recording for primary teeth:

DMFT Index

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

DT : MT : FT : DMFT :

dft Index

55	54	53	52	51	61	62	63	64	65
85	84	83	82	81	71	72	73	74	75

dt : ft : dft :

Section E: Oral Hygiene Status

Overall oral hygiene status: ☐ Good ☐ Fair ☐ Poor

Presence of visible plaque: ☐ Yes ☐ No

Gingival condition: ☐ Healthy ☐ Bleeding ☐ Inflamed

Part F: Treatment Priority & Recommendations (Based on your findings)

1. Urgency of Care:

☐ No obvious problem (Recall)

☐ Routine dental care needed (e.g., small caries, prophylaxis)

☐ Early dental care needed (e.g., large caries, mild pain)

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School Address / Area: _____

Date of Visit: ____ / ____ / _____

Examiner Name (Student): _____

Examiner Roll No.: _____

Child's Serial Number: _____

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Name of Child: _____

Age (in completed years): _____ years

Gender: ☐ Male ☐ Female

Class / Grade: _____

Type of School: ☐ Government ☐ Private

Area of Residence: ☐ Urban ☐ Rural

Section C: Oral Health Behaviour and History

82. How often do you brush your teeth?

☐ Twice daily ☐ Once Daily ☐ Other please specify: _____

83. What is the timing of your toothbrushing?

☐ Before Meals ☐ After Meals

84. What do you use to clean your teeth?

☐ Toothbrush & toothpaste ☐ Toothpowder ☐ Miswak ☐ Other: _____

85. If you use toothpaste, what type do you use?

☐ Fluoridated ☐ Non-fluoridated ☐ Don't know

86. Do you rinse your mouth after meals?

☐ Always ☐ Sometimes ☐ Never

87. How often do you consume sugary foods?

☐ Once daily ☐ More than once daily ☐ Occasionally ☐ Rarely

88. How often do you drink sugary beverages?

☐ Daily ☐ Weekly ☐ Occasionally ☐ Never

89. Have you ever visited a dentist before?

☐ Yes ☐ No

90. If yes, what was the 4eason for the last dental visit?

☐ Pain ☐ Check-up ☐ Tooth decay ☐ Gum problem ☐ Other: _____

91. Do you have pain or discomfort in your teeth at present?

☐ Yes ☐ No

Section D: Caries Experience Index (dft / DMFT)

9. Dentition Type: ☐ Primary ☐ Permanent ☐ Mixed

2. Decayed, missing, filled teeth (DMFT) recording for permanent teeth Decayed, filled teeth (dft) recording for primary teeth:

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DT : MT : FT : DMFT :

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Overall oral hygiene status: ☐ Good ☐ Fair ☐ Poor

Presence of visible plaque: ☐ Yes ☐ No

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Part F: Treatment Priority & Recommendations (Based on your findings)

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☐ Fluoride application advised

☐ Referred to dentist for: _____

Student filled in the proforma correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

Block G Module 4: Pre-Clinical Dentistry II: Neoplasia & Dental Rehabilitation Practical List

1. Dietary counseling in a dental care setting

Block G

Module 4: Pre-Clinical Dentistry II: Neoplasia & Dental Rehabilitation

Dietary counseling in a dental care setting

Number of Hours: 2

Learning Outcomes:

1. Assess patient's dietary habits and identify potential oral health risks.
2. Provide personalized dietary advice to patient's specific needs and oral health status.
3. Apply oral health education principles to provide comprehensive dietary counseling.
4. Calculate and interpret Dental Health Score from patient's food diary.

Date:

INTRODUCTION

Oral health is an integral part of general health & is achieved by eating a balanced diet. So, patients are informed about the importance of good dentition. So, guidance in the art of food planning & food preparation & food services is provided. It assists a person to adjust food consumption to his or her health needs.

Nutrition: Science of food and its relationships to health. It is concerned primarily with the part played by the nutrients in body growth, development and maintenance.

Food: Anything that is eaten, drunk or absorbed for maintenance of life, growth and repair of the tissues.

Diet: Total oral intake of a substance that provides nourishment and energy.

Balanced Diet: It is one which contains varieties of foods in such quantities and proportions that the need for energy, amino acids, vitamins, fats, carbohydrates and other nutrients is adequately met for maintaining health, vitality and general well-being and makes provision for a short duration of leanness.

DIET COUNSELLING

Diet counselling involves giving advice on food selection based on the individual's reasons for liking or not liking certain foods. Counselling requires obtaining information as to why, where, when, and what specific foods (e.g. sweets) are eaten, how frequently, and what feelings are experienced. The objectivity, personalization of the diet, and the time spent on counselling are rewarded both financially and by the satisfaction of performing a usual health care and preventive dentistry service.

Minimal Requirements for a Successful Dietary Counselling Service include:

1. The patient and not the counsellor should bear the responsibility for accomplishing the dietary change.
2. Enrolling active patient involvement in planning, implementing, and evaluating the diet before and after counselling
3. Insisting on a series of follow-up visits to tailor the diet to the patient's needs and likes, and to avoid, if possible, dislikes without jeopardizing the dental-oral health status.

Diet counselling could be directive or non-directive. In the directive counselling, the role of the patient is passive,

and the decisions are made by the counsellor for the patient. In the non-directive counselling, the counsellor's role is merely to aid the patient in clarifying and understanding his or her own final decision as to the type of action that should be taken. The non-directive counselling approach is recommended. Diet counselling is tailor-made based on needs of individual patients on a one-on-one basis. Dietary advice is a set of general instructions given to people at large. Dentist counsels via face-to-face interview via eye contact, tone of voice, facial expression & gestures conveying sincerity, enthusiasm & empathy. Modified diet should not deviate too much from regular diet & adapted to patient's needs & daily routine lifestyle. Counselling is done in a different room not in dental chair. Qualities for counselors are patient, sound knowledge of nutrition & health & good communication skills. Maximum patient acceptance and cooperation required for it with him or her making their own final decision about diet. Community based nutritional programs like the school lunch program and midday meal programs can be launched to improve nutritional status of community

Systematic, logical approach for counselling is:

S-O-A-P (Subjective, Objective, Assessment, Plan):

S-Subjective: What does the patient report? Depicts the need for counselling, reason for consuming type of diet, what is being consumed.

O-Objective: What does the clinician observe? Depicts Clinical examination, role of diet in oral health and prevention

A-Assessment: Clinicians' evaluation based on subjective and objective findings. Depicts food/diet adequacy, cariogenic potential of diet, and diagnosis.

P-Plan: How to go about treatment for patient based on evaluation/diagnosis done? Depicts solution, summary and closure, follow-up and revaluation.

Guidelines for Counseling:

1. Gather information
2. Evaluate and interpret information
3. Develop and implement a plan of action
4. Seek active participation of patient's family
5. Follow up to assess the progress made

Patient Selection

Diet counselling will not succeed with every dental patient. **Patients who need counselling are:**

1. Potential candidates must want information about their potential dental caries problem and must be willing to improve current undesirable food selections and eating habits.
2. They should give high priority to preventive dentistry and should be willing to expend long-term efforts to maintain their natural dentition in good health for a lifetime.
3. They should have a positive attitude.
4. They should have a demonstrable need for dietary improvement, based on their current food intake regimen which can be achieved by Dental Health Diet Score.

FOOD DIARY

A food diary is a record of everything you eat and drink, often including what, how much, when, where, and why (feelings/hunger) to help you understand habits, manage weight, track nutrients, and meet health goals, using notebooks, apps, or printables for simple logging

Instructions of a Seven – Day Food Intake Diary:

1. Please record in detail everything you eat or drink in the order in which it is eaten.
2. The frequency of eating is an important consideration, therefore, including not only meals but between meal snacks, candies, gum, etc.

The following information is essential:

1. The amount in household measurements such as 8 oz, 1 serving, ½ cup, 1 teaspoon.
2. The food and how it is prepared such as fried chicken, baked apple, raw carrots, etc.
3. The addition of sugar, syrup, or milk to cereal, beverages, or other foods such as 1 bowl of cornflakes with 2 teaspoons of sugar and ½ c of milk.

Example

Time	Meal	Food Consumed
7:30 am	Breakfast	Tea with milk (200 ml) + **2 teaspoons sugar**; white bread (2 slices) with butter (1 tsp) and jam (2 tsp)
10:00 am	Snack	Chocolate bar (40 g)
1:30 pm	Lunch	White rice (1 cup cooked); chicken curry (3 oz); mixed vegetables (½ cup); soft drink (330 ml can**)**
4:00 pm	Snack	Sweet biscuits (3 pieces, ~30 g)
8:00 pm	Dinner	Roti (2 medium); lentils (½ cup); yogurt (½ cup)
10:00 pm	Bedtime snack	Ice cream (1 scoop, 100 ml)

INTERVIEWING AND COUNSELING VISIT

This visit is scheduled for at least 5 days after the food diary is given to the patient to complete. It is strongly advised that this visit be devoted exclusively to interviewing and counselling and that it does not include other dental procedures, not even oral prophylaxis or X-rays. This is so for three reasons:

1. A useful diet counselling service takes from 45 to 60 minutes, depending on the experience of the counsellor and the patient's comprehension.
2. Reserving this office visit solely for diet counselling gives the counselling session the identification and importance it deserves, with the result that the patient is more likely to heed the prescribed diet
3. Furthermore, a fee for the time spent and the counselling rendered is less likely to be questioned.

Diet History and Evaluation for Dental Caries:

The patient's 7-day food diary is analyzed for:

1. Adequacy of intake of foods from the food groups
2. The amount and type of food sweetened with sugar and the frequency of eating them.

The patient is asked to do the following:

1. **Step 1:** Circle in red all the foods recorded in the 7–day food diary that are sweetened with sugar. This circling foods in red will point out and separate the protective, noncariogenic, high – nutrient density foods from the empty calorie, cariogenic types.
2. **Step 2:** The total number of exposures of the teeth to sweets, the form of the sweets (solid or liquid), and when they were eaten (at meals or between meals) are determined.
3. **Step 3:** Allow the patient to delete from the diet Plaque – Forming, Sugar – Sweetened foods
4. **Step 4:** Allow the patient to select non-plaque promoting snack substitutes. If snacking is a habit of long standing, acceptable alternatives include raw fruits, raw vegetables, Cheddar cheese, or nuts. However, if the patient is consistently reminded that increasing the total food intake at each meal will satisfy appetite and hunger, it is possible that the number of between – meal snacks will eventually be reduced.
5. **Step 5:** Allow the patient to select menus. Starting with the existing menu as a nucleus, encourage the patient to examine each meal and make deletions, substitutions, or additions with which he or she can comfortably live. The rule is to improve the quality, and not the quantity, of the food so that acceptance will be more likely. For example, if the patient is accustomed to eating doughnuts and coffee sweetened with sugar, suggest as a substitute coffee sweetened with an artificial sweetener (or no sweetener at all) and muffins or toast.

Reinforcement by Follow – up Reevaluation Visit

Schedule a follow-up visit for 2 weeks later. The patient is asked to complete a second 7-day food diary in the same manner first just before returning. Evaluate the new food diary and compare the results with the original plan. Self-help preventive measures should be discussed at each dental visit. Repetition, clarification, and encouragement are the keys to success in long-term maintenance of the new, acceptable, less cariogenic and more nutritious diet

Effective Communication

Communication is a basic tool in the practice of preventive dentistry can create motivation for change. Some dentists and dental hygienists have been reluctant to provide the service on a fee – for – time basis. Communication is a combination of interviewing, teaching, counselling, and motivating is used.

This attitude is faulty, unrealistic, and should be changed.

Rules for achieving effective communication with a patient:

1. Keeping eye contact
2. Communication can be both verbal and non-verbal
3. Personalization of the message

Interviewing

Purpose of an Interview: To obtain information and to give help.

The basic goal in interviewing is:

1. To understand the problem.
2. The factors contributing to it
3. The personality of the patient.

Physical settings: Using a private counseling room will indicate that you respect the patient's feelings.

A good dietary interviewing session requires skill, time, and some background knowledge of the science and practice of nutrition, including familiarity with ways in which food habits are formed and the factors that affect these habits. Dentists and dental hygienists are the people who are most likely to have this dual educational background. Nutritionists can readily qualify with some extra course work in dental caries and periodontal diseases and in preventive dentistry. Ideally, as the professional authority, the dentist should be the diet interviewer, but it is probable that he or she will not be able to give adequate time to this phase of preventive services.

How to interview a patient:

1. First, the interviewer should be relaxed and should help the patient to relax and feel comfortable.
2. Start with a brief introductory statement about the purpose of interview.
3. Allow the patient to talk freely.
4. Cross examination may make the patient defensive.
5. The interviewer should guide the interview without any obstructions.
6. Do not make decisions for the person

Teaching and Learning

Patient education is more than simply giving information. It requires the presentation of information with sufficient impact to simulate action by the learner. People learn least well by hearing; they learn better what they can also see; but they learn best by doing, because they are totally involved.

Motivation

Motivation stimulates or is an incentive for action. To modify a patient's diet, the clinician can only seek and encourage the patient's own motivation. The counsellor's positive attitude and conviction as to the necessity and effectiveness of nutrition counselling can stimulate the patient to initiate an improved dietary pattern. According to Garn, the basic factors that motivate people are self-preservation, recognition, love and money. It

is rewarding for the diet counselor when a patient says, “Why didn’t someone take the time to give me this advice about my food habits before? It doesn’t seem that difficult to make some changes.”

Motivating patients to modify food habits:

A person passes through four preliminary decision stages in changing a dietary pattern, the fifth stage involves forming a new habit.

Example: Giving up hard candies to prevent dental decay.

1. **Awareness:** It is recognition that a problem exists, but without an inclination to solve it. (Hard candies produce acid, which can cause my teeth to decay).
2. **Interest:** It is that there is a greater degree of awareness but still no inclination to act. (Maybe I should give up hard candies, I don’t want any more sensitive or painful teeth.)
3. **Involvement:** It is an interest and a definite intention to act. (I definitely will give up hard candy.)
4. **Action:** It is a trial performance. (I have given up hard candies and chew sugarless gum instead to prevent the dry feeling in my mouth.)
5. **Habit:** It is a commitment to perform this action regularly over a sustained period of time. (I haven’t had a hard candy in sixth months).

Diet Management

Four rules should be adopted when making dietary modifications:

1. Maintain overall nutritional adequacy by conforming to the USDA Daily Food Guide for at least the recommended number of servings from each of the food groups.
2. The prescribed diet should vary from the normal diet pattern as little as possible.
3. The diet should meet the body’s requirements for the essential nutrients as generously as the diseased condition can tolerate.
4. The prescribed diet should take into consideration and accommodate the patient’s likes and dislikes, food habits, and other environmental factors as long as they do not interfere with the objectives.

Dietary modifications are made with respect to:

1. Frequency of eating.
2. Quantitative increase, decrease, or elimination of one or more nutrients.
3. Alteration of the physical quantity of the food.

Dietary Counseling for Dental Caries

Keep a food diary: An accurate, complete record of food intake is best achieved by having the patient keep a running daily record of meals and between meal snacks. Recording from memory details concerning the kinds, amounts, and preparation of the foods eaten is not reliable and should be discouraged. A 7-Day Food Intake diary is recommended: The diary is kept for 7 consecutive days, including a weekend day or holiday, to provide a more representative sample of food intake. The patient is asked not to make any changes in the usual dietary pattern during this week of diary keeping because that diet may be perfectly acceptable and may be unrelated to the dental caries problem. For this reason, do not discuss at this time the mechanism of caries production or the role that food can play. The demonstration and discussion of keeping a food diary take only 5 to 10 minutes and can be done as part of any dental visit. These general principles may be applied to the preservation or control of dental caries as follows:

1. Limit the number of eating periods to three regular meals per day, stressing the need to avoid snacks between meals.
2. Increase the intake of protective foods such as vegetables and fruits, milk and cheese, meat, fish, and legumes, which are rich in minerals, vitamins, and protein.
3. Decrease the total amount of carbohydrates so that they provide no more than 50% and no less than 30% of the calories.
4. Ideally, it is best to wean the patient from the taste of sweets. Next best is to restrict the consumption of sugar-containing foods to meals. The complete elimination of sticky, concentrated sweets such as candy, cakes, pastries, and dried fruits, especially between meals, is a requirement.

5. Recommend the liberal use of firm detergent (tooth-cleansing) foods such as raw fruits and raw vegetables so that there will be some oral clearance of food debris and stimulation of salivary flow. These and other nutritious snacks should be recommended as suitable alternatives for the sugar-rich, sticky, retained foods.
6. Recommend drinking and cooking with fluoridated water or the ingestion of fluoride supplements if the patient lives in a non-fluoridated area from birth to 13 years of age; also recommend the use of a fluoride dentifrice and mouthrinse.

Dietary Counseling for other oral diseases

Periodontal Disease: Nutritional care involves increasing vitamin C, folate, and zinc.

Tooth Loss patients with dentures: Modify diet consistency: mechanical soft, ground, pureed. Use least restrictive diet possible; individualize; mix consistencies if appropriate.

Mouth Pain and Oral Infections: Avoid acidic and spicy foods. Offer soft, cold, nutrient dense foods such as canned fruit, ice cream, yogurt, cottage cheese. Try oral supplements. Use PEG or NG feeding if oral supplementation is unsuccessful. For xerostomia, try artificial saliva, citrus beverages, sugar free candies or gums.

Wired or Broken Jaw: Provide pureed, strained, or blended foods as appropriate. Encourage nutrient-dense foods such as blended casseroles. Recommend small, frequent meals with oral supplements such as milkshakes, Instant Breakfast, medical nutritionals. Use liquid vitamin supplement if necessary. Recommend patients weigh self to monitor weight status.

Orthodontic patients: Take vigorous care of oral hygiene with special orthodontic toothbrushes. When appliances are bonded to your teeth, avoid or eliminate certain foods from diet to prevent them from breaking or loosening orthodontic appliances. Modify or be careful with the way one chews during orthodontic treatment to avoid breakages or damages to permanent orthodontic appliances. Avoid hard and crunchy foods & sticky foods. Avoid chewing with front teeth. Avoid biting fingernails and other items.

DENTAL HEALTH DIET SCORE

It is a simple screening device and a simple scoring procedure that can disclose a potential dietary problem that is likely to adversely affect a patient's dental health. It gives points earned because of an adequate intake of food from each of the food groups plus points for ingesting foods, especially recommended because they are the best sources of the ten nutrients essential for achieving and maintaining dental health. From this sum, points are subtracted for frequent ingestion of foods that are overtly sweet - whose sweetness is derived from added refined sugar or concentrated natural sugars. The difference is the Dental Health Diet Score.

Instructions for calculating Dental Health Diet Score

STEP 1: AVERAGE DAILY INTAKE	
Lunch (12.00 Noon)	4 oz tomato juice 1 chicken (3 oz) sandwich on rye bread 1 slice of chocolate cake with fudge icing 1 cup of coffee with 1 tsp of sugar
P.M Snack (2.00 PM) (3.00 PM)	1 cup milk 1 piece of sugarless gum

Step 2: Food group evaluation chart: Add the points. The sum is the Food Group Score 96 is the highest score)				
Food Group	**Servings**	**Portion sized considered one serving**	**No of servings**	**Points**
MILK (milk and cheese)	3	8 oz (1 c) milk 1.5 oz Cheddar cheese	X 8 = 3 X 8 = 24	Highest possible score = 24

		1.5 slice American cheese 1.5 c cottage cheese 8 oz (1 c) yogurt		
MEAT (meat, fish, poultry, dry beans, nuts)	2	2-3 oz lean cooked meat, fish, or poultry 2 eggs 4 tbsp peanut butter 1 c cooked dry beans or lentils	X 12 = 2 X 12 = 24	Highest possible score = 24
FRUITS AND VEGETABLES Vitamin A: (dark green and deep yellow fruits and vegetables)	1	0.5 c cooked fruit or vegetable 1 medium raw fruit or vegetable 0.5 medium grapefruit or melon 4 oz (0.5 c) juice	X 6 = 1 X 6 = 6	Highest possible score = 6
Vitamin C: (juice and citrus fruits)	1		X 6 = 1 X 6 = 6	Highest possible score = 6
Other	2		X 6 = 1 X 6 = 6	Highest possible score = 12
Bread and Cereals (enriched or whole grain)	4	1 slice of bread 0.75 dry cereal 0.5:c cooked cereal, rice, noodles, or macaroni	X 6 = 1 X 6 = 6	Highest possible score = 24

Step: 3 Nutrient Score							
Protein and Niacin 7	**Vitamin A 7**	**Iron 7**	**Folic Acid 7**	**Riboflavin (Vitamin B2) 7**	**Ascorbic Acid (Vitamin C) 7**	**Calcium and Phosphorus 7**	**Zinc 7**
Cheese Dried beans Dried peas Eggs Fish Meat Milk Nuts Poultry	Apricots Broccoli Butter Cantaloupe Carrots Collards Eggs Greens Liver Margarine Milk Peaches Squash Spinach Sweet potatoes	Beef Broccoli Eggs Green leafy vegetables Liver Oysters Sardines Shrimp	Asparagus Broccoli Cereals Kidney Liver Spinach Yeasts	Broccoli Chicken breasts Eggs Ham Liver Milk Mushrooms Pork Okra Spinach	Broccoli Brussels sprouts Cantaloupe Grapefruit Green peppers Greens Oranges Raspberries Strawberries Tomatoes	Broccoli Cheese Eggs Green leafy vegetables Milk Oranges String beans	Beef Liver Lobsters Oysters Shrimp (Other red meats and shellfish)

Calculate Nutrient Score		
Protein 7✓	Ascorbic Acid 7✓	Calcium 7✓
Cheese Milk✓ Meat✓	Broccoli Grapefruit Greens	Broccoli Eggs Milk✓
Regardless of the number of foods checked in the column, only seven points are given per nutrient (56 is a perfect score). Add the circled numbers to obtain the Nutrient Score.		

Step 4: Sweets Evaluation Chart		
Form	**Frequency**	**Points**
Liquid Soft drinks, fruit drinks, cocoa, sugar and honey in beverages, non-dairy creamers, ice cream, sherbet, gelatin dessert, flavored yogurt, pudding, custard, popsicles	X 5 =	
Solid and sticky Cake, cupcakes, donuts, sweet rolls, pastry, canned fruit in syrup, bananas, cookies, chocolate candy, chewing gum, dried fruit, marshmallows, jelly jam.	X 10 =	
Slowly dissolving Hard candies, breath mints, antacid tablets, cough drops.	X 15 =	
Sweet Score		
5 or less	Excellent	
10	Good	
15 or more	Watch out zone	

Dental Health Diet Scorecard

Step 5: Totaling the Scores

Dental health diet score = FOOD SCORE + NUTRIENT SCORE - SWEET SCORE

FOOD SCORE = adequate intake of foods from each of the food groups

NUTRIENT SCORE = consuming food from especially recommended groups of ten nutrients

SWEET SCORE = ingestion of foods that are overtly sweet sugars

ASSESSMENT OF DENTAL HEALTH DIET SCORE		
SCORE	**RESULT**	**INTERPRETATION**
72-96	Excellent	Counseling not required
64-72	Adequate	Educate the patient
56-64	Barely adequate	Counseling required
56 or less	Not adequate	Counseling with diet modification

Practical Exercise 1

Food Diary

Scenario:

You are a dental intern at a preventive dentistry clinic. A new patient, Ms. Ananya, 24 years old, has come for a routine dental check-up. She reports occasional tooth sensitivity and visible early cavities. As part of the caries risk assessment, you asked her to maintain a 7-day food diary. Below is a summary of her recorded intake for two representative days (Day 1 and Day 2).

Task:

Analyze Ms. Ananya's food diary and answer the following questions based on principles of diet counseling for caries prevention.

Food Diary

Day 1		
Time	**Meal**	**Food / Drink Consumed**
8:00 am	Breakfast	Cornflakes (1 bowl) with sugar (2 tsp) and milk (½ cup); tea (1 cup) with sugar (1 tsp)
11:00 am	Snack	Chocolate chip cookie (1 piece)
1:00 pm	Lunch	Chapati (2), dal (1 cup), mixed vegetables (½ cup), gulab jamun (1 small)
4:30 pm	Snack	Cola (1 can), chips (1 packet)
8:00 pm	Dinner	Rice (1 cup), fried fish (1 piece), curd (1 cup), cake (1 slice)
10:30 pm	Bedtime	Hot chocolate (1 cup) with marshmallows

Day 2		
Time	**Meal**	**Food / Drink Consumed**
8:30 am	Breakfast	Toast (2 slices) with jam; coffee (1 cup) with sugar (1 tsp)
10:30 am	Snack	Banana (1 medium)
1:30 pm	Lunch	Chapati (2), paneer curry, salad, jalebi (1 piece)
5:00 pm	Snack	Sugary yogurt (1 cup), peanuts (1 handful)
8:30 pm	Dinner	Noodles (1 cup), chicken stir-fry, sweetened lemonade (1 glass)
10:00 pm	Late Snack	Hard candy (2 pieces)

Questions for Students:

1. Identify cariogenic eating patterns:
i) How many eating episodes (meals + snacks) does Ms. Ananya have per day?
ii) List all the sugar-sweetened foods/drinks consumed over the two days.
2. Analyze food group intake:
i) Using the food group evaluation chart given above, categorize her intake into: Milk, Meat, Fruits & Vegetables, Breads & Cereals.
ii) Is her intake of protective foods (fruits, vegetables, dairy, protein) adequate? Justify.
3. Frequency and timing of sugar exposure:
i) How many times per day are her teeth exposed to fermentable carbohydrates?
ii) Which exposures are between meals, and which are with meals? Why does this matter?
4. Recommendations for dietary modification:
i) Suggest three specific changes to reduce caries risk without compromising nutrition.

ii) Provide two non-cariogenic snack alternatives she could adopt.

5. Patient communication:

i) How would you explain to Ms. Ananya the link between her snacking habits and tooth decay, using patient-friendly language?

ii) What one positive aspect of her current diet would you praise to encourage cooperation?

Practical Exercise 1 Student Answer:

Practical Exercise 1 Student Answer:

Student answered the questions correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

(Practical Exercise 2 on next page)

Practical Exercise 2

Dental Health Diet Score

Patient Profile:

Name: Samina Khan

Age: 22 years

Occupation: College student

Chief Complaint: Frequent dental cavities despite regular brushing

24-Hour Food Diary (provided by Samina)

Time	Food/Drink Consumed	Portion Size
8:00 AM	Oatmeal with milk and honey	1 bowl
10:30 AM	Apple	1 medium
1:00 PM	Vegetable sandwich (whole wheat bread)	2 slices
1:00 PM	Orange juice (packaged)	1 glass (200 ml)
4:00 PM	Chocolate chip cookie	2 pieces
4:00 PM	Coffee with sugar	1 cup (2 tsp sugar)
8:00 PM	Rice, dal, mixed vegetables, grilled chicken	1 plate
10:00 PM	Ice cream	1 scoop

Tasks for Students:

Part 1: Calculate the Food Group Score

Using the Food Group Evaluation Chart given above:

1. Categorize each food item into the appropriate food group.
2. Determine the number of servings per food group.
3. Calculate points for each food group and sum them to obtain the Food Group Score.

Part 2: Calculate the Nutrient Score

Using the Nutrient Evaluation Chart given above:

1. Identify foods that are rich in the 10 essential nutrients listed (Protein & Niacin, Vitamin A, Iron, Folic Acid, Riboflavin, Ascorbic Acid, Calcium & Phosphorus, Zinc).
2. Assign points (maximum 7 per nutrient, total 56 possible).
3. Sum the points to get the Nutrient Score.

Part 3: Calculate the Sweet Score

Using the Sweets Evaluation Chart given above:

1. Identify all sugary foods/drinks consumed.
2. Classify them by form (liquid, solid/sticky, slowly dissolving)
3. Calculate frequency and assign points as per the chart.
4. Determine the Sweet Score using the Sweet Score table

Part 4: Calculate the Dental Health Diet Score

Part 5: Interpret the Score

With reference to the Assessment Table given above:

1. Determine Samina’s dietary adequacy level (Excellent, Adequate, Barely Adequate, Not Adequate).
2. Recommend whether counseling is needed and what type.

Part 6: Suggest Dietary Modifications

1. Based on the score and food diary:
2. Suggest two specific dietary changes to reduce caries risk.
3. Recommend two non-cariogenic snack alternatives.
4. Outline a brief counseling plan using the S-O-A-P format (Subjective, Objective, Assessment, Plan).

Practical Exercise 2 Student Answer:

Practical Exercise 2 Student Answer:

Practical Exercise 2 Student Answer:

Student answered the questions correctly: ☐ Yes ☐ No

Student needs improvement on: _____

_____

Signature of Teacher

END OF PRACTICAL LOGBOOK

KHYBER MEDICAL UNIVERSITY

PREPARED BY:

Dr NAJIA SAJJAD KHAN

In collaboration with other respected faculty of Community and Preventive Dentistry of KMU affiliated Dental Colleges of KP