✅ COMMUNITY DENTISTRY – FINAL PROFESSIONAL BDS YEAR 5 TOPICS (MQA-ALIGNED)

🟦 A. Dental Public Health Concepts

- Definition, scope, and importance of Community Dentistry
- Levels of prevention (primordial, primary, secondary, tertiary)
- Measures of disease frequency: incidence, prevalence
- Natural history of dental diseases
- Risk factors and indicators
- Iceberg concept of disease

🟦 B. Epidemiology & Biostatistics

- Epidemiological study designs (cross-sectional, cohort, case-control, RCTs)
- Measurement of disease burden (DMFT/DMFS, deft/defs, CPI, LOA, OHI-S, plaque index)
- Validity and reliability of diagnostic tests
- Sensitivity, specificity, PPV, NPV
- Bias, confounding, effect modification
- Basic biostatistics: mean, median, mode, standard deviation
- Sampling methods (random, stratified, cluster, convenience)
- Statistical tests: Chi-square, t-test, ANOVA
- Interpretation of data and graphs

🟦 C. Oral Health Surveys & Indices

- WHO Pathfinder survey method (2013, 5th edition)
- Types and classifications of indices
- DMFT, def, OHI-S, PI, GI, CPI, CPITN
- WHO Oral Health Assessment Form
- Survey planning, data collection, and evaluation

🟦 D. Health Education & Promotion

- Health education vs health promotion
- Principles and methods of health education (individual, group, mass media)
- Models of health behavior (Health Belief Model, KAP, Transtheoretical Model)
- Planning and evaluation of dental health education programs
- IEC and BCC strategies

🟦 E. Preventive Dentistry

- Water fluoridation – mechanisms, safety, levels (0.7 ppm)
- Topical fluorides – gels, varnishes, rinses
- Fluoride toxicity and management
- Pit and fissure sealants – indications, types
- Atraumatic Restorative Treatment (ART)
- Sugar control and dietary counseling
- Oral hygiene aids: toothbrushes, interdental aids, chemotherapeutic agents

🟦 F. School Dental Health Programs (SDHP)

- Components of SDHP in Malaysia
- Roles of dental therapists and school dental teams
- Fluoride mouth rinses, brushing programs
- Evaluation of school dental programs
- Integration with MOH services

🟦 G. National Oral Health Policies & Programs

- National Oral Health Plan (NOHP) Malaysia
- Oral Health Strategic Plan
- Roles of MOH, JKNP, Oral Health Division
- NOHPSA (School, Adolescent, Elderly, Special Needs, Pregnant Women)
- Community Water Fluoridation Policy
- MyOHUN and MyHEALTH initiatives

🟦 H. Dental Manpower & Planning

- Dental auxiliaries – roles and regulations
- Human resource planning and distribution
- Dental team model in Malaysia
- Task shifting and skill mix

🟦 I. Community Oral Health Program Planning

- Needs assessment: perceived vs normative need
- Planning cycle: assessment → goal setting → implementation → evaluation
- Logic model and outcome frameworks
- Evaluation: process, outcome, impact evaluation

🟦 J. Research Methodology in Public Health Dentistry

- Research question and hypothesis formulation
- Ethical approval and informed consent
- Writing research protocols and reports
- Literature review and referencing (e.g., Vancouver style)
- Pilot studies
- Evidence-based dentistry and critical appraisal

🟦 K. Environmental & Occupational Hazards

- Infection control in community settings
- Biomedical waste management
- Occupational hazards in dentistry
- Ergonomics in dentistry

🟦 L. Public Health Laws and Ethics

- Malaysian Dental Act 2018
- Code of ethics for dental practitioners
- Informed consent, confidentiality, autonomy
- Legal aspects of school and community outreach

🟦 M. Global Oral Health

- WHO oral health goals and strategies
- FDI, IADR, Fones School of Dental Hygiene history
- Comparison of oral health systems globally
- SDGs (Sustainable Development Goals) and oral health

🟦 N. Community-Based Clinical Rotations / Field Visits

- Report writing and presentation of community diagnosis
- Evaluation of outreach programs
- Reflection logs and case summaries
- Screening and referral protocols

🔶 *HIGH-YIELD OSCE & VIVA TOPICS:*

- Interpretation of WHO assessment forms
- Index scoring (DMFT, OHI-S, CPI, GI)
- Critical appraisal of survey results
- Writing SMART objectives for a program
- Designing IEC materials
- Counseling for tobacco cessation
- Role play: oral hygiene instruction

🟦 A. DENTAL PUBLIC HEALTH CONCEPTS

📌 1. Definition, Scope, and Importance of Community Dentistry

✅ Definition:

- **Dental Public Health (DPH)** is **"the science and art of preventing and controlling dental diseases and promoting dental health through organized community efforts."** (American Association of Public Health Dentistry)

- It focuses on **populations** rather than individuals.

✅ Scope of DPH:

Area	Activities
Assessment	Surveys, community diagnosis
Policy Development	Planning oral health programs
Assurance	Ensuring access to dental care
Research	Epidemiology, evaluation
Prevention	Fluoride programs, health education
Service Delivery	School dental programs, outreach

✅ Importance of Community Dentistry:

- Addresses oral health **inequalities**

- Focuses on **prevention** and **cost-effective interventions**

- **Improves oral health** of underserved populations

- Integrates oral health with **general health** (especially NCDs)

- Vital for planning **National Oral Health Policies** (e.g., NOHP Malaysia)

📌 2. Levels of Prevention

Level	Objective	Example in Dentistry
Primordial	Prevent development of risk factors	Promoting healthy eating in children before caries develop
Primary	Prevent disease before it occurs	Tooth brushing education, fluoride application
Secondary	Early detection and treatment	School dental screenings, sealants
Tertiary	Limit damage, restore function, rehabilitate	Dentures for edentulous patients, crowns, implants

🔍 **Mnemonic**: *PPST – Primordial, Primary, Secondary, Tertiary*

📌 3. Measures of Disease Frequency

✅ Incidence

- Number of **new cases** of disease in a population over a specified time.
- **Formula**:

$$\text{Incidence Rate} = \frac{\text{New cases during a period}}{\text{Population at risk during the period}} \times$$

- **Use**: Identifies **risk** and helps determine **cause** of disease.
- Example: Incidence of new caries in 12-year-olds over 1 year.

✅ Prevalence

- Total number of **existing cases** (old + new) at a specific point (point prevalence) or over a period (period prevalence).
- **Formula**:

$$\text{Prevalence} = \frac{\text{All cases (existing)}}{\text{Total population}} \times 1000$$

- **Use**: Measures **burden** of disease.
- Example: % of children with untreated dental caries at time of survey.

Measure	Indicates	Timeframe
Incidence	**Risk**	Over time
Prevalence	**Burden**	At one time

📌 4. Natural History of Dental Diseases

✅ **Definition:**

- **Sequential progression** of disease without intervention, from initial exposure to final outcomes (e.g., cure, disability, or death).

✅ **Stages:**

Stage	Dental Example
Stage of Susceptibility	High sugar intake, poor brushing habits
Stage of Subclinical Disease	Demineralization without cavitation (white spot lesion)
Stage of Clinical Disease	Caries visible on examination
Stage of Recovery or Disability	Tooth loss, restoration, or complication (e.g., abscess)

🔍 **Intervention can occur at any stage** – preferably **before clinical disease** (primary prevention).

📌 5. Risk Factors and Indicators

✅ **Risk Factor:**

- A **variable or exposure** that **increases the likelihood** of developing a disease and is **causally related**.

Examples (Dental Caries):

- Sugar intake
- Low salivary flow
- Poor oral hygiene
- Cariogenic bacteria (e.g., *Streptococcus mutans*)

✅ **Risk Indicator:**

- A variable **associated** with disease but **not proven to be causal** (often used in cross-sectional studies).

Examples:

- Low socioeconomic status
- Parental education level
- Previous caries experience

Type	Definition	Use in Dentistry
Risk Factor	Proven causal link	Sugar → caries
Risk Indicator	Associated, not causal	Poor education → higher caries

📌 6. Iceberg Concept of Disease

✅ **Definition:**

- Visual metaphor showing that **what is clinically visible (tip)** represents **only a small part** of the total disease burden.
- **Subclinical, undiagnosed, or asymptomatic** cases form the **hidden part** of the iceberg.

✅ **Relevance:**

- Emphasizes the need for:
  - **Screening programs**
  - **Population-based interventions**
  - **Early detection**
  - Recognizing the **silent burden** of disease

✅ **Example in Dentistry:**

Visible (Tip)	Hidden (Base)
Cavitated carious lesions	White spot lesions, incipient caries
Complaining patients	Non-attending population with undiagnosed disease

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📘 Summary Table:

Concept	Key Points
DPH Definition	Organized efforts to prevent/control dental disease at population level
Levels of Prevention	Primordial → Primary → Secondary → Tertiary
Incidence & Prevalence	Incidence = risk; Prevalence = burden
Natural History	Disease progression from risk → subclinical → clinical → outcome
Risk Factors & Indicators	Factors with causal or associative links to disease

Iceberg Concept	Clinically visible disease is just a small portion of total burden

🟦 B. EPIDEMIOLOGY & BIOSTATISTICS

📌 1. Epidemiological Study Designs

Study Type	Description	Features	Example in Dentistry
Cross-sectional	Snapshot of disease & exposure at one point	Descriptive, cheap	DMFT of 12-year-olds in 2024
Case-control	Compares individuals with disease (cases) and without (controls)	Retrospective, for rare diseases	Periodontitis vs healthy: smoking history
Cohort	Follow group with exposure vs non-exposed over time	Prospective or retrospective, costly	Sugar intake and future caries risk
Randomized Controlled Trial (RCT)	Participants randomly allocated to groups	Gold standard for causality	New fluoride varnish vs placebo

📌 2. Measurement of Disease Burden

Index	Description	Score Range	Notes
DMFT/DMFS	Decayed, Missing, Filled Teeth/Surfaces (permanent)	0 to 28/32 (DMFT); up to 128 (DMFS)	Measures caries experience
deft/defs	Same as above but for primary teeth	0 to 20 (deft); higher for defs	‘e’ stands for indicated extraction
CPI	Community Periodontal Index	0 to 4	Based on codes: bleeding, calculus, pockets
LOA	Loss of Attachment	0 to 4	Used with CPI for older adults
OHI-S	Oral Hygiene Index – Simplified	0 to 6	Green & Vermillion, debris + calculus
Plaque Index (PI)	Silness & Löe	0 to 3	Measures plaque thickness on gingival margin

📌 3. Validity and Reliability of Diagnostic Tests

Concept	Description	Example
Validity	Accuracy – does the test measure what it claims?	CPI for periodontal status
Reliability	Consistency – does the test produce same results on repetition?	Examiner scoring same DMFT twice

🔁 **Types of reliability:**

- **Intra-examiner**: same examiner over time
- **Inter-examiner**: between different examiners

📌 4. Sensitivity, Specificity, PPV, NPV

Term	Definition	Formula	Example
Sensitivity	% of true positives correctly identified	TP / (TP + FN)	Caries detection tool identifies all those who have caries
Specificity	% of true negatives correctly identified	TN / (TN + FP)	Tool correctly excludes those without caries
PPV	Probability that a positive result is correct	TP / (TP + FP)	High PPV means fewer false positives
NPV	Probability that a negative result is correct	TN / (TN + FN)	High NPV means fewer false negatives

📌 5. Bias, Confounding, Effect Modification

Term	Description	Prevention
Bias	Systematic error in study	Blinding, randomization
Selection Bias	Unequal selection into groups	Proper sampling
Information Bias	Errors in measurement	Training, calibration
Confounding	3rd variable distorts association	Stratification, matching
Effect Modification	Strength of association differs by subgroup	Analyze by subgroups (e.g., age, gender)

📌 6. Basic Biostatistics

Term	Description	Notes
Mean	Arithmetic average	Affected by outliers
Median	Middle value in ordered data	Not affected by outliers
Mode	Most frequent value	Useful for categorical data
Standard Deviation (SD)	Spread of data around the mean	Small SD = clustered, Large SD = dispersed

📌 7. Sampling Methods

Method	Description	Example
Simple Random	Equal chance for every subject	Randomly select students from a list
Stratified	Divide into subgroups, sample each	Urban vs rural children
Cluster	Groups/clusters sampled	Schools as clusters
Convenience	Based on availability	Volunteers at a dental camp

📌 8. Statistical Tests

Test	Use	Example
Chi-square (χ^2)	Association between 2 categorical variables	Gender vs plaque score
t-test	Compare means of two groups	Mean DMFT in males vs females
ANOVA	Compare means of ≥3 groups	Mean GI in 3 income groups

Use **p-value < 0.05** for significance

📌 9. Interpretation of Data and Graphs

- **Bar chart**: categorical data (e.g., gender distribution)
- **Histogram**: continuous data (e.g., age distribution)
- **Pie chart**: proportional data
- **Line graph**: trends over time
- **Scatter plot**: correlation between variables

🟦 C. ORAL HEALTH SURVEYS & INDICES

📌 1. WHO Pathfinder Survey Method (2013, 5th edition)

Feature	Description
Age Groups	5, 12, 15, 35–44, 65–74 years
Sampling	Stratified cluster sampling
Minimum	20–50 individuals per age group
Tools	WHO Oral Health Assessment Form
Examiner	Calibrated, uses CPI probe and mirror
Indices Used	DMFT, CPI, OHI-S, GI, LOA, etc.

📌 2. Types and Classifications of Indices

✅ **By Reversibility:**

Type	Examples
Reversible	OHI-S, GI, PI
Irreversible	DMFT, CPI, LOA

✅ **By Scoring:**

Type	Examples
Simple	Presence/absence (Plaque Index)
Cumulative	Past + present disease (DMFT)
Composite	Multiple conditions (CPI with bleeding, calculus, pockets)

📌 3. Key Indices in Detail

Index	Full Form	Scoring	Notes
DMFT	Decayed, Missing, Filled Teeth	0–28	Measures caries experience
def	decayed, extracted, filled (primary)	0–20	‘e’ = planned extraction
OHI-S	Oral Hygiene Index – Simplified	0–6	Debris + Calculus on 6 teeth
Plaque Index (PI)	Silness & Löe	0–3	Measures thickness of plaque
Gingival Index (GI)	Löe & Silness	0–3	Bleeding and inflammation

CPI/CPITN	Community Periodontal Index	0–4	Uses WHO probe, sextants
LOA	Loss of Attachment	0–4	Measures periodontal destruction

📌 4. WHO Oral Health Assessment Form

Components:

- Personal info
- Index age group
- Dentition status (DMFT/def)
- Periodontal status (CPI)
- Oral mucosa, prosthetics, fluorosis
- Treatment needs
- Comments

Features:

- Standardized for international use
- Uses numeric coding system
- Only 6 index teeth used for CPI

📌 5. Survey Planning, Data Collection, and Evaluation

Step	Description
1. Planning	Define objectives, select population, determine sample size
2. Calibration	Ensure inter- and intra-examiner consistency
3. Data Collection	Use WHO form, proper aseptic protocol
4. Data Entry & Analysis	Use Excel/SPSS
5. Evaluation	Compare with national benchmarks, draw conclusions

🟦 D. HEALTH EDUCATION & PROMOTION

📌 1. Health Education vs Health Promotion

Aspect	Health Education	Health Promotion
Definition	Planned learning to improve knowledge & behavior	Process that enables people to increase control over their health
Scope	Focus on **individual behavior change**	Includes **policy, environment**, and individual changes
Example	Teaching brushing techniques	School brushing program + fluoride + policy change

📌 2. Principles & Methods of Health Education

✅ Principles:

1. **Interest:** must be relevant to the target group
2. **Participation:** encourages involvement
3. **Comprehension:** use appropriate language and content
4. **Motivation:** stimulates interest to adopt behavior
5. **Reinforcement:** repetition helps retention
6. **Learning by doing:** interactive activities (e.g., brushing demos)
7. **Feedback and evaluation:** for continuous improvement

✅ Methods:

Method	Features	Examples
Individual	One-on-one, tailored	Chairside brushing instruction
Group	Peer learning, interactive	School oral health talks
Mass Media	Wide reach, cost-effective	TV ads, social media, posters

📌 3. Models of Health Behavior

✅ a) Health Belief Model (HBM)

Predicts likelihood of adopting a health behavior:

Component	Explanation	Dental Example
Perceived susceptibility	Risk of disease	"I could get cavities"
Perceived severity	Consequences	"Cavities will cause pain"
Perceived benefits	Advantages of action	"Brushing prevents cavities"
Perceived barriers	Obstacles	"Too tired to brush"
Cues to action	Triggers	TV ad, dental advice
Self-efficacy	Confidence in ability	"I can brush twice daily"

✅ b) KAP Model

Knowledge → Attitude → Practice

- Assumes knowledge changes attitude and leads to better practice
- Limitation: knowledge alone ≠ behavior change

✅ c) Transtheoretical Model (Stages of Change)

Behavior change is **progressive**:

1. **Pre-contemplation** – unaware/unwilling
2. **Contemplation** – aware but not ready
3. **Preparation** – planning to act soon
4. **Action** – recently changed
5. **Maintenance** – sustained change
6. **Relapse** – risk of returning to old behavior

📌 4. Planning and Evaluation of Dental Health Education Programs

✅ Steps:

1. **Assessment:** identify community needs
2. **Goal setting:** broad, long-term
3. **Objectives:** SMART (Specific, Measurable, Achievable, Relevant, Time-bound)
4. **Content development:** culturally appropriate, age-matched
5. **Implementation:** appropriate delivery method
6. **Evaluation:**
    - **Process**: was the program delivered as planned?
    - **Impact**: immediate effects on knowledge/attitude
    - **Outcome**: long-term behavior change, reduced disease

📌 5. IEC vs BCC Strategies

Aspect	IEC (Information, Education, Communication)	BCC (Behavior Change Communication)
Goal	Inform and educate	Change behavior
Approach	One-way communication	Interactive, two-way
Example	Posters, pamphlets	Counseling sessions, community dialogue
Use	Awareness creation	Sustained behavior modification

🟦 E. PREVENTIVE DENTISTRY

📌 1. Water Fluoridation

✅ **Mechanism of Action:**

- **Pre-eruptive**: incorporated into enamel → makes enamel more resistant to acid
- **Post-eruptive**: promotes remineralization, inhibits demineralization
- **Anti-bacterial**: inhibits glycolysis in bacteria

✅ **Recommended Level:**

- **0.7 ppm** (adjusted for climate and water intake)

✅ **Safety:**

- **Optimal range**: 0.7–1.2 ppm
- **Dental fluorosis**: risk if >1.5 ppm in early childhood
- **Monitoring**: conducted by MOH Malaysia in treated areas

📌 2. Topical Fluorides

Type	Composition	Indication	Notes
Gels	1.23% APF (acidulated phosphate fluoride)	High-risk children, periodic application	Avoid in restorations due to acid
Varnishes	5% NaF	Young children, school programs	Adheres to tooth longer, ideal for school use
Mouth Rinses	0.05% NaF daily / 0.2% weekly	Group settings	Cost-effective, used in school programs

📌 3. Fluoride Toxicity and Management

✅ **Acute Toxicity:**

- Occurs if >5 mg/kg of body weight is ingested
- Symptoms: nausea, vomiting, abdominal pain, diarrhea
- Management:
    - Give **milk** (calcium binds fluoride)
    - **Calcium gluconate** orally
    - Hospitalize if ingestion >15 mg/kg

✅ **Chronic Toxicity:**

- **Dental fluorosis**: hypomineralization due to excessive ingestion in enamel-forming years (under 8 years old)
- **Skeletal fluorosis**: long-term exposure >10 years, affects bones

📌 4. Pit and Fissure Sealants

✅ **Indications:**

- Deep, narrow fissures in molars
- Children at high caries risk
- 6-year and 12-year molars

✅ **Types:**

Type	Notes
Resin-based	Light-cured, good retention
Glass ionomer	Fluoride releasing, used in moisture-sensitive environments

✅ **Application Steps:**

1. Clean tooth
2. Isolate (rubber dam or cotton roll)
3. Etch (37% phosphoric acid)
4. Rinse and dry
5. Apply sealant
6. Cure with light

📌 5. Atraumatic Restorative Treatment (ART)

✅ **Definition:**

- Minimally invasive restorative technique using **hand instruments only** and **high-viscosity GIC**.

✅ **Indications:**

- Field/outreach settings
- Children, special needs
- Primary and early carious lesions

✅ **Advantages:**

- No electricity required
- Fluoride release from GIC
- Painless and cost-effective

📌 6. Sugar Control and Dietary Counseling

✅ **Goals:**

- Reduce **frequency** and **amount** of sugar intake
- Emphasize:
    - Limit sugary snacks between meals
    - Avoid sugar before bedtime
    - Promote fibrous food, water

✅ **Tools:**

- **24-hour dietary recall**
- **Diet diary**
- **Food frequency questionnaire**

✅ **Counseling:**

- Use motivational interviewing
- Tailor to age, SES, and cultural practices

📌 7. Oral Hygiene Aids

✅ **Toothbrushes:**

- **Soft-bristled** recommended
- Replace every 3 months
- Small head for better acces

✅ **Interdental Aids:**

Aid	Use
Dental floss	Tight contacts
Interdental brushes	Open embrasures
Wooden sticks	Simple mechanical aid

✅ **Chemotherapeutic Agents:**

Agent	Function
Chlorhexidine	Anti-plaque, 0.12–0.2%, short-term use
Fluoride toothpaste	Caries prevention
Essential oils (e.g., Listerine)	Mild anti-plaque effect

🟦 F. School Dental Health Programs (SDHP)

1. Components of SDHP in Malaysia

- **Target population**: All school-going children from preschool to secondary school.
- **Key components**:
    - **Oral health education**: Delivered via classroom-based sessions.
    - **Preventive care**:
        - Fluoride mouth rinsing (for caries prevention).
        - Supervised toothbrushing programs.
        - Application of fissure sealants.
        - Scaling and polishing.
    - **Curative services**:
        - Basic restorative procedures.
        - Extractions and simple endodontics.
    - **Screening and referrals**:
        - Routine dental check-ups.
        - Identification and referral of complex cases to clinics.
- **Record keeping**:

- Use of standardized dental record cards (Borang Rekod Pergigian Murid).

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2. Roles of Dental Therapists and School Dental Teams

- **Dental Therapists**:
  - Provide basic preventive and restorative care for children.
  - Conduct oral health education and health promotion.
  - Maintain oral health records.
- **Dental Officers**:
  - Supervise therapists.
  - Perform complex treatment.
  - Provide referral support.
- **Dental Nurses**:
  - Assist in chair-side duties.
  - Aid in oral health education activities.
- **Mobile dental teams**:
  - Visit schools without permanent clinics.
  - Ensure outreach to rural and underserved areas.

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3. Fluoride Mouth Rinses, Brushing Programs

- **Fluoride mouth rinsing**:
  - Weekly rinsing with 0.2% NaF solution.
  - For children in non-fluoridated areas.
  - Reduces caries incidence by 20–40%.
- **Brushing programs**:
  - Daily supervised toothbrushing with fluoridated toothpaste.
  - Implemented in preschools and primary schools.
  - Promotes proper brushing technique and hygiene awareness.

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4. Evaluation of School Dental Programs

- **Evaluation indicators**:
    - Coverage rate (% of children receiving care).
    - Caries incidence/prevalence (DMFT scores).
    - Sealant application rate.
    - Oral hygiene status (OHI-S or plaque index).
    - Knowledge, attitude, and behavior change post-education.
- **Tools**:
    - Pre- and post-intervention surveys.
    - Clinical audits.
    - Annual performance reports from JKNP.

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5. Integration with MOH Services

- SDHP is fully integrated under **Ministry of Health Malaysia**, overseen by the **Oral Health Division**.
- Coordination with:
    - **Family health services** (for referrals).
    - **School health programs**.
    - **Nutrition and health education units**.
- Reporting to **District Health Offices** and **JKNP**

🟦 G. National Oral Health Policies & Programs

1. National Oral Health Plan (NOHP) Malaysia

- Strategic plan aligning oral health goals with **Wawasan 2030** and **Malaysia Health Systems Reform**.
- **Vision**: Optimum oral health for all Malaysians.
- **Focus areas**:
    - Prevention and promotion.
    - Equitable access.
    - Intersectoral collaboration.
    - Workforce development.

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2. Oral Health Strategic Plan

- Developed by the **Oral Health Division, MOH**.
- Includes 5-year action plans.
- Goals:
    - Reduce caries prevalence in schoolchildren.
    - Improve periodontal health in adults.
    - Enhance service coverage in vulnerable groups.
- Incorporates:
    - **National Key Performance Indicators (NKPIs)**.
    - Use of **e-Oral Health** for monitoring.

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3. Roles of MOH, JKNP, Oral Health Division

- **Ministry of Health (MOH)**:
    - Formulates policies, allocates budget, manages manpower.
- **JKNP (Jabatan Kesihatan Negeri Pergigian)**:
    - Implements programs at state level.
    - Manages logistics and human resources.
- **Oral Health Division**:
    - Central authority under MOH.
    - Conducts training, monitoring, surveillance, and research.

4. NOHPSA

National Oral Health Promotion for Specific Age Groups:

- **School children**: Via SDHP (as above).
- **Adolescents**:
    - Focus on orthodontic care and anti-smoking education.
    - PEKA-B24 Program (self-care screening).
- **Elderly**:
    - **Geriatric Oral Health Programs**.
    - Denture provision and home-visiting care.
- **Special Needs (OKU)**:
    - Mobile dental units and caregiver training.
- **Pregnant Women**:
    - **ANC (Antenatal Care)** integrated dental check-ups.
    - Oral health modules in mother's health record.

5. Community Water Fluoridation Policy

- Fluoridation level: **0.5–0.7 ppm** (based on ambient temperature).
- Managed by MOH in collaboration with local councils.
- Fluoridation plants are located at water treatment facilities.
- Coverage: Over 75% of population.
- Reduces DMFT in children by 40–60%.

6. MyOHUN and MyHEALTH Initiatives

- **MyOHUN** (Malaysia One Health University Network):
    - Interdisciplinary collaboration on human–animal–environment health.
    - Promotes integration of dental professionals into zoonotic disease surveillance and emergency preparedness.
- **MyHEALTH**:
    - National online health portal by MOH.
    - Public education on oral health topics.
    - Accessible resources for self-care and prevention.

🟦 H. Dental Manpower & Planning

1. Dental Auxiliaries – Roles and Regulations

- **Definition**: Personnel who assist dentists in delivering dental care, not including dentists.
- **Types in Malaysia**:
    - **Dental Therapists**: Provide preventive and basic curative services to children.
    - **Dental Nurses**: Assist in procedures and patient care.
    - **Dental Technicians**: Fabricate dental prosthetics.
    - **Dental Hygienists** (limited in Malaysia): Focus on oral prophylaxis and health education.
- **Regulations**:
    - Governed under the **Dental Act 2018** (Act 804).
    - Must be registered with the **Malaysian Dental Council (MDC)**.
    - Scope of practice regulated to ensure patient safety and competency-based tasks.

2. Human Resource Planning and Distribution

- **Human Resource Planning**:
    - Ensure **adequate number, distribution, and training** of dental professionals.
    - Conduct **manpower forecasting** using current service data and population needs.
- **Distribution**:
    - Urban-rural disparities persist; rural areas often underserved.
    - **Incentives**, **bonding programs**, and **rotation systems** used to address imbalance.
    - Consider **population ratio target**: e.g., 1 dentist per 3,000 population (as per WHO guidelines).

3. Dental Team Model in Malaysia

- **Team-Based Approach**:
    - Dentist-led team involving auxiliaries like therapists, nurses, and technicians.
    - **Integrated roles** in public programs, especially school-based oral health.
- **Public Sector Example**:
    - Mobile dental units, school dental teams, community clinics.

- **Benefits**:
    - Task-sharing improves efficiency.
    - Cost-effective delivery of primary oral healthcare.

4. Task Shifting and Skill Mix

- **Task Shifting**: Delegating certain dental care tasks from dentists to trained auxiliaries.
- **Skill Mix**: Strategic combination of varied health worker types to maximize efficiency.
- **Examples**:
    - Dental therapists performing fillings, fluoride application, and extractions in schoolchildren.
- **Benefits**:
    - Reduces dentist workload.
    - Extends access to care, especially in rural areas.
- **Challenges**:
    - Need for standardization.
    - Continuous training and supervision.

🟦 I. Community Oral Health Program Planning

1. Needs Assessment: Perceived vs Normative

- **Perceived Need**:
    - Based on patient's **own awareness** of oral health problems.
    - Subjective and influenced by culture and knowledge.
- **Normative Need**:
    - Assessed by professionals based on clinical findings.
    - More objective and scientifically valid.
- **Importance**:
    - Both must be considered for effective program planning.

2. Planning Cycle:

A systematic process consisting of:

1. **Assessment**:
    - Identify the problem using surveys, epidemiological data.
2. **Goal Setting**:
    - Broad long-term vision (e.g., reduce caries prevalence).

3. **Objective Formulation**:
    - SMART objectives (Specific, Measurable, Achievable, Realistic, Time-bound).
4. **Implementation**:
    - Apply interventions (e.g., school fluoride rinse program).
5. **Evaluation**:
    - Check success and modify future interventions.

3. Logic Model and Outcome Frameworks

- **Logic Model**:
    - Visual representation of program: *Inputs → Activities → Outputs → Outcomes → Impact*.
- **Outcome Framework**:
    - Defines short-, medium-, and long-term outcomes to evaluate program success.
- **Use**:
    - Helps in **budgeting**, **accountability**, and **planning adjustments**.

4. Evaluation Types:

- **Process Evaluation**:
    - Assess *how* the program is implemented (e.g., number of children receiving fluoride).
- **Outcome Evaluation**:
    - Measures short- to mid-term results (e.g., reduction in plaque index).
- **Impact Evaluation**:
    - Assesses long-term effects (e.g., lower DMFT rates in the population).

🟦 J. Research Methodology in Public Health Dentistry

1. Research Question and Hypothesis Formulation

- **Research Question**:
    - Should be clear, focused, and answerable.
    - Follows the **PICO format** (Population, Intervention, Comparison, Outcome).
    - Example: “Does fluoridated toothpaste reduce caries in 6–12-year-olds?”
- **Hypothesis**:
    - **Null Hypothesis (H_0)**: No difference or effect.
    - **Alternative Hypothesis (H_1)**: There is a measurable

difference or effect.

2. Ethical Approval and Informed Consent

- **Ethical Approval**:
    - Required from the Institutional Review Board (IRB) or Ethics Committee.
    - Ensures study adheres to ethical principles (beneficence, non-maleficence, autonomy).
- **Informed Consent**:
    - Participant must be aware of risks, benefits, and voluntarily agree.
    - Must be obtained **before** data collection.

3. Writing Research Protocols and Reports

- **Research Protocol**:
    - Includes background, objectives, methodology, ethical considerations, budget, timeline.
- **Research Report**:
    - Follows structure: *Abstract → Introduction → Methods → Results → Discussion → Conclusion → References*.

4. Literature Review and Referencing

- **Literature Review**:
    - Summarizes existing knowledge.
    - Helps identify gaps and justify the research.
- **Referencing**:
    - Use **Vancouver style**:
        - In-text: (1), (2–4)
        - Reference list in numerical order based on citation.
        - Format: Author(s). Title. Journal. Year;Volume(Issue):Page range.

5. Pilot Studies

- **Definition**:
    - Small-scale preliminary study.
- **Purpose**:
    - Test feasibility, instruments, and methodology.
    - Identify problems before full-scale study.

6. Evidence-Based Dentistry (EBD) and Critical Appraisal

- **EBD**:
    - Integration of clinical expertise, best current evidence, and patient values.
    - Steps: Ask → Acquire → Appraise → Apply → Assess.
- **Critical Appraisal**:
    - Systematic evaluation of study validity, results, and relevance.
    - Tools: CASP checklists, CONSORT, STROBE.

🟦 K. ENVIRONMENTAL & OCCUPATIONAL HAZARDS

1. Infection Control in Community Settings

- **Importance**: Prevents transmission of infectious diseases (HBV, HCV, HIV, TB).
- **Standard precautions**:
    - Use of PPE (gloves, masks, gowns, eyewear).
    - Hand hygiene before and after patient contact.
    - Safe injection practices.
    - Respiratory hygiene/cough etiquette.
- **Instrument sterilization**:
    - Autoclaving: Gold standard.
    - Use of chemical disinfectants when heat is not feasible.
- **Surface disinfection**: Sodium hypochlorite, alcohol-based disinfectants.
- **Barrier techniques**: Plastic covers for difficult-to-disinfect surfaces.
- **Special attention in field/outreach dentistry**:
    - Portable dental units must follow strict aseptic protocols.
    - Disposable instruments preferred in remote settings.

2. Biomedical Waste Management

- **Categories (as per Malaysian guidelines)**:
    1. Infectious waste: Blood-soaked dressings, tissue fragments.
    2. Sharps: Needles, scalpels (in puncture-proof containers).
    3. Chemical waste: Disinfectants, amalgam waste (requires mercury separator).
    4. Non-hazardous/general waste: Food wrappers, paper.
- **Color-coded bins**:

1. Yellow – Infectious
2. Red – Highly infectious (surgical waste)
3. Blue – Glass waste
4. Black – General waste

- **Steps**:
    1. Segregation at source
    2. Proper storage
    3. Transportation to treatment facility
    4. Final disposal (incineration/landfill)
- **Dental clinic compliance**: Clinics must display SOP and train staff.

3. Occupational Hazards in Dentistry

- **Biological**: Blood-borne infections (HBV, HCV, HIV), aerosols (TB, COVID-19).
- **Chemical**: Exposure to mercury (amalgam), formaldehyde, disinfectants.
- **Physical**: Sharp injuries, noise from ultrasonic scalers, eye strain.
- **Musculoskeletal**: Back/neck pain due to poor posture.
- **Psychological**: Stress, burnout, patient anxiety.
- **Radiation**: From intraoral/extraoral radiographs (need for lead apron, dosimeter badge).

4. Ergonomics in Dentistry

- **Definition**: Adapting work environment to reduce physical strain and increase efficiency.
- **Four-handed dentistry**: Dentist and assistant work together efficiently.
- **Posture**:
    - Sit upright with back support.
    - Feet flat, thighs parallel to floor.
    - Avoid neck flexion beyond 20°.
- **Chair design**:
    - Contoured backrest.
    - Adjustable height and armrests.
- **Instruments**:
    - Lightweight, balanced.
    - Avoid excessive grip pressure.
- **Work schedule**:
    - Breaks every 60–90 minutes.
    - Stretching exercises recommended.

🟦 L. PUBLIC HEALTH LAWS AND ETHICS (version 1)

1. Malaysian Dental Act 2018

- **Key Provisions**:
    - Establishes **Malaysian Dental Council (MDC)** as regulatory authority.
    - **Compulsory registration** for all practitioners with Annual Practising Certificate (APC).
    - **Professional misconduct** defined and penalized.
    - Protection of public through disciplinary actions.
    - Recognition of foreign qualifications through Dental Qualifying Examination (DQE).
    - Encourages Continuing Professional Development (CPD) as part of APC renewal.
- **Sections**:
    - Part IV: Registration
    - Part V: Offences and Penalties
    - Part VI: Enforcement

2. Code of Ethics for Dental Practitioners

- **Principles**:
    - **Autonomy**: Respect patient's decision and confidentiality.
    - **Beneficence**: Promote well-being.
    - **Non-maleficence**: Do no harm.
    - **Justice**: Fair treatment and accessibility to care.
    - **Veracity**: Truthfulness in communication.
- **Professional behavior**:
    - No false advertising.
    - Maintain professional boundaries.
    - Mandatory reporting of unsafe practices.
- **Violation**: Leads to disciplinary action by MDC.

3. Informed Consent, Confidentiality, Autonomy

- **Informed Consent**:
    - Must include: diagnosis, treatment options, risks, benefits, costs.
    - Consent must be written, dated, signed.
    - Required for all invasive or irreversible procedures.
- **Confidentiality**:
    - All patient data must be protected (digital or physical).
    - Shared only with legal or medical justification.
- **Autonomy**:
    - Patients have right to refuse or accept treatment.
    - In minors or incapacitated patients, consent is from guardian.

4. Legal Aspects of School and Community Outreach

- **Consent for minors**:
    - Parental/legal guardian consent required for treatment.
    - Implied consent acceptable for non-invasive screenings.
- **School-based programs**:
    - Must adhere to MOE-MOH guidelines.
    - Infection control, waste disposal, and safety protocols mandatory.
- **Documentation**:
    - Record-keeping for all procedures performed.
    - Reports submitted to JKNP or MOH.
- **Accountability**:
    - Dental officers are legally responsible for care rendered.
    - Supervisory roles must be clearly defined for auxiliaries.

✅ POSSIBLE EXAM TOPICS

1. **Features and implications of the Malaysian Dental Act 2018**
2. **Ethical principles in dentistry and their clinical application**
3. **Differences between informed consent and implied consent**
4. **Legal responsibilities during community outreach programs**
5. **Confidentiality and autonomy in patient care**
6. **Case-based MCQs/SAQs: handling legal/ethical dilemmas in outreach**
7. **Role of Malaysian Dental Council (MDC) and complaints mechanism**
8. **Ethical considerations in school-based dental programs**
9. **Legal implications of negligence or breach of duty**
10. **Ethical management of special populations (minors, special needs, elderly)**

🟦 L. PUBLIC HEALTH LAWS AND ETHICS — DETAILED NOTES (version 2)

1. Malaysian Dental Act 2018

Definition:
The Dental Act 2018 (Act 804) is a legislative framework regulating the dental profession in Malaysia.

Key Features:

- **Regulatory Body**: Establishes the **Malaysian Dental Council (MDC)** and **Dental Therapist Board**.
- **Registration**: Mandatory for all dentists, dental specialists, and therapists to register.
- **Annual Practicing Certificate (APC)**: Required to practice legally; renewed annually.
- **Specialist Registration**: Specific provisions for dental specialists.
- **Offences and Penalties**:
    - Practicing without registration or APC → fine/imprisonment.
    - False representation as a dentist.
    - Disciplinary actions for misconduct.

- **Complaint Mechanism**: MDC hears cases of professional misconduct.
- **Scope of Practice**: Clearly defines permitted procedures for dentists and auxiliaries.

Exam Tip: Know the **differences between Dental Act 1971 and 2018** and common causes of disciplinary action (e.g., fraud, negligence).

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2. Code of Ethics for Dental Practitioners

Definition: A professional guideline that governs the moral behavior and decision-making of dental practitioners.

Core Ethical Principles:

- **Autonomy**: Respect for patient decisions and consent.
- **Beneficence**: Act in the best interest of the patient.
- **Non-maleficence**: “Do no harm” — avoid causing injury.
- **Justice**: Fairness in distribution and access to care.
- **Veracity**: Truthfulness in communication.

Responsibilities of a Dentist:

- To patients (confidentiality, informed consent)
- To colleagues (respect, collaboration)
- To the profession (integrity, continuing education)
- To the community (health promotion, outreach)

Violations include:

- Advertising false claims
- Performing unnecessary treatments
- Breaching confidentiality
- Failing to obtain proper consent

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3. Informed Consent, Confidentiality, Autonomy

A. Informed Consent:

- **Definition**: Voluntary agreement after disclosure of diagnosis, treatment options, risks, and alternatives.
- **Elements**:
    - Disclosure
    - Competence
    - Comprehension
    - Voluntariness

- **Types**:
    - **Written**: For invasive procedures or research
    - **Oral**: For routine care
    - **Implied**: When patient voluntarily cooperates (e.g., opening mouth for exam)
- **Special Cases**:
    - Minors: Consent from parents/legal guardian
    - Emergencies: Implied consent applies

B. Confidentiality:

- Legal and ethical obligation to **protect patient information**.
- Only breach if:
    - Required by law (e.g., abuse, notifiable diseases)
    - Patient poses risk to others (e.g., HIV status with intent to harm)

C. Autonomy:

- Patients have the right to accept/refuse treatment.
- Respect choices even when declining care.
- Exceptions: Mental incapacity, public health risk.

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4. Legal Aspects of School and Community Outreach

Key Legal Considerations:

- **Informed Consent**: Required from parents/guardians for minors in schools.
- **Documentation**: Consent forms, screening findings, referrals.
- **Supervision**: Students must be supervised by licensed dentists.
- **Scope of Practice**: Ensure procedures fall within the provider's legal scope.
- **Emergency Preparedness**: Availability of emergency kits and protocols.
- **Insurance and Liability**: Coverage for mobile teams and outreach setups.

Confidentiality in Field Settings:

- Secure handling of patient records
- Avoid discussing cases in public settings

Negligence:

- Defined as breach of duty resulting in harm.
- Legal action may follow if standard of care not met during outreach.

⭐ Quick Summary Table:

Concept	Key Points
Dental Act 2018	Mandatory registration, APC, scope of practice, MDC regulation
Ethical Principles	Autonomy, beneficence, non-maleficence, justice, veracity
Informed Consent	Must be informed, voluntary, comprehended
Confidentiality	Legal obligation to protect patient information
Autonomy	Right of patients to make decisions about their health
Outreach Legalities	Consent, supervision, scope of care, emergency protocols
Common Ethical Issues	Over-treatment, misrepresentation, negligence, privacy breach

🟦 Malaysian Dental Act 2018: Features & Implications

Key Features:

- Replaces the **Dental Act 1971**; came into force on **1 January 2018**.
- Establishes **Malaysian Dental Council (MDC)** as regulatory body.
- Introduces **Annual Practising Certificate (APC)** and **Continuing Professional Development (CPD)** requirements.
- Clearer definitions: "Dental Practitioner", "Specialist", "Foreign Practitioner".
- Introduces **fitness to practise framework** (competence, health, conduct).
- Allows for **disciplinary proceedings** with more defined procedures and rights.

Implications:

- Mandatory CPD for APC renewal.
- Standardization of specialist registration.
- Strengthened mechanisms to protect patients.
- Greater accountability and documentation in community-based practice.

🟦 Differences between Dental Act 1971 vs 2018 & Common Disciplinary Actions

Feature	Dental Act 1971	Dental Act 2018
CPD	Not compulsory	Compulsory for APC
Specialist Register	Not structured	Regulated registration
Disciplinary Process	Less structured	Clearly defined, fair
Foreign Practitioners	Limited clarity	Defined conditions

Common Causes of Disciplinary Action:

- Practising without APC.
- Misleading advertisements or titles.
- Breach of patient confidentiality.
- Negligence or malpractice.
- Substance abuse or criminal conviction.

🟦 Ethical Principles in Dentistry & Clinical Application

1. **Autonomy** – Respect patients' right to make informed decisions (e.g., explaining all treatment options).
2. **Beneficence** – Act in the best interest of the patient (e.g., pain relief before full treatment).
3. **Non-maleficence** – Do no harm (e.g., avoid over-treatment).
4. **Justice** – Treat all patients fairly (e.g., equal treatment during community programs).
5. **Veracity** – Be honest (e.g., transparent about treatment limitations)

🟦 Informed Consent vs Implied Consent

Informed Consent	Implied Consent
Explicit verbal/written agreement	Inferred from actions/behavior
Required for invasive or irreversible treatment	Adequate for routine examination
Legal requirement	Common law principle
Example: Extraction, minor surgery	Example: Patient opening mouth for check-up

🟦 Legal Responsibilities During Community Outreach

- Ensure participants are informed and give **valid consent**.
- Maintain **confidentiality and records**.
- Be supervised by **registered practitioners**.
- Abide by **infection control** and **waste disposal** laws.
- Must **refer complicated cases** appropriately.

🟦 Confidentiality and Autonomy in Patient Care

- Do not disclose patient information without consent, except in legal exceptions (e.g., child abuse).
- Provide patients with information for them to decide.
- Empower patients during outreach via **oral health literacy**.

🟦 Case-Based Application – Legal & Ethical Dilemmas in Outreach

Scenario: You are performing screenings at a school. A child has rampant caries. The parent is not present and school wants treatment.

Dilemmas:

- Consent not obtained → Legal issue.
- Treating could violate autonomy.
- Best interest (beneficence) vs legal requirement.
- Action: Provide referral letter, notify guardian, no irreversible procedures.

🟦 Role of Malaysian Dental Council (MDC) & Complaint Mechanism

- **Regulates registration**, maintains **specialist register**.
- Issues APC, enforces CPD.
- Conducts **disciplinary inquiries**.
- Receives and investigates complaints from public via **complaint form**.
- Has authority to **suspend or remove registration**.

🟦 Ethical Considerations in School Dental Programs

- Obtain **parental/guardian consent**.
- Respect children's **developmental autonomy**.
- Avoid coercion; use **age-appropriate health education**.
- Ensure **non-discrimination** among students.
- All procedures must be within **scope of training** and under supervision.

🟦 Legal Implications of Negligence or Breach of Duty

- **Negligence**: Failure to provide standard of care, resulting in harm.
    - *Duty → Breach → Damage → Causation* (Four elements).
- Consequences: Legal suits, disciplinary action, removal of license.
- Must **document all actions** taken in outreach and private settings.

🟦 Ethical Management of Special Populations

- **Minors**: Require guardian consent, age-appropriate communication.
- **Special Needs**: May require surrogate decision-maker or adapted protocols.
- **Elderly**: Ensure capacity assessment, avoid age bias.
- Apply **inclusivity, dignity, and empathy**.

📘 Sample Exam Questions

📝 MCQs:

1. Which of the following is *not* an ethical principle in dentistry?
A. Autonomy
B. Veracity
C. Liability
D. Justice
✅ *Answer: C. Liability*

2. Under the Dental Act 2018, the Annual Practising Certificate (APC) is:
A. Voluntary
B. Required every 5 years
C. Linked to CPD
D. Issued by MOH
✅ *Answer: C. Linked to CPD*

📝 SAQs (5 marks each):

1. List and explain any four differences between the Dental Act 1971 and Dental Act 2018.
2. Briefly describe the ethical considerations when treating a child in a school dental program.
3. Define informed consent. How is it different from implied consent?

📝 MEQ (15 marks):

Case:
You are assigned to a rural school dental outreach. A 9-year-old student presents with grossly decayed molars and pain. The teacher asks you to extract the teeth immediately, but you do not have prior parental consent. The student appears distressed.

Q1. Identify and explain the ethical principles involved. (5 marks)
Q2. What legal risks could you face if you proceed? (3 marks)
Q3. What actions should you take in this situation? (4 marks)
Q4. Describe the role of the MDC in regulating outreach activities. (3 marks)

Here are detailed **answers for SAQ and MEQ questions** related to **Public Health Laws and Ethics** (aligned with Malaysian BDS Final Professional Examination and MQA standards):

🟦 Short Answer Questions (SAQs) with Answers

SAQ 1:

What are the major features of the Malaysian Dental Act 2018 and how does it differ from the 1971 Act?
Answer:
Key Features of Dental Act 2018:

1. **Expanded Scope:** Covers registration, licensing, and practice of dentists and dental therapists.
2. **Annual Practising Certificate (APC):** Mandatory renewal of APC every year.
3. **Competency Assessment:** Dentists must undergo CPD to maintain practice rights.
4. **Specialist Registration:** Recognized dental specialties are regulated.
5. **Disciplinary Procedures:** More structured with an independent inquiry panel.

Differences from 1971 Act:

Feature	Dental Act 1971	Dental Act 2018
Specialist registration	Not defined	Officially recognized
CPD requirement	Not mandatory	Mandatory
Disciplinary process	Less formal	Structured inquiry & appeal system
Scope of coverage	Dentists only	Dentists + therapists

SAQ 2:

Define informed and implied consent. Provide one example of each in dental practice.
Answer:

- **Informed Consent:** A voluntary agreement by a patient after receiving adequate information about the nature, risks, benefits, and alternatives of a procedure.
    - *Example:* A patient signs a consent form for extraction after being explained all risks.
- **Implied Consent:** Consent inferred from a patient's actions or the context of the situation.
    - *Example:* A patient opens their mouth during examination.

SAQ 3:

Explain the concept of patient autonomy and how it applies during school dental screening.
Answer:

- **Autonomy:** Respecting the patient's right to make decisions about their own care.
- In school screening, even though consent may be obtained from parents, children should also be verbally asked before performing oral exams. Autonomy includes respecting refusal to undergo treatment.

SAQ 4:

List four common causes of disciplinary action against dentists under the Dental Act 2018.
Answer:

1. Practicing without valid APC.
2. Overcharging or fraudulent billing.
3. Professional misconduct (e.g., inappropriate behavior).
4. Negligence or harm caused to patients due to substandard care.

SAQ 5:

Describe two ethical principles and provide a clinical example of each.
Answer:

- **Beneficence:** Obligation to act in the patient's best interest.
    - *Example:* Providing fluoride varnish to prevent caries in high-risk children.
- **Non-maleficence:** Do no harm.
    - *Example:* Avoiding unnecessary radiographs to prevent radiation exposure.

🟦 Modified Essay Question (MEQ)

MEQ: Managing Legal and Ethical Issues During a School Outreach Program

Scenario:

You are a final-year dental student participating in a school dental outreach program in a rural area. You are tasked with screening, oral hygiene instruction, and fluoride application for students aged 6–12. During the visit, a 7-year-old child refuses fluoride application. Another student discloses suspected abuse during casual conversation.

Part A: What legal preparations are needed before conducting a school dental outreach program? (3 marks)

Answer:

- Obtain written **informed consent** from parents/guardians.
- Ensure **permission from the school** authorities (via MOH/MOE protocols).
- Team must hold **valid APC** and indemnity coverage.
- Comply with **Infection Control Guidelines** and **Dental Act 2018**.

Part B: How would you handle the child who refuses fluoride application? (3 marks)

Answer:

- Respect the child's **autonomy** even if parental consent was obtained.
- Gently communicate benefits and reassure the child.
- If still refusing, **do not force** the procedure. Document refusal appropriately.
- Inform the parent/guardian post-visit.

Part C: What ethical and legal steps should you take regarding the suspected abuse disclosure? (4 marks)

Answer:

- Maintain **confidentiality**, but prioritize **beneficence** and **duty to report**.
- Document the disclosure factually without interpretation.
- Report to a **teacher, counselor, or relevant authority** as per MOH guidelines.
- Do not confront parents or interrogate the child.

Part D: What are the potential legal consequences of not obtaining consent for fluoride application? (3 marks)

Answer:

- Considered **battery or assault** under Malaysian law.
- Violation of **Dental Act 2018** and breach of professional conduct.
- Can lead to **disciplinary action** by MDC or civil liability.

Part E: Outline the role of the Malaysian Dental Council (MDC) in regulating ethical practice. (2 marks)

Answer:

- Registers and monitors dentists and specialists.
- Enforces standards of professional conduct.
- Investigates complaints and initiates **disciplinary actions**.
- Promotes **continuing professional development** (CPD).

🟦 M. GLOBAL ORAL HEALTH

1. WHO Oral Health Goals and Strategies

🔹 **WHO Global Oral Health Goals (most recent: 2023–2030):**

- **Goal 1**: Achieve universal coverage for oral health services.
- **Goal 2**: Integrate oral health into primary health care and UHC (Universal Health Coverage).
- **Goal 3**: Reduce the burden of oral diseases (caries, periodontal disease, oral cancer, clefts).
- **Goal 4**: Strengthen surveillance, monitoring, and health information systems for oral health.

🔹 **Key WHO Strategies:**

- **Prevention-focused**: Fluoridation of water/salt/milk, oral health education.
- **School-based programs**: Oral health promotion in curricula.
- **Integration with general health**: Especially for NCDs (non-communicable diseases).
- **Common Risk Factor Approach (CRFA)**: Targets shared risk factors (e.g., tobacco, sugar, alcohol).
- **Health promotion**: Community empowerment, healthy public policy, supportive environments.

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2. FDI, IADR, Fones School of Dental Hygiene – History & Relevance

🔹 **FDI World Dental Federation:**

- **Founded**: 1900, Paris.
- **HQ**: Geneva, Switzerland.
- **Role**: Global advocate for oral health, policy development, oral health days.
- **Notable activities**:
    - Organizes **World Oral Health Day (March 20)**.
    - Publishes **FDI Dental World**.
    - Frameworks: Vision 2030 – Delivering Optimal Oral Health for All.

🔹 **IADR (International Association for Dental Research):**

- **Founded**: 1920, USA.
- **Purpose**: Promote dental, oral, and craniofacial research globally.
- **Supports**: Young researchers, evidence-based practice, global symposia.

🔹 **Fones School of Dental Hygiene:**

- **Founded**: 1913 by Dr. Alfred C. Fones in Connecticut, USA.
- **Significance**:
    - First formal training institution for **dental hygienists**.
    - Emphasized **preventive dentistry** and school dental programs.
    - Set the stage for **dental auxiliaries' training worldwide**.

3. Comparison of Oral Health Systems Globally

Country	Type	Funding	Coverage	Challenges
Malaysia	Mixed public-private	Gov't (MOH), Private Out-of-Pocket	Limited adult coverage	Rural access, long waiting times
UK (NHS)	Public	NHS funded by taxes	Comprehensive, universal	Budget cuts, long queues
USA	Private insurance-based	Mostly private	Not universal	High cost, disparities
Cuba	Fully public	Government-funded	100% coverage	Limited resources
Scandinavian (e.g. Sweden)	Public-private mix	Gov't & insurance	Free till age 18–20	Age-based limitations

- **Key points**:
    - Oral health care access **varies by country's GDP and political will**.
    - Nations with **UHC-integrated oral health** (e.g., UK, Sweden) fare better in outcomes.
    - WHO advocates for **oral health equity** in low-resource countries.

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4. SDGs (Sustainable Development Goals) and Oral Health

- **What are SDGs?**
  - Launched by UN in 2015 (Agenda 2030), includes **17 goals** and **169 targets**.

- **Relevant SDGs for Oral Health:**

SDG	Link to Oral Health
Goal 3	*Good Health & Wellbeing*: Includes NCDs and universal health coverage
Goal 1	*No Poverty*: Oral diseases reduce productivity and increase healthcare costs
Goal 4	*Quality Education*: School dental programs enhance oral hygiene habits
Goal 6	*Clean Water and Sanitation*: Fluoridation and safe water critical
Goal 10	*Reduced Inequalities*: Oral health equity among underserved populations
Goal 12	*Responsible Consumption*: Sugar reduction and tobacco control

- **Global Strategy on Oral Health (2022 WHO Resolution):**
  - Emphasizes alignment with SDGs.
  - Encourages **health systems strengthening**, **primary care-based oral health**, and **evidence-based practice**.

🟦 N.COMMUNITY-BASED CLINICAL ROTATIONS / FIELD VISITS

1. Report Writing and Presentation of Community Diagnosis

🔹 **Structure of a Community Diagnosis Report:**

1. **Introduction**: Area/location details, demographics.
2. **Objectives**: General and specific aims of diagnosis.
3. **Methodology**:
    - Surveys used (DMFT index, CPI).
    - Sampling method.
    - Tools (questionnaire, oral exam).
4. **Findings**:
    - Prevalence of caries, fluorosis, periodontal disease.
    - Risk factors (diet, hygiene habits, SES).
5. **Discussion**: Interpretation of findings, comparison to national targets.
6. **Recommendations**: Based on need (e.g., school fluoride rinse, oral health education).
7. **References**: APA or Vancouver style.
8. **Annexures**: Survey tools, photos, maps.

🔹 **Presentation Tips:**

- Use pie charts, bar graphs.
- Highlight key statistics.
- End with evidence-based recommendations.

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2. Evaluation of Outreach Programs

🔹 **Evaluation Parameters:**

1. **Process Evaluation**:
    - Were activities carried out as planned?
    - Were resources adequate?
    - Attendance/logistics analysis.
2. **Output Evaluation**:
    - No. of people screened, treated, educated.
    - Satisfaction surveys (feedback forms).
3. **Outcome Evaluation**:

    - Change in oral hygiene behavior.
    - Reduction in disease prevalence (follow-up needed).
4. **Impact Evaluation**:
    - Long-term health improvement.
    - Sustainability and cost-benefit analysis.

🔹 **Tools:**

- Pre- and post-intervention questionnaires.
- KAP (Knowledge-Attitude-Practice) surveys.
- SWOT analysis for program improvement.

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3. Reflection Logs and Case Summaries

🔹 **Reflection Log Format (Recommended by MQA & MUCM):**

1. **Date & Setting**: Clinic, school, rural camp.
2. **Activity Description**: What did you do?
3. **Learning Experience**: What skills did you develop?
4. **Challenges Faced**: e.g., communication barriers, logistics.
5. **Solutions or Adaptation**: Teamwork, innovation.
6. **Personal Insight**: Professionalism, empathy, leadership.

🔹 **Example:**

"During the school visit, I struggled with a child who was uncooperative during fluoride application. I learned to use non-verbal cues and tell-show-do to gain cooperation. It reinforced the importance of behavioral management in pediatric care."

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4. Screening and Referral Protocols

🔹 **Screening Protocols:**

- **Basic Oral Examination**:
    - Visual-tactile exam with mirror, probe, gloves.
    - Use **WHO Oral Health Assessment Form**.
- **Indices used**:
    - DMFT/def
    - CPI (Periodontal)
    - Dean's Index (Fluorosis)

- **Referral Indications:**
  - Deep carious lesions requiring RCT/extraction.
  - Suspected oral cancer/lesions >2 weeks.
  - Orthodontic needs.
  - Impacted third molars, facial swelling.
  - Special needs requiring GA.

- **Referral Letter Format:**
  - Patient details
  - Clinical findings
  - Provisional diagnosis
  - Suggested treatment/referral reason
  - Name/signature of referring officer